

The EGSA Handbook: A Guide to
Engineering Graduate Life at Cornell
University

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Chapter 1

Academics

This chapter addresses issues related to academic life as a graduate student in Engineering. The chapter contains a description of the degrees offered in engineering, advice on choosing an advisor and a committee, information on graduate school forms, and some other topics. Our purpose here is to help you know what you need to do and when.

We hope you find the information here helpful, but do not rely upon it solely for making decisions. The official sources of information on these topics are the Graduate School, the *Guide to Graduate Study*, and the Director of Graduate Studies (DGS) or the Director of the M.Eng. Program in your field.

1.1 Degrees

If you are reading this handbook, you are probably pursuing a Master of Engineering (M.Eng.), Master of Science (M.S.), or Doctor of Philosophy (Ph.D.) degree. The M.Eng. is a professional degree, which means it is designed for those who expect to find jobs in industry; the other two are generally considered more academic. This has been changing in recent years, though, as engineering practice requires ever more specialized knowledge.

The M.Eng. degree requires 30 credits of technical classes, including four to eight credits of work on a Master of Engineering project. This typically takes one academic year and sometimes extends into the following summer. Cornell undergraduates frequently get a head start on an M.Eng. degree during the last semester of their senior year; for them in particular, the M.Eng. degree is like a fifth year of undergraduate work. Unlike many undergraduate programs, however, the M.Eng. degree incorporates intense classwork with a large independent or group project. An M.Eng. student has an advisor, who must be picked promptly if one wishes to begin the project the first semester. This can be worthwhile because serious work on an M.Eng. project can be a valuable asset come job interview time in February and March, but starting so soon doesn't permit much time to adapt to Cornell.

The M.S. and Ph.D. degrees are far more flexible; in many of the graduate fields, these degrees have no written requirements whatsoever. The M.S. degree is usually a stepping-stone on the way to the Ph.D. Many departments do not usually admit students to an M.S. program that expect to stop after the Master's. Some departments expect Ph.D. students to get a full Master's along the way, others are content with a "Special Master's," and others don't expect any at all. The differences between these are described briefly here, but check with your advisor, or other students in your

field, to find out what will be expected of you.

Students pursuing a Master's degree have two committee members: an advisor and one minor committee member. The student usually picks a collection of courses to take, but consult your advisor to see if there are courses he or she feels particularly strongly about. The total time to earn the degree varies, but about two years is typical. The first couple of semesters consist largely of coursework, choosing an advisor, becoming familiar with the research lab, and picking a research project. During the remaining semesters, the emphasis is reversed: you might take a couple of courses, but most of the time is spent on research and writing the Master's thesis. In many ways, the thesis is practice for the Ph.D. dissertation. Often you can see what is expected by watching more advanced students; otherwise, look at theses in the Engineering Library written by previous students in the same research group. The degree ends with a Master's defense: an oral exam where you present your thesis work in a talk, and answer questions asked by the committee members.

Some fields and some advisors feel that writing a Master's thesis requires time that is better spent in other ways and eliminate that step of the process for a Ph.D. They may preserve the Master's defense, in which case one earns a Special Master's; others do away with the Master's entirely and students work directly for the Ph.D.

For a Ph.D., at least one to two years of research are expected beyond a Master's degree. That means that after a Bachelor's degree, the Ph.D. takes about five years. Some students finish in as few as three, though for others the Ph.D. program can drag on indefinitely. Those who enter Cornell with a Master's from another school may need to take some additional coursework, and thus may still need three and a half to four years for the Ph.D. degree alone.

There are three exams on the way to the Ph.D., known as the Qualifying or Q exam, Admission to Candidacy or A exam, and the Final or B exam. The Q exam certifies that one is ready to begin Ph.D. work. Policies on Q examinations vary widely between departments, however. You should check with your DGS to find out how things are done in your department. The A exam certifies that one has finished with coursework, and usually serves as a proposal of the Ph.D. research project. Both the Q and A exams involve a certain amount of "grilling" by the committee members to verify familiarity with coursework. If they find a significant deficiency, they may recommend taking an appropriate course. At the end of the road is the B exam, which is the dissertation defense. It is a presentation of the dissertation results; if the dissertation work is solid, there is generally nothing to worry about.

After a few dissertation corrections, which the committee will invariably require, it's cap and gown time!

1.2 Course Registration and Selection

This section is divided into two parts. First, we will explain the process of registering as a Cornell student and enrolling in courses. After that, we'll give you some advice on deciding on what courses you want to take. Be cautious, however. The registration process is subject to change. For the latest information, as well as the dates and deadlines for registration, see the Graduate Field Assistant in your field/department or visit the Graduate School on the first floor in Caldwell Hall.

1.2.1 Registration and Course Enrollment

The first thing you need to understand about choosing courses at Cornell is that registration and course enrollment are **separate** processes. First, you register to be a student at Cornell for a given semester. After you are registered, you enroll for courses. The processes are slightly different depending on whether you are a new or a returning student, so we'll look at them both.

New Students

You must participate in a walk-through registration process for your first main semester (Fall or Spring) at Cornell. If you come in the fall (or in the Summer), then you should attend an orientation day in mid-August set aside for registration. This registration event is held in the Bartels Hall (E5, just up Campus Road from the Engineering Quad) and allows you to complete many required tasks at one time. Be prepared to battle the crowds — it can take a few hours to do everything you need to do. In addition to registering, you can also pick up your Cornell ID or have one made, apply for a parking permit, apply for a Cornell computing account, and apply for a Social Security Number if you are an international student (see chapter 5). If you miss the registration day in Bartels Hall, you can still register by visiting Day Hall (C5) on other designated days — see your Graduate Field Assistant or visit Caldwell Hall (DE4) for details. If your first major semester is the Spring semester, then you should visit the Graduate School offices in Caldwell Hall to register; you may have to wander all over campus to complete the other tasks mentioned above, however.

To enroll for the courses you want to take, you need to use the Just The Facts system (accessed through Bear Access on www.uportal.cornell.edu/uPortal) which allows you to electronically add or drop courses until the third week of classes, but check the university calendar to be sure of the exact date. Cornell allows you to shop around for courses during the first couple of weeks of classes before you make a final decision, but you should begin attending classes that you may want to take on the very first day! If your course enrollment is not done on time, you may have to pay a fee to register for your courses. To enroll or drop courses beyond the add/drop date, you must submit a course enrollment form. This form is generally due to Caldwell Hall (DE4). Your course enrollment form must be signed by your Chairperson (see below) and approved by the departments of the courses in which you are enrolling, so don't wait until the last minute.

As mentioned in the previous paragraph, you need the chairperson of your special committee to sign your course enrollment petition form. As a result, you need a chairperson. Special committees are discussed in more detail in section 1.4, but if you haven't yet decided on your chairperson then many graduate fields and departments will allow you to use the Director of Graduate Studies or another faculty member in your department as a temporary chair. In any case, you should submit a Special Committee selection form (see section 1.5) to the Graduate School by the time you submit your course enrollment form.

If you show up at the beginning of the summer to start your graduate work, then the situation is slightly different. You will still have to go through the registration process in the fall, but you also need to be registered for the Summer. Visit the Graduate School in Caldwell Hall (DE4) to get started. In the past, new students who begin graduate work in the summer were required pay a registration fee; we believe that this fee has been eliminated.

Continuing Students

After your first semester, the registration process is considerably easier. Provided that you pay your bills on time and return your library books, registration for fall and spring is completely automatic. Using Bear Access (Cornell's computer system) you can check "Just the Facts" to be sure that you have been registered for the semester. If you owe money to Cornell or have any other obligations that you haven't cleared, then Just the Facts will tell you what they are. After you clear up these holds with the department that placed them, you may have to go to Caldwell Hall (DE4) or Day Hall (C5) to register.

For continuing students, summer registration sometimes requires a trip to Caldwell Hall (DE4). In those cases, if you do not go to Caldwell Hall to register for the summer, then various taxes from which graduate students are usually exempt will be withheld from your pay.

Continuing students have two choices for Course Enrollment. They can either enroll during the first three weeks of class, just like new students, or they can pre-register with Just the Facts. Despite the fact that Cornell continues to move towards all-electronic course enrollment, many graduate students never pre-register. By waiting until the start of classes, students can sample classes before they sign up. If you are reasonably sure about the courses that you will be taking, pre-registering can save you some time and trouble because pre-registration does not generally require departmental approvals. You must first obtain a registration code from your chairperson. Using this code, you can select your courses in Just the Facts at any time during the pre-registration period for each semester. If you make a mistake, you can still change your courses during the first three weeks of classes. In addition, pre-registration can guarantee your seat in popular courses not related to your major.

1.2.2 Choosing Courses

There are lots of factors to consider when choosing a course. Which classes am I interested in? Will this course help me with my research? Will this course help me get the job I want? These are all important questions to ask, but they are not the only things to consider when choosing a course.

As was mentioned in our discussion of the course enrollment process, Cornell does not require you to choose your courses until several weeks into the semester. You can take advantage of this opportunity to attend several classes to see the professor's teaching style and find out the content and structure of the class. These can't be looked up in a course catalog, of course, and they play a big role in how much you get out of the course. You'll want to decide quickly which classes you'll actually take, though, or you'll end up trying to do homework in seven classes, and you'll be behind in all your classes before you've even decided which ones to take.

If you haven't yet decided on a chair for your special committee, then the person who is teaching the course may be just as important as the subject being taught. Taking classes is often a good way to get to know faculty and let them get to know you.

Each Cornell course is assigned a particular number of credits. The number of credits assigned to a course is generally equal to the number of hours spent in lecture each week. It does not include the number of

hours required for homework and study. This number is often estimated at 2–3 times the number of lecture hours for undergraduate courses; for some graduate courses, however, it can be much higher. It is always a good idea to ask other graduate students about specific courses you are considering; they can give you an idea of the workload as well as information on course content and teaching style.

For M.S. and Ph.D. students, 3 courses of 3–4 credits each is considered a workload that will keep you busy. If you are also a teaching assistant for the semester, you may have almost no time left for research. On the other hand, there are exceptional cases in which students have taken 12–13 credits of course-work along with TA responsibilities. Before finalizing your courses, it is a good idea to discuss your time commitments with your committee chair (if you have chosen one) so that both of you know how much time you will be expected to spend on research.

Note that many graduate fields want their M.S. and Ph.D. students to register for additional credits of “Thesis Research” to bring their total credits to 12–15 each semester. You should check with the chairperson of your committee as to whether they would like you to register for Letter or S/U grade for research credits. Various fields have different policies about it and different faculty members may have their own styles.

If you are in the M.Eng. program you are required to take 30 credits of technical classes over two semesters, but that includes 4 to 8 credits of work on your M.Eng. project. So, M.Eng. students are probably looking at 11–13 credits of non-project coursework and 2–4 credits of work on a project each semester. If you are extending your M.Eng. degree work into the summer, then your schedule may be more flexible.

If you have selected a chairperson for your special committee, then it is very important that you discuss the courses you will take with that person. If you are in the M.S./Ph.D. program, then the special committee is usually the ultimate authority on which courses you must take in order to graduate. If you haven’t selected a chairperson yet, then talk to the Director of Graduate Studies in your department and consider meeting with several professors that you are interested in working with to ask for course selection advise.

1.2.3 Residence Units

One semester of full-time study at Cornell counts as one-residence unit. Master’s degrees require at least two residence units, and a Ph.D. requires at least six, two of them after the A exam. Registration during summers can count towards residence units, but there are limitations. See

the Cornell *Guide to Graduate Study* (http://www.gradschool.cornell.edu/pubs_and_forms/pubs/guidetograduatestudy.pdf).

1.3 The Graduate Minor

Most fields require M.S./Ph.D. students to complete one or two minors. Usually each minor is a series of 3–6 graduate courses in a field other than the one in which your degree will be granted. Some fields expect the minor(s) to be in a closely related area to your thesis research, and others allow more latitude when choosing a minor. Sometimes the field has no preference, and approval of the minor is entirely up to the chair of the special committee. In many cases, a M.S. degree requires and allows only one minor; Ph.D. programs may require one or two minors. Be sure to check with your Director of Graduate Studies and your faculty advisor regarding the particular requirements in your area. The list of possible minors is almost endless; some engineering graduate students have been known to minor in modern dance or Russian Literature. These are exceptions, however. Your best resource for advice on this is graduate students in your research group or field and the chairperson of your committee.

M.Eng. students generally do not complete minors, but may choose to complete a “program option” which is similar to a minor. Most of the available program options require three courses, and the requirements for each option are fairly specific. If you have any questions about completing a program option, see the director of the M.Eng. program in your department.

1.4 Special Committees

In the Graduate School at Cornell, a graduate student’s “Special Committee” has ultimate power over his/her progress and degree.

Different fields have different requirements and expectations concerning special committees. The graduate school requires that you have an advisor (who also serves as your special committee chair) within three weeks of first registering in the graduate school. In some cases, this may just be a temporary advisor. Some departments assign their Director of Graduate Studies to be every first-year student’s advisor, for example. Then, when you decide whom you want to work with, you can easily change your advisor by filling out the appropriate form. The Graduate School insists that a full committee must be formed by the end of the third semester of graduate study. If you do not form the committee by the end of third semester, your

registration for the fourth semester will be put on hold. You will not be able to add or drop courses unless you are registered. Also, if you delay it too much, a fine may also be imposed on you by the Graduate School.

It's a good idea to start by choosing the chair of your special committee (your advisor) and then get his or her advice before choosing the other members of the committee. For more information on choosing your advisor, see section 1.12.2.

The composition of special committees varies widely. While your committee chair is usually the faculty member you do your research under, there are different ways to select your other committee members. Two models are presented here, but these are not the only options. Every graduate student at Cornell may have slightly different criteria when forming a special committee.

1. Traditional Model

- Chair & Faculty Advisor
- 2nd Member: Faculty member who is familiar with your research area and can offer technical advice and guidance.
- 3rd Member: Minor advisor

2. Professional Development Model

- Chair & Research Advisor
- 2nd Member: Professional Development Mentor (A faculty member, perhaps in your field, who agrees to help with career and professional development not directly related to scientific research.)
- 3rd Member: Minor advisor
- 4th Member: (optional) Faculty member who is familiar with your research area and can offer technical advice and guidance.

In some departments, there may be a requirement of two minors and so, both the other members of the committee would be representing minors. In this case, you may add one more member for help on career and professional development and/or for technical guidance.

The special committee is responsible for ensuring that the requirements of the field are being fulfilled. These requirements could be course, minor, or grade requirements. The Graduate School does have some regulations but it does not have any specific course or other similar requirements. The

primary objective of the special committee is to make sure that the candidate attains the desired level of independence in scholarship.

Even though there is no such obligation, you should try to arrange regular meetings of the whole committee from time to time. Such meetings ensure proper and timely communication. If you have more than one faculty member in your committee who can understand the technical details of your work, then such meetings may generate new ideas or may warn you of certain overlooked aspects. Such meetings can also ensure that your current project(s) and activities are commensurate with your professional goals.

The Graduate School is very flexible about the reconstitution of the special committee. So, if you are not satisfied with it, you can reconstitute your committee any time. However, after your A exam if you decide to replace a non-chair person in your committee, you will have to petition the Graduate School. Normally, such permissions are granted. For Masters' students, a petition is required for committee changes less than 3 months prior to the thesis defense.

Changing your chair is more complicated. You may have to start your work from scratch on an altogether new topic, especially if no other faculty member is interested in working on the same topic. In particular, if you are in an advanced stage of your program, try seriously to sort your differences with the chair person before you finally decide upon the change. Read Section 1.12.2 for more information about the factors you should consider before you decide to change advisors.

If a member of your committee leaves Cornell, he/she can still remain as member for at least one more year. You need to petition the Graduate School for longer durations. If the chair decides to leave Cornell or goes on a sabbatical, you may decide to accompany him/her. To do this, you may need to take a "leave of absentia" from the Graduate School. To take a leave of absentia, the Graduate School requires you to have spent at least two residence terms at Cornell for a Ph.D. student and at least one term for the M.S. Students. The duration of "leave of absentia" should be less than two residence units. In both the above cases, as usual, exceptions are permissible but require petitioning the Graduate School. Other possible options could be to take a "leave of absentia" and do work outside or stay and work here and take the guidance of another faculty member.

In some departments, the field appoints a member to committees. Ph.D. students can choose three other members (and Masters two other members) to complete the committee. If the student so desires, a field appointed member can be the third member in his committee. It is the prerogative

of the student to decide whether the field appointed member serves on the committee throughout the program or just sits for the exams.

1.5 Graduate School Forms

As you probably expect, you will need to fill out forms during your time in graduate school, but the number and details of the forms will depend on your degree program and the path you take to get your degree. This section provides general information about some of these forms, and is divided by type of degree program. For more information, go to the Graduate Records office in 150 Caldwell Hall (DE4) or check out the graduate school website at <http://www.gradschool.cornell.edu>. In addition, read through the *Guide to Graduate Study* (a small booklet put out by the Graduate School, www.gradschool.cornell.edu/pubs/_and_forms/pubs/guidetograduatestudy.pdf) for printed documentation. Finally, you might also want to attend one of the sessions (held in October and June by the Graduate School Thesis Advisor) which discuss the forms and formatting needed for theses and dissertations.

Note: There is a good chance the forms you need to fill out will change (the graduate school does update them from time to time), so make sure you have the most recent version of each form. All forms can be obtained from the Graduate Records office in 150 Caldwell Hall (DE4) or downloaded in .pdf format from the website listed above. If you find a blank form lying around in your office, don't just assume that it is the current version, since it may be out of date. In addition, if you have questions about forms **at any time**, check with the graduate school. You can save yourself lots of wasted time if you check with them first before filling out the form incorrectly or filling out the wrong form entirely!

1.5.1 All Graduate Students

All graduate students must fill out a Special Committee Form within the first three weeks of their first semester in the graduate school, listing at least a Committee Chairperson or temporary advisor. If necessary, this advisor can easily be changed later with the submission of a new committee form. It is important to realize, however, that the first version of this form must be filled out shortly after you start at Cornell. If you forget to fill out your form, you'll be contacted by the Graduate School! Furthermore, the

Graduate School will not process your first semester course enrollment form until your Special Committee Form has been received. In filling out the Special Committee Form, you should consult the list of “Fields of Study, Subjects, and Concentrations,” available in 150 Caldwell Hall (DE4) or from your Graduate Field Assistant.

To maintain student status for a given semester, you must be registered for that semester. As a registered student, you will pay tuition (or have it paid for you) and you will be granted access to University facilities, such as the library system. As explained in Section 1.2.1, you will need to register in person for your first semester at Cornell, but will be automatically registered for the subsequent semesters if you have paid your Bursar bills and have no “holds” on your registration. You must, however, register **in person** each summer that you want to maintain student status. This involves filling out a Summer Graduate Registration Form in 150 Caldwell Hall (DE4). If you are not planning to register for a given semester, you need to file a Leave of Absence Form. Check with the Graduate Records Office in 150 Caldwell Hall if you have any questions about leaves of absence.

1.5.2 M.Eng. Students

In addition to the Special Committee Form, M.Eng. students must fill out a Degree Information Card. It’s not complicated to fill out, but the catch is that it must be typed, so make sure you find a typewriter. Many departments have typewriters available for this and other such purposes, and the Graduate Records office in 150 Caldwell Hall (DE4) has several as well (form available online at <<http://gradschool.cornell.edu>>).

1.5.3 M.S. Students

The Special Committee for M.S. students requires at least two committee members and must be finalized by the end of the second semester. This means that by that time you need to have chosen at least a chairperson and a minor member (representing your chosen minor field). You can make changes to the Special Committee Form as necessary until the end of the second semester, but every time you make a change, you must file an entirely new form, with all new signatures. You may also have more than two committee members on your committee if you want.

When you are ready for your final master’s defense, you can obtain a Final Defense Packet from the Graduate Records Office in 150 Caldwell Hall (DE4); just ask them for the M.S. Final Defense information. This yellow folder contains all the necessary paperwork you need for your defense. You

will need to fill out a Schedule of Examination Form at least seven days before the exam is to be held, in addition to a Degree Information Card. You should bring a copy of the Results of Examination Form to the exam itself so that your committee members can sign off on the results. Don't forget to submit this form (with all the required signatures) to the Graduate School no more than three working days after the exam. Note that your entire Special Committee (consisting of all members that were listed on the special committee form) needs to be present at your master's defense; if any member cannot attend, you must obtain a proxy (from the same graduate field) to attend instead. If you have questions about proxies, consult the *Guide to Graduate Study* or ask at the Graduate Records office.

1.5.4 Ph.D. Students

The Special Committee for Ph.D. students requires at least three committee members and must be finalized by the end of the third semester. In other words, by this time you need to have chosen at least a chairperson and two minor members; you may have additional committee members if you choose. You can make changes to this form without a petition until you have taken your A Exam, but each time you make a change, you need to fill out a new form and obtain all new signatures (may be done electronically through the Graduate School website). You do NOT need the signature of an outgoing committee member to make this change, only the signatures of all members of your new committee. If you need to make any changes after you've taken your A Exam, you should consult the Graduate Records Office (150 Caldwell Hall (DE4)) to see if you need to file a petition.

To take and pass your A Exam, you will need to fill out a Schedule of Examination Form at least seven days before the exam is to be held. To the exam, you should bring a copy of the Results of Examination Form so that your committee members can sign off on the results. Don't forget to submit this form (with all the required signatures) to the graduate school no more than three working days after the exam. Note that all the members of your Special Committee must be present (or represented) at your A Exam (minimum of 3 graduate faculty present); if any member cannot attend, you must obtain a proxy from the same graduate field to attend instead. For questions about proxies, consult the *Guide to Graduate Study* or ask at the Graduate Records office. If you are awarded a Special Masters at your A Exam, you will also need to fill out a Degree Information Card, which must be typed.

Before scheduling your B Exam, pick up a Final Defense Packet from the Graduate Records office in 150 Caldwell Hall (DE4); just ask for the

Ph.D. Final Defense information. As for the A Exam, you will need to file a Schedule of Examination Form at least seven days before the exam as well as a Results of Examination Form within three days after the exam. You will also need to fill out a Degree Information Card, and submit it along with the Schedule of Examination Form. All these, plus additional information, are included in the Ph.D. Final Defense packet.

1.6 Teaching Assistantships

Many graduate students at Cornell are supported through teaching assistantships. With a teaching assistantship, you are expected to perform duties associated with the teaching of one or more university courses. These duties may include grading, teaching one or more recitation sections, or teaching laboratory sections.

Cornell offers variety of opportunities to get formal training in teaching and has resources dedicated to educational issues and research on campus. The following programs offer excellent professional development opportunities and we think everyone — whether you are interested in teaching as a career or not — should review what these programs have to offer.

1.6.1 Engineering TA Development Program

A teaching assistantship (TA) is an invaluable experience in graduate life. It is not only a first stepping stone for those interested in making a career in academia but also acts as a platform for the development of a variety of skills such as public speaking, presentation techniques, and diversity awareness which are greatly sought by today's industry. With this in mind, the College of Engineering offers a TA development program that encompasses different aspects of being a TA. This program is offered in both the fall and the spring.

Chances are, if you are going to be a TA, your department will require you to participate in the TA development program. If, however, you are not a TA your first year and become one later, or are simply interested in this material, contact Lisa Schneider (eng-learning@cornell.edu) to enroll in the next available session. Her office is in 167 Olin Hall (C5-6).

If you have any other questions and/or concerns about teaching, feel free to contact the Center for Learning and Teaching. Direct your questions to either Dr. Virleen Carlson (vmc3@cornell.edu, 255-8427) or the TA fellows from the development program.

For more details of this program and for useful hints and educational material on teaching please visit the website of the Engineering TA Development program at <http://www.engineering.cornell.edu/student-services/learning/engineering-ta-development/index.cfm/>.

History and Goals

Over the past ten years, the College of Engineering teaching development program has evolved from an optional lecture series run by faculty members to mandatory workshops facilitated by experienced engineering teaching assistants. All new TAs must complete the College of Engineering TA development Program and/or the International Teaching Assistant (ITA) Program as a condition for receiving their salary. TAs can get credit for their successful participation in this program by registering for a one credit Teaching Seminar (ENG 678). Currently, 150–200 TAs are certified each year. The training programs are conducted twice a year — once each in the fall and spring semesters. This workshop series was initiated in 1987 in response to numerous complaints received by the Engineering Office of Undergraduate Programs. The goals of the program have evolved over the years to include not only training TAs for their specific duties but also giving them time management skills, an understanding of University policies, and a broader perspective on teaching. The program has been geared to achieve two key objectives: 1) improvement of quality of Teaching Assistants so as to improve overall quality of Engineering education that undergraduate students at Cornell receive and 2) enrichment of the graduate life experience by formal training in various facets of teaching and highlighting what TAs can gain from teaching experience. The program is structured and conducted in such a manner that the TAs develop a sense of community among themselves and with the training staff and thus have a valuable resource to draw upon as they gain teaching experience.

Program Administration

In its current form, the program is a joint effort of three entities across Cornell. The program is housed in the Office of Instructional and Research Support (OI&RS) in the College of Engineering and is headed by the Lisa Schneider. The program seeks valuable input and relies on expertise in the area of education by interacting closely with the Center for Learning and Teaching at Cornell University. Dr. Virleen Carlson (Assistant Director of Instructional Support in the University-wide Center for Learning and

Teaching) brings her vast experience in the field of education and a broader perspective well beyond engineering. The third entity is a group of 8 TA fellows selected by the College of Engineering. One of them is selected as a Head TA Fellow (generally one of the returning fellows). These TA fellows bring their first hand experiences as TAs from the classrooms at Cornell.

1.6.2 University TA Development Workshops

In addition to the College of Engineering TA development program, University-wide TA development workshops are also available to all graduate students. These are one-day workshops offered by the Center for Learning and Teaching in both the fall and spring semesters. Some topics of past workshops are managing stress and time, creating a teaching portfolio, constructing a classroom presence, and facilitating discussions. With sufficient experience, you may even get the chance to be a volunteer facilitator for these workshops. Workshops often include free lunch and more importantly a great chance to meet people interested in teaching from all across the campus.

Direct your questions about this program to Dr. Virleen Carlson (vmc3@cornell.edu, 255-8427), Assistant Director of the Office of Instructional Support. Her office is in room 415 at the Computing and Communications Center (D4).

The Office of Instructional Support also publishes a handbook for teaching assistants at Cornell, which is free when you sign up for a TA development workshop (engineering or university-wide), or can be purchased for \$1.50.

1.6.3 Course on Effective College Teaching

If you are consider a career as in teaching, you may be interested in taking Effective College Teaching, EDU 548, a course taught by the Education Department at Cornell. This course is offered for 1–3 credits in the spring and as an intense one-week course over the summer as well (typically in the second or third week of June). The course focuses on helping you improve your teaching via reflection upon teaching/learning styles, motivations, and techniques. You will learn how to design a course, plan a class session, and create portfolio of your teaching experiences.

1.6.4 International TA Development Program

For all international students who come from countries where English is not the first language, and who are going to be TAs in their first semester, there is a mandatory 10-day TA development program, conducted in the

middle of August. Depending on the evaluation at the end of the program, a student may be assigned to take one or more English or TA development classes. Note that housing is NOT provided during the program, so you will need to arrange it by yourself. However, a stipend of \$500 is paid for participation in the program.

In addition to the summer program, the Center for Learning and Teaching offers EDU 578 course, which focuses on cross cultural classroom dynamics, teaching techniques, and English proficiency. The followup course, EDU 579, focuses more on practice of oral English and pedagogical skills. Those courses are open to all students whos native language is not English. The up to date information about the International TA Development Program may be found at

<<http://www.engineering.cornell.edu/student-services/learning/engineering-ta-development/international-ta.cfm>>

1.7 Research Assistantships

A research assistantship (RA) is another important form of financial support available to graduate students in the College of Engineering.

Research Assistants normally work on projects under the guidance of a Principal Investigator. This person is typically a professor in the College of Engineering; graduate students usually work for their thesis advisors. Each student should discuss his or her duties as an RA with the advisor.

The projects on which research assistants work are typically funded through external agencies like NSF, DARPA, and a variety of industries. Many times the nature of duties can depend on what the funding agency expects and in what timeframe. One should get all the necessary details before accepting such a position. Generally, the appointments of RAs are for a semester or an academic year. Students should discuss issues related to the exact duration of an appointment and associated vacation during the period of appointment with their advisor. As a University policy, the average workload for such an appointment is 15–20 hours a week.

In most cases, graduate students are appointed as RAs on a research project the results of which go into their thesis and thus contribute towards their Ph.D. In such cases it seems realistic to expect that such graduate students should work more than 20 hours a week. This is especially true in case of graduate students in advanced stages of their Ph.D. (e.g. after passing their A exam). Keep in touch with your advisor regarding the progress in your research. If you feel you are overworked, you should talk to your advisor to try to identify the most important issues your research

should address. Many times overwork is a result of different perspectives and lack of communication between the two parties involved — the graduate student and the advisor. A typical research project demands quantifiable results in a definite timeframe and periodic reports; you are as responsible for these as your advisor is.

Under no circumstances can any Research Assistant be expected to do personal work for their advisor or project leader. It is inappropriate for the person in charge to even ask for it. If you feel you are doing “non-research” related work for someone in charge, first try discussing it with the person. If the problem cannot be resolved amicably, take it to your advisor or other committee members if you can, and then to the DGS. Beyond that, see section 3.7 for further pointers.

A “Research Assistantship” is sometimes known as a “Graduate Research Assistantship.” The nomenclature seems to differ between departments. Both, however, are substantially different from a “Graduate Assistantship” (GA). In general, a GA is a part time job on the Cornell Campus that may or may not have any relation to your department and/or field of study. For example, various offices on campus need technically qualified students for certain administrative work; specifically, Cornell Information Technologies might need consultants for their “Help Desk.” Also, some departments have “Graduate Assistantships” which are scholarships without any expected work in return. These are offered to first year students in some departments so that first year graduate students can concentrate on course work and don’t have any additional responsibilities (like teaching). However, these differ from some fellowships in that tax is withheld from GA stipends.

1.8 Fellowships

The final way in which many graduate students are supported is through a fellowship. A fellowship differs from an assistantship in that students who hold a fellowship are only obligated to complete coursework and research related to obtaining their degrees. Many fellowships do have strict rules regarding the amount of outside work which a fellow may undertake. In addition, depending on the funding agency, fellows may be required to make periodic progress reports. To get more information about what fellowships are available (both university funded and externally funded) the grad school has a nice webpage at

<http://www.gradschool.cornell.edu/loans/>.

Although taxes are not withheld from fellowships paid to some U.S.

students, fellowship stipends are taxable income! Consult IRS publications and Cornell's payroll office for more information.

1.9 Career Planning

1.9.1 Career Services

The College of Engineering has its own "Engineering Career Services" whose office is located in Carpenter Hall. When we contacted the director, Mark Savage, he told us the following:

"The main thing I want graduate students to know is that they are welcome to use the services of the Engineering Career Services Office, including advising, resume critiques, job search/interview strategies, offer negotiations, and on-campus recruiting interviews. There is a rumor out there that graduate students (especially Ph.D.s) cannot use these services and they are more or less on their own, and that is incorrect.... [Our] office has traditionally had grad students on the order of nearly 50% of our registrants. We don't get a lot of opportunities for those who do pursue academic careers, but we get some and can email those to students registered in our database."

A summary of some of the services offered by this office is given below.

- A resume book is prepared by Career Services each summer. If one plans to graduate by August 2005, one must submit a resume to the office by July 15th 2004 for publication in the 04-05 resume book. The book is made available to hundreds of employers every year. For specific information about preparing a resume for inclusion in the resume book, contact Career Services.
- Every year a University-wide career fair is attended by more than 200 employers. This fair is generally scheduled around the middle of September.
- "Orientation to On Campus Recruiting" is a program which occurs several times during the first two days of the Fall Semester; graduating students are encouraged to attend this event to register for on campus recruiting opportunities. All services are web-based. Students must sign on to InterviewTRAK to learn about interview opportunities on campus. Two thirds of all job interviews occur during the Fall Semester.

- The Engineering Career Services Office is willing to speak with research groups in the College to address questions regarding job searches.
- The Cornell University Job Search Guide, available from the Career Services office, includes sample resumes, cover letters, and articles about the job search process.

The Graduate School also has a career development office <<http://www.gradschool.cornell.edu/careers>> They offer individual career counseling, career development workshops, and career development resources.

In addition to the services provided by the Engineering and Graduate School career services offices, every other semester the Engineering Graduate Student Association (producers of this fine handbook) also organizes a workshop on the academic job search. Email egsa@cornell.edu for more information. From time to time, the Big Red Barn and the Graduate School also hold career-related workshops and programs.

1.9.2 Publications to Help With Career Planning

Graduate students pursuing a Ph.D. have found the American Directory of Research & Technology (corporate Research labs) to be a very useful publication. The Engineering Library has the most recent edition.

For those seeking academic careers, check publications in your field and the Chronicle of Higher Education, available at the Engineering Library. The Chronicle also has some resources available online at <<http://www.chronicle.com>>.

1.9.3 Understanding the Process

Job searches vary between fields and types of positions being sought. However, most job searches have a few basic components in common. We summarize these below to give you an idea of what is ahead of you. However, the best preparation for a job search is to talk to your advisor, other graduate students who have already started (or finished!) their job search, or someone at career services.

When embarking on a job search, you'll probably be expected to provide most or all of the following for each position for which you apply:

- Resume or CV
- Personal/Research Statement
- References

For an interview, it may be necessary to prepare a job talk, particularly if you are interviewing for an academic position. You should also make sure that you have determined what questions you want to ask, and what factors will weigh for or against a job before you go on an interview.

Finally, most job searches end with a period of negotiation between you and your future employer. You should ask your advisor or colleagues about what aspects of the offer are likely to be open for negotiation in your field and for the specific position you are pursuing.

1.10 Graduation

Cornell awards degrees in August, January, and May each year. The commencement ceremony is in May, usually on the Sunday of Memorial Day weekend. Students who will have finished their degree requirements by the end of August are eligible to take part in the ceremony. If you finish the requirements before the graduate school sends out the graduation information (usually mid February) you will automatically receive the information. However, if you plan on finishing between February and August, you must go to the Graduate School and request the information. You must finish your requirements before the end of March to have your name printed in the graduation programs. The programs automatically contain the names of student who received degrees in the previous January and August.

One of the things the graduation information packet includes is info on getting your robe. M.S./M.Eng graduates can rent a black robe for about \$12. The robe is similar to the undergraduate robe, but nicer with the special hood. Ph.D. graduates have the special privilege of wearing a red robe which can be rented for about \$46. Graduates going into academia will want to consider buying their robes, which cost about \$700.

The information packet will also contain lists of all the activities happening during graduation weekend. There's lots of stuff for your parents and family to do!

For ceremonies, there is a university ceremony, department ceremonies, and a Ph.D. ceremony. The university ceremony starts off with all graduating students lining up on the Arts quad (Ph.D. students in front, JGSM and Law students next, Vet, Masters, and finally all undergrad seniors). The procession then marches through campus to the football stadium. As long as the weather is nice, the ceremony takes place outdoors in the stadium. If the weather is bad, the ceremonies are moved indoors. Due to limited indoor seating, graduates are only allowed 4 guests (tickets given in graduation information packet). Note that the tickets are **ONLY** important

if the weather is bad, otherwise you're allowed as many guests as you can bring.

If you are to receive your diploma at graduation, then you will receive it at your department ceremony. Larger departments have separate ceremonies for graduates and undergraduates whereas the smaller departments combine the two.

The Ph.D. ceremony is usually held on the Saturday of commencement weekend in the late afternoon. It is open to all Ph.D. grads, parents, and friends. The ceremony is much smaller than the university one. In addition to speeches by the Grad School Dean and guest speaker, each student is called onto the stage and gets to shake hands with the Grad School Dean and university President.

As a final note, if friends and family are planning on coming to watch you graduate, you should warn them to make hotel reservations very early. Since all the undergraduates are also graduating at the same time, the hotels fill up early. The same thing goes if your family would like to eat out graduation night. Make reservations early! Another alternative for graduation housing is available in the dorms on campus. For a small fee per room for the whole weekend, your family can stay in one or more dorm rooms. These are usually made available sometime in March; they are distributed on a first-come-first-served basis, but usually the housing department is able to accommodate all requests. Check the commencement information packet for more information.

1.11 Graduate Fields

1.11.1 What is a Graduate Field?

Faculty who can chair committees for graduate students are divided up into groups (called graduate fields) based on their research interests. Hence, a graduate field is a collection of faculty with similar research areas. Not all graduate fields have a corresponding department and not all departments have a corresponding graduate field. Also, a faculty member may be a member of more than one graduate field. Some faculty in the Chemical Engineering department (who participate in biomedically related research) are members of both the Chemical and Biomedical Graduate Fields.

When you apply to graduate school, you apply to a specific graduate field. Your graduate field determines the specific requirements for graduation. For example, it determines the number of minors you must complete and what classes, if any, are required.

The graduate field system at Cornell is fairly unique among universities. It gives the university and the College of Engineering flexibility, because they can create a graduate field in an up-and-coming area with less hassle and expense than would be required of a full department. If interest in the new area continues to grow, an undergraduate program and an associated department can be created later.

For a more extensive discussion of graduate fields, and a complete list and description of the Engineering Graduate Fields at Cornell, see Chapter 2.

1.11.2 Director of Graduate Studies (DGS), Director of M.Eng. Program, and Graduate Field Assistant (GFA)

Each graduate field has a Director of Graduate Studies, known as the DGS, who is responsible for M.S./Ph.D. students in his or her graduate field. The office of the DGS is responsible for maintaining graduate student records, processing applications and admissions decisions, and completing other administrative tasks. The DGS is a useful person to know if you wish to change student status, change your Special Committee, or get an opinion on any issue that you don't want to take to your own committee members for any reason.

The Director of the M.Eng. program in each department serves in a similar capacity for M.Eng. students.

The Graduate Field Assistant (GFA) for each graduate field is the administrative assistant who assists the DGS and Director of the M.Eng. program with their respective tasks. The GFA in your field is a very important person to get to know; he or she can often serve as a helpful first point-of-contact for many questions and problems. In most fields, the same GFA serves both the M.Eng. program and the M.S./Ph.D. program.

1.12 Managing a Graduate Career

There are as many strategies for approaching graduate school as there are graduate students, and no one route is right for everybody. However, we've put together some general suggestions and tips on managing your graduate career that should at least point out some of the questions to ask yourself and pitfalls to avoid.

1.12.1 Being A Successful Grad Student

There is no perfect formula for negotiating graduate school. However, many people have thought about and written on this topic, and there are some common themes that everyone who has gone to graduate school seems to focus on. We'll summarize a few of these themes here, and give you some pointers to places to get more information.

Obviously, choosing an advisor, and to a lesser degree a special committee, is pivotal in determining your experience as a graduate student. We discuss some factors in making these decisions in sections 1.12.2 and 1.4. After you have chosen an advisor, though, what else should you do to start your graduate career out right? We offer the following advice:

- Read a lot. This is particularly important in your first few years. Keep notes on the papers you read, summarizing the questions they answer, their contributions, and their shortcomings.
- Keep a research journal, with dates and details of your original work. Most graduate students are never faced with having to justify that their work is their own, but it is wise to protect yourself. It will also be useful when you are writing papers or your thesis.
- Don't be afraid to try new things. This could mean pushing your research in a new direction, taking the time to learn about a topic that might not seem directly related to your work, or even deciding to pursue a different thesis topic than the one with which you started.
- Manage your time. Set regular appointments with your advisor. Set goals for yourself throughout the week. Avoid trying to cram all of your research into the night before a meeting with your advisor.
- Find a mentor. Whether it is your advisor, another committee member, or even a faculty or researcher from another department, having a source of advice and support is invaluable.

It is also important to plan your graduate career, rather than just letting it carry you along. Keep in mind what your career goals after graduate school are. If you want to get an academic job, you might want to look into some of the teaching courses or workshops that Cornell offers (see section 1.6), or try to get extra teaching experience. You can also use summer positions to gain experience that may not be easily available within your research group.

While summers in Ithaca are beautiful, the summer is also often a good time to get outside experience, working in industry or at a research lab, or visiting a group at another university. Many Ph.D. students find that in their final year or two they prefer to focus on their thesis than to spend time away from Cornell, so you may want to look for a position elsewhere during your first couple of summers.

Most advisors are very supportive of their students and want them to succeed. However, advisors do not always have the same priorities as their students. The more you communicate your goals to your advisor, the more they can help you. Ultimately, it is your responsibility to make sure you get as much out of graduate school as possible.

1.12.2 Choosing an Advisor

Choosing your faculty advisor is probably one of the most important decisions you'll make for your graduate and research career. There are a number of books and articles written for graduate students that give advice about this crucial choice. We have summarized Cornell's rules and regulations about the advisor and the special committee in sections 1.4 and 1.5. Now, some advice on how to make a good choice.

Cornell requires that you have an advisor within three weeks of first registering in the graduate school. In some cases, this may just be a temporary advisor. Some departments assign their Director of Graduate Studies to be every first-year student's advisor, for example. Then, when you eventually decide who you want to work with, you can easily change by filling out the appropriate forms. Your advisor serves as the chair of your special committee. (See Section 1.4.)

While choosing an advisor, you should consider several factors: research interests, type of research projects, seniority, relationship with past students, usual time it takes to graduate while working with him/her, how much independence his/her students enjoy, type of funding offered, etc. Then think about your own needs and expectations. It may be difficult to find a faculty who would fulfill all of your expectations so you may have to find a balance. Different people give different weights to different factors and so the decision will have to be your own!

To find more about a faculty member's research, you should attend any seminars they give, take/audit courses they teach, and read the papers written by them in past. If you need more clarification, go talk to them. Remember, this is the beginning of a research career for you and you should really feel interested in your work. Besides, by attending classes taught by them or their talks, you will get a chance to know them better.

Regarding seniority, here is an excerpt from “How to be a Good Graduate Student” (a URL for this article is provided in the last section of this chapter) :

“How long have they been on the faculty? There are advantages and disadvantages to being one of the first members of a new research group. On the positive side, you often have more freedom to choose your research topic and to influence the direction of the group’s research. On the negative side, you may be more isolated (since there won’t be older graduate students in the group), and your advisor won’t have as much experience. . . .”

One thing to keep in mind is whether your potential advisor has tenure or not. There are advantages and disadvantages to each choice.

First, junior faculty have vast incentives to produce a lot of high-quality research. Thus, it probably won’t be hard to find a project. On the other hand, as junior faculty they are highly motivated to promote their own work. Tenured faculty may have a bit more flexibility and may be more inclined to let graduate students take the lead in research. Senior faculty, however, are not always as prolific as in their pre-tenure days, and therefore you may have to be more assertive about getting publications out and projects underway. Senior faculty generally have more “clout”, both in their research area and in their departments. It never hurts to have a senior faculty member’s backing throughout your graduate career — if not as your official advisor then as a mentor. Junior faculty are often very enthusiastic and are often actively looking for graduate students to work with.

To find out more about the relationship of faculty members with their past students, talk to the senior students and recent graduates. You should be asking questions about the nature of their interactions (how often and whether collaborative or not) and level of independence they enjoy(ed) while working with them. Ask about the average time their students take to graduate. How much interest do they take in finding a topic for their new students? Also ask about the quality of the research they do, how helpful they were in job searches, the kind of reputation they enjoy in academia and industry, etc. If you are interested in an academic position after graduation, the reputation of the advisor may be important; many in academia believe that a student will possess some of the qualities of the advisor that he/she worked with.

Type of funding you may get while working with a faculty member is

also important. If a faculty member does not get a lot of research grants, then you may have to rely on teaching assistantships and you may not get as much time to focus on your research.

Even if you were careful while choosing your advisor, it's quite possible that after some time you may find it difficult to work with him/her. Your advisor may lack the technical knowledge to help you, may not be very accessible or interested in your work, may not have a positive attitude, and, in some extreme cases, may try to harass you. In such cases, it may be advisable to consider changing your advisor. Obviously, you should not make such a decision in haste: changing advisors could mean restarting your research from scratch. Sometimes, it helps to let the faculty member know politely when your expectations are not met; talking may eliminate your grievances. You may also want to use one of the resources mentioned in section 3.7; in many cases, you may be able to find a less-drastic solution than changing advisors.

1.12.3 What is a Thesis?

The content of a thesis or dissertation varies widely depending on the faculty member who serves as your advisor. Remember, it is primarily your advisor who will decide whether or not your “writing” is acceptable as a thesis or dissertation.

Within the college of engineering itself, there are variety of thoughts and practices on this matter. One of the opinions is that each chapter (with the exception of introduction and conclusion) of your thesis/dissertation should be a publication in a refereed journal. Other advisors think that the thesis/dissertation should be a unified and coherent presentation of your research.

Your best bet is to talk to your advisor and look at a thesis or dissertation of someone who has graduated from your research group in the recent past to get a rough idea of what is expected.

Although what goes into a thesis or dissertation and in what order is a matter of taste (yours and your advisors), the Graduate School enforces a certain level of consistency among all theses and dissertations at Cornell. Before starting to write or compile your thesis, it is definitely a good idea to read the Graduate School's guidelines for theses and dissertations. These are available in booklet form from Caldwell Hall (DE4) or on the web at <<http://www.gradschool.cornell.edu/thesis>>.

Checking the guidelines ahead of time will help you avoid any major formatting changes later. Talk to your advisors and peers about how to be more efficient in this process.

In addition to the published guidelines, a member of the staff of the graduate school is responsible for checking and approving the format of all theses and dissertations submitted at Cornell. This person must approve the format of your thesis before you submit it, but the thesis advisor also has regularly scheduled office hours to help you ensure that you are meeting the thesis/dissertation guidelines as you prepare your thesis. It is especially important to see the thesis advisor if you would like to include special graphs, data, or other visuals that do not easily conform to the usual guidelines.

1.12.4 Getting More Information

The advice given here is a brief sampling of what some engineering graduate students at Cornell think is most important. For a broader perspective, there are many resources on the web about surviving and enjoying grad life. Here is a brief list of sites we recommend:

- Marie desJardins, *How to be a good graduate student*.
<<http://www.cs.indiana.edu/how.2b/how.2b.html>>
Aimed at beginning graduate students, this short introduction is considered by several Cornell students to be the standard work on what it means to be a graduate student.
- Phil Agre, *Networking on the network*.
<<http://dlis.gseis.ucla.edu/people/pagre/network.html>>
Many graduate students don't realize just how much networking is necessary to begin building a research career. This essay is an excellent introduction to some of the things you need to know about building your research network. It contains an excellent list of references as well. Agre's stated goal is to get this article into the hands of every Ph.D. student on the planet.
- Ronald T. Azuma, *So long and thanks for the Ph.D.*
<<http://www.cs.unc.edu/~azuma/hitch4.html>>
This is a good article written by a graduate school survivor.

Chapter 9 of this handbook also offers a selection of quotes from Cornell engineering graduate students about their experiences and advice.

Chapter 2

Engineering Departments, Graduate Fields, and M.Eng. Degrees

The distinction between departments, schools, graduate fields and Master of Engineering (M.Eng.) majors can get a little confusing at Cornell; a preliminary explanation is in order. M.S./Ph.D. students at Cornell are officially in the Graduate School, while Master of Engineering students are actually in the M.Eng. degree program that is run by the Office of Research, Graduate Studies, and Professional Education of the College of Engineering.

There are twelve schools/departments in the College of Engineering: Applied and Engineering Physics, Biological and Environmental Engineering, Biomedical Engineering, Chemical and Biomolecular Engineering, Civil and Environmental Engineering, Computer Science, Earth and Atmospheric Science, Electrical and Computer Engineering, Materials Science and Engineering, Mechanical and Aerospace Engineering, Operations Research and Information Engineering, and Theoretical and Applied Mechanics.

M.Eng. degree majors are, strictly speaking, different from the schools and departments. For M.Eng. students, there are 15 possible majors; Mechanical Engineering and Aerospace Engineering, for example, are distinct M.Eng. majors. There is also an M.Eng. degree in Systems Engineering, although this is not a department/ school in the College of Engineering. The M. Eng. Program also allows students to supplement their field curriculum with a “program option.” Students who chose a program option enroll in courses that satisfy elective requirements. The program options offered are Bioengineering, Financial Engineering, Manufacturing, Engineering Management, and Systems Engineering. Each M.Eng. degree has a program director that typically comes from the associated department/school.

There are a large number of graduate fields for M.S./Ph.D. students in the Graduate School at Cornell. There are actually 93 major fields and 12 minor-only fields. Of these about 15 may be said to be engineering-related. These graduate fields, like M.Eng. degrees, need not be the same as the schools/departments in the College of Engineering. For instance, one graduate field is Applied Mathematics, which is associated with the Center for Applied Mathematics (CAM). The graduate fields of Mechanical Engineering and Aerospace Engineering are distinct, though they are both affiliated with the School of Mechanical and Aerospace Engineering. The available options for different M.Eng. degrees change frequently, so it is best to check the department websites for the most current information on the current program options.

The sections in this chapter provide a brief description of each of the departments/schools/fields at Cornell University that are related to engineer-

ing. Graduate students from the specific department or field have supplied much of this information. If you find that this description is lacking in any way, please submit your suggestions and corrections to egsa@cornell.edu for inclusion in the next version of the handbook.

For general information about the College of Engineering, see <http://www.engr.cornell.edu>.

For general information about the Graduate School go to <http://www.gradschool.cornell.edu>.

2.1 Applied and Engineering Physics (AEP)

Home Page: <http://www.aep.cornell.edu/>

**Director of the School of Applied & Engineering
Physics:** Frank W. Wise

Director of Graduate Studies: Chris Xu

Director of M. Eng. Program: David Muller

Academic Programs Coordinator: Kelli Hulslander

Phone No.: (607)255-5198

Location: 212 Clark Hall (D4)

Degrees Offered: Master of Engineering (Engineering Physics), Doctor of Philosophy (Applied Physics)

Statistics:

15 active faculty

73 graduate students

The School of Applied and Engineering Physics (A&EP) is one of the departments in the College of Engineering. The undergraduate and M.Eng. major is called Engineering Physics or “EP”; the graduate field is called Applied Physics.

The M.Eng. degree may lead directly to employment in engineering design and development or may be a basis for further graduate work. Students have the opportunity to broaden and deepen their preparation in the general field of applied physics, or they may choose the more specific option of preparing for professional engineering work in a particular area such as laser and optical technology, nanostructure science and technology,

device physics, materials characterization, or software engineering. A wide latitude is allowed in the choice of the required design project.

The course of study leading to a Ph.D. in applied physics is flexible, individualized, and limited only by a student's interests. The interdisciplinary nature of applied physics enables students to enroll in courses offered by departments throughout the university, including physics, chemistry, biological sciences, astronomy, electrical engineering, computer science, mathematics, and materials science. Students who wish to do so may also take courses in a variety of nonscientific topics such as music, business, and foreign languages.

2.2 Center for Applied Mathematics (CAM)

Home Page: <<http://www.cam.cornell.edu/>>

Director of the Center of Applied Mathematics: Steven Strogatz

Director of Graduate Studies: Steven Strogatz

Administrative Manager: Dolores Pendell

Phone No.: (607)255-4335

Locations:

Center of Applied Mathematics: 657 Rhodes Hall (D6)

Graduate Office: 614 Rhodes Hall (D6)

Degrees Offered: Doctor of Philosophy

Statistics:

90 affiliated faculty members

40 graduate students

Applied Mathematics is one of the most diverse graduate fields, comprising faculty members from a wide range of disciplines such as biology, chemical engineering, chemistry, civil engineering, computer science, economics, electrical engineering, management, mathematics, mechanical and aerospace engineering, operations research, physics, and theoretical and applied mechanics. Graduate students in CAM can work with any affiliated faculty member. Students graduating from CAM go on to academic post docs, assistant professorships, industry, and government labs.

CAM faculty members work in the following principal areas of research:

Analysis

Applied logic and theory of computing

Computational mathematics

Discrete and combinatorial mathematics

Information and control theory

Mathematical biology

Mathematical finance and economics

Mechanics and dynamics

The Center for Applied Mathematics has a network of 25 CAM workstations running Red Hat Enterprise Linux with a wide range of mathematical software, including Maple, MATLAB, and Mathematica. The facility is used by graduate students, faculty and other researchers for many aspects of their work.

All students in CAM are required to complete a graduate minor in mathematics and another in an application area of their choice. CAM offers an applied mathematics minor for graduate students in other fields.

2.3 Biological and Environmental Engineering (BEE)

Home Page: <<http://www.bee.cornell.edu/>>

Department Chair of Biological and Environmental Engineering:
Michael F. Walter

Director of Graduate Studies: Daniel J. Aneshansley

Director of M. Eng. Program: James A. Bartsch

Graduate Program Coordinator: Brenda Marchewka

Phone No.: (607)255-2173

Locations:

Department: 106 Riley Robb Hall(G5)

Graduate and M.Eng. Office: 207 Riley Robb Hall (G5)

Degrees Offered: Master of Engineering (Agricultural and Biological),
Master of Professional Studies, Master of Science, Doctor of Philosophy

Statistics:

22 active faculty

61 graduate students

The field of Biological and Environmental Engineering (BEE) is consistently rated the best of its kind in the country. Graduate students come from a variety of undergraduate programs, including other fields of engineering, physics, applied mathematics, biological sciences, and the physical sciences. Roughly one-half of the students have an undergraduate degree in a subject other than agricultural and biological engineering; this diversity adds strength to the program through a constant infusion of new ideas and talent.

There are four main program areas: Biological Engineering, Environmental Engineering, Food and Bioprocessing Engineering, and Industrial Biotechnology.

Within these, there are ten specialization areas:

Biological Engineering

Energy

Environmental Engineering

Environmental Management (MPS only)

Food and Fiber Processing Engineering

International Agriculture

Local Roads Engineering

Machine Systems

Soil and Water Engineering

Structures and Environment

Facilities of the department include a microcomputer center within Riley-Robb, a machine shop, and an up-to-date copy center. In addition to those in Riley-Robb Hall, laboratory facilities are located at the Animal Science Teaching and Research Center at Harford, New York, and the nearby Agricultural Waste Management Laboratory and Pilot Plant. Students also have shared access to greenhouses. The University has mainframe computers accessible to remote users.

2.4 Biomedical Engineering

Home Page: <www.bme.cornell.edu>

Director of Biomedical engineering Program: Michael L. Shuler

Director of Graduate Studies: Michael L. Shuler

Graduate Studies Coordinator: Shelby Clark-Shevalier & Belinda Floyd

Phone No.: (607)255-1003

Location: Graduate Office: 270 Olin Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

50 active faculty

81 graduate students

A program leading to the M.S. and Ph.D. degrees in any traditional field of engineering may involve coursework and research in some area of bio-engineering. In addition, Cornell has established a graduate program in biomedical engineering. This new graduate field includes faculty from the Cornell University Medical College in New York City. The M.Eng. program focuses on giving students experience in biomedical engineering practice and design. The MS/PhD program has five areas of emphasis: biomedical instrumentation and diagnostics; biomaterials; drug delivery, design, production and metabolism; systems biology; and biomedical mechanics.

Industrial R&D in this field is growing at a rapid pace, especially in small firms with flexible employees who have the ability to quickly transform new discoveries into completed products. In such environments, Ph.D.-level engineers work on teams whose duties range all the way from initial investigations to practical marketing. This program will prepare its graduates for this expanding research environment at the interface between engineering and the life sciences. Throughout their program, students work closely with biological and clinical scientists, integrate knowledge from a broad range of fields to synthesize solutions, and use their technical problem-solving skills to translate ideas into needed products.

2.5 Chemical and Biomolecular Engineering (ChemE)

Home Page: <<http://www.cheme.cornell.edu/>>

Director of the School of Chemical Engineering: Paulette Q. Clancy

Director of Graduate Studies: Fernando Escobedo

Director of M.Eng. Program: William L. Olbricht

Graduate Studies Coordinator: Shelby Clark

Phone No.: (607)255-4550

Locations:

Department: 120 Olin Hall (C6)

Graduate and M.Eng. Office: 358 Olin Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

17 active faculty

89 graduate students

The field of chemical engineering offers advanced degree programs to prepare its students for research and technical careers in industry, academia, and government. The program strikes a balance between the science of chemical engineering and its implementation through synthesis — a blend that provides a strong base in the discipline’s fundamentals while developing in its students the skills to apply these fundamentals to significant engineering problems.

The research in the department is divided into four main areas:

Biomolecular Engineering

Complex Fluids and Polymers

Nanoscale Electronics, Photonics and Materials Processing

Sustainable Energy Systems

Specializations in Energy Economics and Engineering and in Medical and Industrial Biotechnology are a feature of the Master of Engineering (Chemical) degree.

2.6 Civil and Environmental Engineering (CEE)

Home Page: <<http://www.cee.cornell.edu>>

Director of School of Civil and Environmental Engineering: Philip Liu

Director of Graduate Studies: James Bisogni

Chair of M.Eng. Program: James Bisogni

Graduate Program Coordinator: Tania Sharpsteen

Phone No.:

School: (607)255-3438

Graduate/M.Eng. Office: (607)255-7560

Locations:

School: 220 Hollister Hall (C6)

Graduate and M.Eng. Office: 219 Hollister Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

26 active faculty

125 graduate students

The School's research facilities, housed in Hollister Hall (C6) and Thurston Hall (C6), include separate laboratories for research in environmental engineering, hydraulic engineering, environmental fluid mechanics and hydrology, geotechnical engineering, remote sensing, materials of construction, structural modeling, and static and dynamic loading of large structural components and systems. Distributed computational facilities are available to graduate students.

The School offers two distinct graduate degree programs. The first is a research-oriented program leading to the degrees of Master of Science and Doctor of Philosophy. It is intended primarily for students seeking research or academic careers, although a number of degree recipients do enter professional practice. The second program is a two-semester professional course of study leading to the degree of Master of Engineering. It is intended primarily for those who plan to enter professional engineering practice or management, but it can also be used as preparation for the Ph.D. program. Both the M.S. and Ph.D. degrees require a thesis, while the M.Eng. entails a 6-credit group project.

The School is organized into three primary Mission Areas, with subdisciplines within each area. Note that the subdisciplines coincide with the 9 graduate concentrations within the graduate field of CEE.

Civil Infrastructure

Civil Infrastructure Systems

Structural Engineering

Geotechnical Engineering

Environment

Environmental Engineering

Environmental and Water Resources Systems Engineering

Environmental Fluid Mechanics and Hydrology

Systems Engineering & Information Technology

Transportation Systems Engineering

Remote Sensing

Engineering Management (M.Eng. only)

Each of the Mission Areas and several of the subdisciplines sponsor seminar series.

2.7 Computer Science (CS)

Home Page: <<http://www.cs.cornell.edu/>>

Director of the Department of Computer Science: Eva Tardos

Director of Graduate Studies: Dexter Kozen

Director of M.Eng. Program: Graeme Bailey

Ph.D. Program Coordinator: Becky Stewart

M.Eng. Program Coordinator: Stephanie Meik

Phone No.: (607)255-7316 (School) or (607)255-8720 (Grad Office)

Location: 4130 Upson Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

28 active faculty

212 graduate students

The department is consistently ranked in the top 5 Computer Science programs for both its graduate and undergraduate programs. Created in 1965, it is one of the oldest CS departments in the country and home to two Turing Award winners. Undergraduates at Cornell can major in Computer

Science from both the College of Arts and Sciences and from the College of Engineering.

Some of the areas of research in the CS department include applied logic, artificial intelligence, computer vision, databases, digital libraries, natural language processing, networking distributed systems, programming languages, scientific and engineering computing, systems, and theory. The department has close ties to industry and many students spend a summer or two working at an industrial research lab. The Computer Science department is located on floors 3 through 5 of Upson Hall (C6) and has some space in Rhodes Hall (CD6). Facilities include over 500 computers, and there is also a technical support staff.

The department of Computer Science also has close ties to the newly formed Office of Computing and Information Science. This new office was formed to draw together the role of computing in a range of disciplines across the entire university.

2.8 Earth and Atmospheric Sciences (EAS)

Home Page: <<http://www.eas.cornell.edu>>

Chair of Department of Earth and Atmospheric Sciences: Larry Brown

Co-Chair of Department of Earth and Atmospheric Sciences: Art DeGaetano

Director of Graduate Studies: Geological Sciences,
William White

Director of Graduate Studies: Atmospheric Sciences,
Dan Wilks

Director of M.Eng. Program: Larry Cathles

Phone No.: (607)255-5466

Location: 2124 Snee Hall (C6)

Degrees Offered: Master of Engineering (Geological Sci.), Master of Science (Geol. Sci.), Master of Science (Atmospheric Sci.), Doctor of Philosophy (Geol. Sci.), Doctor of Philosophy (Atmospheric Sci.)

Statistics:

- 22 active faculty, 6 senior research staff and senior lecturers
- 38 graduate students

The Department of Earth and Atmospheric Sciences is associated with two graduate fields. The Geological Sciences Graduate Field is based in Snee Hall (C6). The Atmospheric Science Graduate Field is based on the 11th floor of Bradfield Hall (E5). These programs are designed to give students broad and formal training in the basic sciences as well as in the field and to provide extensive practical experience through research in their specialty. The exceptional flexibility of Cornell's graduate program provides ample opportunity for students to work across disciplinary areas.

Research concentrations can be pursued in atmospheric science, economic geology, engineering geology, environmental geophysics, general geology, geobiology, geochemistry and isotope geology, petrology, planetary geology, Precambrian geology, Quaternary geology, rock mechanics, sedimentology, seismology, stratigraphy, structural geology. Students may also pursue a minor in marine geology. Faculty members in other fields or divisions offer interdisciplinary courses including paleobotany, ecology and systematics, biogeochemistry, environmental fluid mechanics and hydrology, geotechnical and earthquake engineering, hydraulics and hydrology.

The Geological Science graduate field and the Atmospheric Science graduate field programs are designed to give students broad and formal training in the basic sciences as well as in the field, and to provide extensive practical experience through research in their specialty. EAS research spans the globe! Students travel internationally to experience hands-on research in the field, while the Ithaca region itself is particularly well suited for research in stratigraphy, paleontology, geomorphology, and glacial geology. The nearby Adirondack area is classic for studies of igneous and metamorphic petrology, and much of the Appalachian orogenic belt is readily accessible.

EAS also maintains campus collaborations with Cornell's new Energy Institute, the KAUST-Cornell Center for Energy and Sustainability, the Cornell Center for Materials Research, and the Cornell Center for a Sustainable Future. EAS is home to the Northeast Regional Climate Center (NRCC), the Water Resources Institute (WRI), the Paleontological Research Institution (PRI), and the Institute for the Study of the Continents (INSTOC).

For further information about the programs EAS offers in the Earth Systems Sciences, go to: <http://www.eas.cornell.edu/cals/eas/academics/graduate/grad-geosci-msphd.cfm>

2.9 Electrical and Computer Engineering (ECE)

Home Page: <<http://www.ece.cornell.edu/>>

Chair of School of Electrical and Computer Engineering: Tsuhan Chen

Director of Graduate Studies: Rajit Manohar

Director of M.Eng. Program: C. Richard Johnson

Graduate Field Coordinator (M.Eng. and Ph.D.): Scott Coldren

Phone No.: (607)255-4109

Locations:

Department Office: 224 Phillips Hall (C6)

Student Services Office: 223 Phillips Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

40 active faculty

275 graduate students

The scope of Electrical Engineering is wide, and the traditional image of circuits and soldering irons is little related to most of the activity here. The biggest groups of graduate students and faculty are working on semiconductors and on signals and systems, but computer engineering is rapidly expanding, and there is active research in optics, plasmas and space physics, microwaves and antennas, and power systems and control. Signals and systems is primarily concerned with telecommunications issues such as signal processing, wireless communications, and information theory. Semiconductor research here is shaped by the Nanofabrication Facility, so while there is work on VLSI design, the primary focus is on novel fabrication processes, thin films, and micromachines. The addition of Duffield Hall has dramatically expanded Cornell's nanofabrication capabilities.

The classrooms, offices, undergraduate laboratories, and many of the graduate research laboratories are housed in Phillips Hall and in Rhodes Hall. Among the graduate research laboratories are those devoted to communications, computer engineering, control systems, digital signal processing, high-energy particle beams, integrated circuits, ionospheric physics and

radio-wave propagation, lasers and optoelectronics, microwave and semiconductor devices, and semiconductor material preparation and characterization. Faculty members and graduate students use the facilities of the following centers, laboratories, and programs: the Center for Applied Mathematics, the Electronic Packaging Program, the Laboratory of Plasma Studies, the Materials Science Center, and the Cornell Theory Center. In addition, the facilities of the Cornell Nanofabrication Facility, the National Astronomy and Ionosphere Center (Arecibo, Puerto Rico), and the Jicamarca Radio Observatory (Peru) are available. All research areas are served by a variety of computing resources. These include networked multi-MIP workstations, PCs, and the Cornell Supercomputing Facility.

2.10 Materials Science and Engineering (MSE)

Home Page: <<http://www.mse.cornell.edu/>>

Director of the Department of Materials Science and Engineering: Emmanuel Giannelis

Director of Graduate Studies: Bruce van Dover

Director of M.Eng. Program: David Grubb

Graduate Field Asst./MEng Asst.: Joseph C. Sweet

Phone No.: (607)255-9617

Location: 214 Bard Hall (C6)

Degrees Offered: Master of Engineering, Master of Science, Doctor of Philosophy

Statistics:

13 active faculty

48 graduate students

The department of Materials Science and Engineering offers both undergraduate and graduate degrees. The M.S./Ph.D. program is research-oriented and requires a thesis. There are no specific credit requirements, although 9 to 12 courses are usual. M.Eng. students work with a faculty advisor on a design project (12 credits) and take courses for at least 18 credits. Enrollment in the M.Eng. program has typically been small.

The faculty members in the department do research in areas of metals, ceramics, polymers, surface and interface science, electronic materials, solid

state-chemistry, and mesoscopic and nanostructure materials. Advances in the understanding and development of materials have been crucial in many developments of modern technology, such as computers and other electronic products.

The department of Materials Science and Engineering is located in Bard, Thurston, and Kimball Halls (all C6), on the engineering quadrangle. Facilities in individual laboratories include equipment for electron spectroscopy, deep-level transient spectroscopy, differential scanning microscopy, infrared and Raman spectroscopy, low-energy electron diffraction, mass spectroscopy, mechanical testing at high temperatures and pressures, optical and interference microscopy, reactive ion-beam etching, scanning tunneling, and atomic force microscopy. The department operates a joint facility for materials preparation and mechanical testing.

Much of the research is conducted in connection with the interdisciplinary Materials Science Center, one of the largest such university centers supported by NSF, which encompasses research from nine schools and departments. The Center's extensive facilities, three of which are located the Bard and Thurston, include laboratories for electron microscopy, Rutherford backscattering spectroscopy, crystal growth, x-ray diffraction, and computing.

Various other interdisciplinary centers and programs at the university provide valuable facilities and opportunities for interaction with researchers in other fields. They include the Cornell Nanofabrication Facility, the SRC Program in Microscience and Technology, the Cornell High Energy Synchrotron Source, and the Advanced Electronic Packaging Facility.

2.11 Mechanical and Aerospace Engineering (MAE)

Home Page: <<http://www.mae.cornell.edu/>>

Director of the Sibley School of Mechanical and Aerospace Engineering: Lance Collins

Directors of Graduate Studies: Charles Williamson (Aerospace), Marjolein van der Meulen (Mechanical)

Chairman of the M.Eng. Committee: Ephraim Garcia

Graduate Program Coordinator: Marcia Sawyer

Phone No.: (607)255-3623

Location: Graduate/M.Eng. Office: 107 Upson Hall (C6)

Degrees Offered: Master of Engineering (Aerospace), Master of Engineering (Mechanical), Master of Science (Aerospace), Master of Science (Mechanical), Doctor of Philosophy (Aerospace), Doctor of Philosophy (Mechanical)

Statistics:

31 active faculty

122 graduate students

The Sibley School of Mechanical and Aerospace Engineering offers M.S. and Ph.D. programs, which provide advanced levels of training suitable for students pursuing careers in research and development, education, or advanced engineering analysis and design. The department focuses on research at a fundamental level rather than applications.

The major areas of research in Mechanical Engineering are:

- Biomechanical engineering
- Combustion
- Energy and power systems
- Fluid mechanics
- Heat transfer
- Materials and manufacturing engineering
- Mechanical systems and design
- Multiphase flows

The major areas of research in Aerospace Engineering are:

- Aerodynamics and Aeroacoustics
- Computational Fluid Dynamics
- Dynamics and Control
- Fluid Dynamics
- Microgravity Granular Flows
- Reacting Flows
- Turbulence
- Combustion

2.12 Operations Research and Information Engineering (ORIE)

Home Page: <<http://www.orie.cornell.edu>>

Director of the School of Operations Research and Information Engineering: James Renegar

Director of Graduate Studies: Adrian Lewis

Associate Director of M.Eng. Program: Mark J. Eisner

Graduate Program Coordinator: Kathy King

Phone No.: (607) 255-4856

Locations:

Department Office: 204 Rhodes Hall (C6)

Graduate/M.Eng. Office: 201 Rhodes Hall (C6)

Degrees Offered: Master of Engineering (Operations Research and Industrial Engineering), Doctor of Philosophy (Operations Research)

Statistics:

21 active faculty

123 graduate students

The faculty members in the school of Operations Research and Industrial Engineering are evenly divided among three subdisciplines: mathematical programming, applied probability and statistics, and manufacturing systems engineering. Several are also consultants to industrial organizations, and research is often conducted directly with a cooperating company, (e.g. in automotive or semiconductor manufacturing).

The Master of Engineering program is a one-year professional degree that stresses applications of operations research and industrial engineering and requires completion of a project. Students can select special options in manufacturing or financial engineering. Most graduates work for companies that specialize in manufacturing or logistics, consulting, financial services, information technologies, or transportation.

Ph.D. students are encouraged to select at least one minor subject outside of operations research; typical choices are computer science, econometrics, environmental systems engineering, managerial economics, mathematics, and hotel or business administration. Graduating students have gone to both academic and industrial positions.

2.13 Theoretical and Applied Mechanics (TAM)

Home Pages: <<http://www.tam.cornell.edu/>>

Chair of Department of Theoretical and Applied**Mechanics:** Timothy J. Healey**Director of Graduate Studies:** Wolfgang H. Sachse**Director of M.Eng. Program:** Chung-Yuen Hui**Student Services Coordinator:** Cindy Twardokus**Phone No.:** (607)255-5062**Location:** 212 Kimball Hall (C6)**Degrees Offered:** Master of Engineering (Engineering Mechanics), Master of Science, Doctor of Philosophy**Statistics:**

13 active faculty

33 graduate students

The research in this department can be divided in three broad fields: solid mechanics and mechanics of materials, dynamics and space mechanics, and fluid mechanics. This department places great emphasis on interdisciplinary research. The faculty and graduate students often interact closely with researchers from various other fields like Materials Science, Mechanical Engineering, Computer Science (for computational issues in mechanics), Structural Engineering, and Physics. There are some crosscutting research areas in TAM, such as biomechanics, mathematical biology, computational mechanics, microelectromechanical system (MEMS), applied mathematics, and manufacturing.

The department has laboratories well equipped for work in stress analysis, vibration, nonlinear dynamics and chaos, ultrasonics, dynamic and fatigue fracture, composite materials, metal cutting, and inelastic deformation of materials. State-of-the-art facilities for materials processing and characterization are available through the Cornell Center for Materials Research. These include electron microscopy, atomic force microscopy, X-ray diffraction, sample preparation, and mechanical testing. In addition, the facilities of the Cornell Nanofabrication Facility are available for design, fabrication, and testing of MEMS.

The department maintains a comprehensive, networked computer facility comprised of PCs, Macintosh, SUN, and DEC Alpha workstations. Software for numerical computation includes Macsyma, Mathematica, MATLAB, ABAQUS, and IMSL, as well as most programming languages. The

computer facility is networked to all other university computing facilities including the Cornell Theory Center.

Though the department does not offer its own baccalaureate program, it is responsible for teaching engineering math (freshman and sophomore level) to all engineering students. The department also offers courses in mechanics and dynamics for sophomore students. The graduate students in the department are TAs for these classes. Thus, TAing in TAM is a different experience, as one has to teach students from other areas. Also, all engineering students have to take math classes and thus pass through TAM TAs. Hence, TAM graduate students affect each class of Cornell Engineering undergraduates.

The students graduating from the department have found jobs in a variety of engineering industries from aerospace to electronic packaging. A number of students have also successfully chosen academic careers and secured tenure track positions at prestigious universities across the nation.

Chapter 3

Work and Study at Cornell

One of the adjustments to starting grad school is figuring out how to do the work of a graduate student. Your department and your advisor should help you out here, but there are many resources that Cornell provides as well. These resources can help you with day-to-day aspects of being a grad student, as well as more unusual needs. This chapter summarizes some of the most common resources that grad students use. However, you should also ask around your own department (the faculty, the graduate students, and the staff) if there are labs, storerooms, photocopiers, or other facilities that grad students in your department use. Access to these things is sometimes available only if you ask.

3.1 Library System

The Cornell University Library is one of the largest academic research libraries in the United States. Within the CU system there are 23 libraries, housing over seven million printed volumes, more than 60,000 journals, and over 1,000 networked resources. The Library Gateway at <http://www.library.cornell.edu/> can help you locate books and find out how to use various library resources, including information on each of the branch libraries. The Ithaca campus library branches are:

- Adelson Library (Cornell Lab of Ornithology), Sapsucker Woods Road
- Africana Library, Africana Studies and Research Center (C1)
- Catherwood Library (Industrial and Labor Relations), Ives Hall (CD5)
- CISER (Cornell Institute for Social and Economic Research), Pine Tree Road
- Engineering Library, Carpenter Hall (C6)
- Entomology Library, Comstock Hall (D5)
- Fine Arts Library, Sibley Hall (C3)
- Hotel School Library, Statler Hall (C5–6)
- Law Library, Myron Taylor Hall (B6)
- Library Annex (Storage Facility), Palm Road
- Johnson Graduate School of Management Library, Sage Hall (C5–6)
- Mann Library (Agriculture, Life Sciences, & Human Ecology) (E4)

Mathematics library, Malott Hall (D4-5)
Music Library, White Hall (B4)
Olin Library (Graduate/Research library) (C5)
Physical Sciences Library, Clark Hall (D4)
Rare and Manuscript Collections, Kroch Library, access
via Olin Library (C5)
Uris Library (Undergraduate library) (BC5)
Veterinary Library, Veterinary Education Center (HJ4-5)

A definite plus for graduate students is that for non-reserve texts, the checkout period is six months. Unfortunately, for periodicals at the Engineering Library (including most journals) the checkout period is one day. This is an attempt to balance between the high demand for many periodicals while allowing time to take a periodical back to your office to read a single article and/or do photocopying. Many other branch libraries only allow periodicals to be taken out for an hour at a time, so this works out to be a good compromise.

There are online facilities for the library system that allow for periodical searches and interlibrary loans. In addition, the library provides access to many journals on-line. These journals will be flagged as a "networked resource" if you do a normal search of library catalog (<<http://catalog.library.cornell.edu>> or you can search through a listing of all electronic journals at (<<http://erms.library.cornell.edu>>).

The electronic journal system continues to be developed as of the printing of this handbook; for up to date information you should go to the main library webpage mentioned above or contact a Cornell librarian. Note that a handy feature of the main Cornell library website is the 'Ask a Librarian' live chat service.

The Engineering Library (<<http://astech.library.cornell.edu/ast/engr>>), in Carpenter Hall (C6), is the most significant library for most engineers and houses many volumes of engineering periodicals and texts. There are photocopying facilities on the first floor and a large computing center, the Academic Computing Center (ACCEL), on the second floor. More information about ACCEL appears in section 3.2.5.1.

3.2 Shops, Services, and Research Resources

Almost everything work related that you'll need to buy as a graduate student, whether it be textbooks, lab equipment, or office equipment, is available on campus. There are also a wide range of machine shop, photocopying, computing, and consulting services available on campus. This is a

summary of some of the most common places that grad students use. You should also ask your advisor and other grad students in your research group if there is a place they prefer you to use. One advantage to using on-campus stores and services is that you can almost always charge expenses directly to a research charge account (check out Section 3.4.1 for more information on this). However, if you're spending your own money, there may be places around Ithaca or on the internet that charge less.

3.2.1 The Cornell Store (C5)

The Cornell Store (<http://www.store.cornell.edu/>) carries a wide range of merchandise, including course textbooks, office supplies, Cornell paraphernalia, general books, art supplies, greeting cards, CDs, and even some dorm-type supplies. It is the only store in town that orders course books, including texts for all of the courses offered in the engineering college, though if you're willing to go to some trouble to save some money, there are internet textbook sellers and some used book sources around Ithaca. In general, the campus store is not cheap, but, located in the middle of campus near McGraw Tower, it is conveniently close to the Engineering Quad.

Other features of the campus store include a snack food center, film processing, a computer store, stamp vending machines, a Tompkins County Trust Company branch, a CFCU branch, and ATMs for the Trust Company and CFCU. (A branch and ATM for the third major Ithaca bank, M&T Bank, is located in Willard Straight Hall(B5), just across Ho plaza from the store.)

3.2.2 Machine and Component Shops and Stock Rooms

There are several machine and component shops and services on campus, which could be beneficial to graduate students in engineering. Listed below are some of the more significant services. The two major design and fabrication facilities on campus are the Advanced Design and Fabrication Facility and the Laboratory of Atomic and Solid State Physics (LASSP) Main Machine Shop, but there are a number of other shops, some specialized to particular types of jobs. These facilities will all allow you to charge the work to a research charge account; check Section 3.4.1 for information on how to charge things to your advisor's account.

Advance Design and Fabrication Facility, Upson Hall (C6)**LASSP Machine Shop and Stockroom, Clark Hall (D4)**

<http://www.lassp.cornell.edu/lassp_data/LASSP/facilities.html>

These two facilities will do design and fabrication jobs for you. They can provide technical assistance in design and also offer labor and machine time. If you think you may have special needs, you should go and talk to the managers of these facilities. It is very likely that they have come across your problem before and even if not, they may have some excellent suggestions. LASSP also runs a graduate student machine shop (managed by Nate Ellis, 255-3951) that graduate students and other researchers can use.

Both of these facilities also have stockrooms that carry inventories of general-purpose items for any laboratory, like nuts and bolts and common materials like cold rolled steel, aluminum, etc.

The LASSP stockroom also carries items for simple electrical circuits like BNC cables, resistors, capacitors, some common chips, common parts, and adhesives. If you think you need something in your lab for research, it's very likely that the LASSP stockroom will have it. See <<http://www.lassp.cornell.edu>> for more information. You might also check with the Technical Operations Laboratory in LASSP, or the Newman laboratory stock room (255-3355).

Cornell Center for Materials Research (CCMR)

<<http://www.ccmr.cornell.edu/facilities>>

CCMR has useful facilities all over campus, and grad students can usually use their services and equipment even if they are not affiliated with CCMR (though check if the particular resource you want to use is available to you). A full list of their facilities is available at the website listed above.

CCMR has a small but neat and very useful machine shop in the basement of Bard Hall (C6). To use this, you need to see John Sinnott in B-57 Bard Hall, jps39@cornell.edu, 255-3371.

The sub-basement of Bard Hall (C6) and first floor of Snee Hall (C6) house a useful facility for microscopy — optical, scanning electron and tunneling. If you want to see something 'small' and are not sure whether you can do it or how you should do it, see John Hunt in SB56 Bard, hunt@ccmr.cornell.edu, 255-3789. There is an ion beam facility in Bard Hall and electron beam instruments in Snee Hall.

The CCMR computer facility is located in Clark Hall (D4).

Cornell Nanofabrication Facility (CNF)

<<http://www.cnf.cornell.edu/>>

The CNF maintains a collection of equipment and expertise which they make available to researchers at Cornell and from around the U.S. to fabricate very small structures. (They define “very small” as a structure with critical dimensions less than 100 nm.) Much of the work of the CNF involves using technology developed by and for the semiconductor industry for other purposes — such as developing very small mechanical devices. They particularly encourage research on topics not usually associated with nanotechnology.

Getting started with the CNF requires the submission of a two-page proposal as well as some training. See their webpage for more information. The CNF is now located in the new Duffield Hall(C6).

Emerson facility, Rhodes Hall (CD6)

<<http://www.mae.cornell.edu/maelab/EMERSON.htm>>

This is primarily meant for use by undergraduates in Mechanical Engineering for their course work and other small projects. Some of the machines have demand for usage from local industry. Graduate students and researchers in various engineering departments can also use this facility. For this, one should first talk to George Petry (gp22@cornell.edu) and figure out which machines and how much time are needed in the shop. One then needs to get approval from the faculty in charge of the facility.

EE components shop, Phillips 120 (D6)

Cornell doesn't provide much in the way of an electronics stockroom, but there is one resource. Bill Mutch in 120 Phillips Hall maintains a limited stock of components for classroom use, particularly for EE 215 and EE 315. If you are a TA, or are doing a project for a class or professor, parts may be purchased with a charge number. It seems to be impossible to pay cash or to use a student account though, so if you tinker with electronics on your own, you're out of luck here. An excellent range of resistors and capacitors is available, along with basic digital logic, a few transistors and op amps, and an array of wire and cable.

If you want to get EE components for a personal project, or if you need something not carried in Phillips 301, you'll probably need to go to a local store. Rad-Tronics at 1005 N. Cayuga St. (273-8026) is a good bet. While the shop is little more than a garage and business hours are limited, the

stock is phenomenal and the owner, Tito, is a character to match. For true-blooded electronics hackers, a visit there is not to be missed.

Chemistry Stock Room, G75 Olin Laboratory (D4)

<<http://www.chem.cornell.edu/kda1/stock.html>>

The Chemistry stock room carries a range of chemicals, lab supplies, office supplies, and other items. The stock room catalog is available on their webpage. They also sell \$40 copy cards that you can charge directly to your advisor's research charge account and then use at photocopiers in the Cornell libraries.

3.2.3 Biological Statistics Consulting

The Department of Biological Statistics and Computational Biology provides free statistical consulting to members of the Cornell community. Members of the department faculty are the main consultants and sessions are usually attended by students who observe as part of their course requirements. Arrangements for continuing sessions are made as needed. To make a consulting appointment, or for more information, go to their webpage at <<http://www.cscu.cornell.edu/>>.

3.2.4 Imaging and Copying

Some departments or research groups provide in-house imaging services. Most departments provide local photocopiers and a mechanism for charging work-related copies to the appropriate account. Ask your advisor for information. Some advisors have their own photocopiers and prefer to have students use them. Copies made as a teaching assistant can generally be charged to a class account, which the professor can provide. You might also want to ask if you can get a personal copier code to use for your own course work.

If these resources aren't available, or if you have more extensive needs than what your department offers, there are other places you can go. Public photocopiers are available in the Engineering Library. If you will be making many copies, there are cheaper places in Collegetown or downtown. Some of your options are described here.

Image Laboratory, Vet School (HJ4-5)

The Image Lab provides graphics and imaging services to the Cornell University College of Veterinary Medicine and other departments in the university for a fee. Their services include digital photography, illustration, and reproduction of slides and other materials. If you're presenting your research, they can print a really nice poster for you (they'll even help you design it) but they can be very expensive. More information is available on their website.

CCMR Printing Facilities

The Cornell Center for Materials Research Computing Facilities in Clark Hall (D4) can print full-size, color posters for you on one large sheet of paper. Their webpage has a full description of the equipment they have, along with the contact information: <<http://cf.ccmr.cornell.edu/overview/>>.

Library Copy Centers

<<http://www.library.cornell.edu/olinuris/ref/info/photocopy.html>>

In the basement of Olin Library, there is a convenient and cheap copy center that provides several services including binding, photocopying, laminating, and note pads. Bindery services, including stapling, collating, padding, folding, cutting, etc., are available for an additional small fee. They have the ability to copy books, transfer records from microfilm or microfiche to paper, prepare labels (dry gum and adhesive), laminate, spiral bind and produce oversize copies.

Mann library (E4) also has the resources to print out posters on one large sheet of paper. The print quality is good and the price is very reasonable (\$8 per foot). The instructions for using these specialized printers can be found here:

<<http://www.mannlib.cornell.edu/computing/printingandscanning/printing/plotter.cfm>>.

Library Copiers

All of the Cornell Libraries, including the Engineering Library, have photocopiers that can be operated either with coins for \$0.15 a copy or copy cards for \$0.10 a copy. You can purchase copy cards at machines in the library. You can also go to the chemistry stock room in Baker (CD3-4), the main desk at Mann library (E4), or to the Eastern Copy Products office

(5-4663) in 279 Clark Hall (D4) and purchase a copy card on a research charge account. This option is very useful if your advisor is willing to pay for copies, since it allows you to copy articles in the library without paying for them yourself. As an alternative to copiers, there are scanners available at various computer stations on both floors of the Engineering Library; by using Adobe Professional, the scanned pages can be assembled into a single PDF document.

Copying facilities, local stores

There are several other copying facilities in Ithaca that are also convenient and easy to use, and may even be less expensive for some jobs. The closest copy store to campus is KC Copy (272-6525) on Dryden Rd. You can also get copy jobs done at Staples or Gnomon Copy (273-3333), both on Rt. 13 S., or at Kinkos on State St.

3.2.5 Computing

Personal computers are essentially office furniture today, and many research groups will provide a personal computer for each of their M.S./Ph.D. students. Some professors will even buy their students computers for their office, so let your advisor know if you have computer needs. Cornell Information Technologies (CIT) provides extensive computer labs and computing services around campus, and many departments have labs for undergraduate courses and/or graduate student research as well.

3.2.5.1 Computer Labs

<<http://www.accel.cornell.edu/>>

The Academic Computing Center (ACCEL) is the newest and largest public computer lab on the Engineering Quad. It has four classrooms with a total of approximately 105 workstations. Center resources are available to the Engineering community and the general Cornell community for scheduled instruction and walk-in use. Also, a seven seat lab, the Yellow Room, can be reserved for small group sessions. Machines have Windows NT and Linux available, with a wide selection of software for engineering and general purpose computing. Accounts on these machines are freely available with on-the-spot registration for accounts.

For general information about other CIT labs across campus see <<http://www.cit.cornell.edu/>>

For more information about department computing facilities, ask your advisor or other graduate students.

3.2.5.2 Cornell Theory Center (CTC)

The Cornell Theory Center (CTC) is Cornell's cyberinfrastructure portal. It provides services including high-performance computing, data archiving and mining resources, high-speed networking, Web-based computing, and visualization and applications expertise.

The CTC also offers a variety of free Web-based training tools for using the CTC systems, which can be accessed at this site: <<http://www.tc.cornell.edu/service>>

In the past, the CTC has given a two-day workshop on high-performance computing, which is a very helpful crash course in using the CTC systems.

3.2.5.3 NetIDs and the Campus Network

All Cornell students - undergraduate, graduate, and professional students - are assigned a Cornell NetID. This four to six character alphanumeric code is your unique Cornell identifier. Unlike your Cornell ID number or your Social Security number, your NetID is public. You'll be asked to use it to identify yourself for a range of purposes around campus.

Your NetID is your username on the Cornell computer network. When someone searches for you on in the Cornell directory, your NetID plus "@cornell.edu" (e.g. abc123@cornell.edu) is the e-mail address that will be given by default. Furthermore, Cornell, and the College of Engineering in particular, use this e-mail address to send out important announcements. You should make sure that you check your e-mail here on a regular basis. If you are given a separate e-mail account by your department, you should check both addresses; you will probably want to forward the e-mail from one account to the other.

Finally, you will need your NetID to access Cornell's Bear Access and Just the Facts systems. Bear Access allows you to send e-mail, access the web, search the library card catalog online, and connect to Just The Facts. Just The Facts lets you check your registration status, bursar bills, and transcript, pre-enroll for classes, and change your mailing address, permanent address, and summer address listings. Bear Access and Just the Facts are installed on the computers in all of the CIT public labs.

For these reasons, it is important for you to find out what your NetID is. The easiest way to get your NetID is to go to the walk-through registration for new grad students at the Field House. Look for the table where they are handing out NetIDs and passwords. If you miss walk-through registration, or want to get it before then, you should go to the first floor of the Computing and Communications Center (D4). Wherever you pick up your NetID and password, you will probably be urged to take the CIT com-

puter training. This one-hour class used to be obligatory, but it isn't any longer. Most graduate students who have been using e-mail and computer networks for several years don't find it useful. If you choose not to take it immediately, CIT offers this and other workshops (such as how to design a webpage) for free at other times throughout the year. You can also get information about using the Cornell network, Bear Access, and other CIT resources at the CIT webpage: <<http://www.cit.cornell.edu/>>.

3.2.6 Thesis Binding

Once you've completed all your thesis/dissertation work, you'll likely want to bind it as a hardcover book. (If you've written a master's thesis, you'll actually be required to submit two bound copies to the Graduate School. Doctoral dissertations must be submitted unbound, but you'll probably want to bind at least one copy for your advisor.) There are several ways to bind your completed work, and they vary in cost and time required.

One option is to go to a place like Kinko's (605 W. State, 272-0202) to have all the photocopying and binding done at one location. Just bring them the original document, and they will photocopy the additional copies and do the hardcover binding. Gnomon Copy (720 S. Meadow, 273-3333) has a similar service, except that they send out the binding to another business rather than doing it on the premises. This one-stop-shopping is convenient, but it is more expensive.

Another (often cheaper) option is to have the photocopying done at one location and the actual binding at another place. Several places that provide photocopying include Gnomon Copy, The WordPro (410 E. Upland, 257-0700), and Staples (Rt. 13 South, by K-Mart, 272-0240). The primary local business that provides hardcover binding is Ridley's Book Bindery (2345 N. Triphammer, 257-0212), and they have turnaround service in as little as one day (though you'll have to pay a little more!).

Remember that all copies of your work that you submit for official purposes must be photocopied on archival paper, so be sure to request it. You can save money on versions for yourself and family by photocopying them on standard paper and binding them with softcovers, but after spending so much time and money in graduate school, the extra splurge for archival paper and hardcover binding may well be worth it. If you are including any out-of-the-ordinary features such as fold-outs, color pages, or a back cover pocket, you might want to call around to comparison shop.

3.3 Funding

There are three major ways that graduate students get funding for graduate school: teaching assistantships (TAs), research assistantships (RAs), and fellowships. The obligations associated with each of these funding sources are described in Chapter 1. In this section we will discuss some of the issues involved with getting and handling these three types of fundings. If you are in a special funding situation, some of this information may still apply to you, but you should consult your field's graduate office or your funding source for specific information.

3.3.1 What Funding Covers

TAs, RAs, and almost all fellowships will cover the cost of your tuition and your stipend. The amount of stipend that you receive will depend on the specific fellowship you have, grant that your RA falls under, or teaching obligations. Most fields determine their grad students' funding situations on a semesterly basis. If you have a TA or RA, then the graduate field is required by the university to provide you with a letter informing you of the source and quantity of your funding. If you do not get this information, you should ask your advisor and/or your Graduate Field Advisor.

TAs last for one semester. RAs are usually only committed for one semester at a time as well. Fellowships may be for a single semester, or an entire year, though most often they cover tuition for the fall and spring and your stipend for nine months. If you want to stay at Cornell during the summer, there are many TA and teaching positions available and faculty can fund students on RAs over the summer as well.

Some funding sources will cover things besides your tuition and stipend. Many engineering graduate students get their student activity fee paid for them. Students who are “fully funded” (most graduate students who receive tuition and a stipend are considered “fully funded”) will also have their mandatory health insurance premiums covered by Cornell (see Section 4.6.5 for more information on health insurance requirements at Cornell). Some fellowships, and some grants that RAs are under, can cover the cost of traveling to conferences or purchasing equipment. You should check if these things or anything else are covered for you.

About a month before the start of each semester, you may receive a bursar bill with the total amount of your tuition listed as due. **Do not panic!** If you have funding, you do not have to pay this (though if you have other charges that you are responsible for on the bill, you should pay those). The bursar office sometimes bills for tuition before the process of

paying your tuition via a fellowship, RA, or TA has begun. This bill will also have your student activity fee listed on it.

It is quite possible (and perhaps even likely) that your tuition will not be paid before registration begins. You cannot register unless your tuition is paid. However, it is **very** important that you are registered since this maintains your student status, allowing you to use university resources and the health center, and also maintains international students' visa status. If your tuition is not paid, when you try to register you will be told to go to the registrar's office in Day Hall (C5). Once there, the registrar's office will tell you that the bursar's office has a hold on your account and will send you there. The bursar's office can release the hold on your account — you need to tell them how you are supposed to be funded and the name of your department's contact person (usually the GFA). They will send you back to the registrar's office, and they will let you register.

When your next bursar bill arrives, it should show that your tuition has been paid. If it does not, then contact your GFA or funding agency and let them know about the problem. You should also check at this point that your student activity fee has been paid, if appropriate. You will probably have accrued some finance charges as well at this point. Any charges due to late payment of your tuition can be removed; ask your field's GFA to take care of this for you.

3.3.2 Getting Paid

How often you get paid will depend on your funding source. TAs and RAs get paid every other week during the semester. Fellowships are sometimes paid out every other week, but often you get paid your entire stipend for a semester at the beginning of that semester. If this is the case, remember to manage your money carefully since it will have to last you for several months!

If you do nothing, you will get paid by check. RA and TA checks will be delivered to your department. They may be put in your department mailbox, or you may have to go pick them up at the Graduate Field Office. Most people find it more convenient to have their paychecks directly deposited into their bank accounts. It is very simple to sign up for this. You just need to fill out a "Payroll Electronic Deposit Authorization Form." They are available from the Payroll Office in East Hill Plaza, or you can download one off the web at <<http://www.payroll.cornell.edu>>. You then return the form to the payroll office and by your next pay cycle your deposit will be made directly into your account. You do not have to notify your bank that you have signed up for direct deposit. If you want to specify

a split of your deposit between the savings and checking portions of an account, you should contact your bank for assistance. You cannot split your deposit among multiple banks. Direct deposits can be made to any financial institution within the United States; all of the banks within Ithaca support direct deposits. Deposits will be made on Thursdays of each pay week.

If you use direct deposit, you will receive notification of every deposit made to your account, rather than receiving the checks. These “pay advices” will be sent to the same mailbox or person that your paychecks were sent to. You should look at your pay advices to make sure that you are being paid the right amount, and that taxes are being withheld correctly.

If you are on a fellowship, particularly one that pays your stipend once a semester, then to institute direct deposit you must fill out a form at http://www.bursar.cornell.edu/Direct_Deposit_for_student_Refunds.cfm or at the Bursar’s Office in Day Hall. If you choose not to have your fellowship direct deposited, then you will have to pick up your check from the Fellowship Office in Caldwell Hall (DE4) and deposit it yourself. When your stipend check is ready, you will see an item listing your stipend as a credit to your account, with a balancing item in the debit column of the bill. It is usually accompanied by a note in the margin saying that you can pick up your check in the Fellowship Office in Caldwell Hall (DE4).

3.3.3 “Extra” Funding

Some graduate students get funding beyond their TA, RA, or fellowship by doing extra work. Often, the extra funding is from teaching some or part of a course while on an RA or fellowship. However, most fellowships and some RAs limit how much time you can spend in other employment, or how much supplemental money you are allowed to earn. If you are on a several-year fellowship and you want to TA before it is over, you can usually defer a semester of your fellowship for a year, allowing you to be funded as a TA for a semester without losing your fellowship. You may also be able to get creative, doing research or teaching work for a faculty member in return for new equipment for your office or some other compensation. Just be careful to check on the rules governing your funding before you agree to do work for extra funding.

3.3.4 Taxes

There are as many different tax situations as there are people, so this is just a broad overview of some of the issues to be aware of when paying taxes as a graduate student. As far as we are aware, the money from standard TAs, RAs, and fellowships that is used to pay your tuition is not taxable. However, you are responsible for paying taxes on your stipend. If you are paid by the payroll office (if you receive bi-weekly checks or direct deposits) then you will probably have federal and state taxes withheld automatically. If you are an international student, though, this may not happen. Similarly, if you are on a fellowship, you will not have taxes withheld.

If you do NOT have taxes withheld, you need to pay estimated tax to the IRS four times a year. The estimated tax forms (which should have a name like 2006 Form 1040ES) are available online at <http://www.irs.gov/> (other IRS forms and publications are available here as well). If you do not make estimated tax payments, you may find yourself paying large penalties when you file your taxes in April.

The Payroll office (H7) has an information filled page with documents on how to understand your W-2, and a wealth of information about student tax issues, including issues for international students: <http://www.payroll.cornell>. If you have questions this is a good place to look (you'll have to scroll past links to information on staff and faculty benefits to get to the student information, but it's worth it).

3.4 Purchases and Reimbursements

If you are doing research, particularly as part of an RA but also for your thesis, most of your work expenses can probably be paid for by your advisor. Depending on what you are purchasing and where, you may be able to charge the expense directly to your advisor, or you may have to get reimbursed.

3.4.1 Research Grant Charge Numbers

If you are buying supplies from the campus store on behalf of a research group or your advisor, you might be able to use a Cornell group charge code (availability of these codes, and what they can be used for varies from group to group). Each research grant handled by Cornell, such as an NSF grant, is assigned a charge number, typically of the form Exx-xxxx, where each "x" is a digit. If you have such a code, rather than paying you just tell the cashier

you are charging it to a group and give them that number, your name and office/lab phone number, and your Cornell ID card. Purchases can be charged to a grant at the campus store and various shops on campus, such as those described in Section 3.2. Ask the faculty member for permission for each purchase in advance, and keep careful track of the receipts. The faculty member should also tell you who to turn the receipts in to (usually either the department's accounting office or the faculty member's administrative assistant).

3.4.2 Procurement Without a Charge Number

In some cases, you may have to make a purchase at a shop that does not accept research grant charge numbers. There are a couple of options in this case.

Many advisors have "procurement cards"; these are credit cards that charge directly out of their grants. If you are ordering something over the phone or internet, or if you can convince them to let you borrow the card, this is just as easy as paying with a regular credit card. However, you can only charge up to \$500 at a time on a procurement card.

If you know in advance that you are making a purchase and have time to allow the university to process the paperwork, you may be able to get a purchase order. This basically allows your advisor to say their account will cover the purchase being made and then get billed for the cost. Purchase orders may not be an available option for all graduate students, though.

Finally, you can pay for your purchase yourself and then get reimbursed. If you do this, be very sure that the faculty member you are working for agrees to pay the expense, or else you could end up footing the bill yourself. It's probably a good idea to double check the price first. Also, you will need to get a tax exempt form before making your purchase; Cornell and the research groups within it do not pay New York State sales tax, and you cannot get reimbursed for it. Show your tax exempt form when you make your purchase (they may or may not need to keep the form) and check to make sure the tax actually wasn't charged. Keep the receipt, and submit it along with a reimbursement form to whoever the faculty member has handling their account. Reimbursement can take anywhere from two to six weeks to be processed.

3.4.3 Long Distance Phone Charge Numbers

The EGSA believes that all graduate student offices should have a telephone that permits free local calls, though we are aware that not all departments

currently respect that opinion. Personal long distance calls generally require a phone card. If you make many research-related calls, your advisor should give you a seven-digit charge number. Dial 9 and the long distance number, and after the tone, dial the charge number. This charge number, in some departments, also acts as the charge number for sending faxes.

3.4.4 Paying for Travel

If you are traveling to a conference, particularly one where you are presenting a paper, you can often get your advisor to pay for the expense of the transportation, lodgings, conference registration, and even food while you are there. There are a variety of ways to handle this. Some advisors will allow graduate students to ask their administrative assistant to make travel arrangements. This is wonderful, because the administrative assistant can then charge these expenses directly to your advisor's grant. If this option is open to you, you avoid having to pay these expenses out of pocket and wait to be reimbursed. You will still need to submit receipts for these purchases, though. If you make the arrangements yourself, just keep track of your receipts as with any other purchase you want to get reimbursed for. If your advisor will pay for your food, ask what the amount per day that you can get reimbursed is (there is usually a limit). Sometimes you can just get a per diem amount paid out to you in advance, which usually means you don't need to keep track of food receipts.

If your advisor is not able to pay for you to go to a conference, you still might not have to pay for it yourself. The Graduate School offers travel grants to pay for transportation to conferences. The application is quite simple and most grant applications that meet their eligibility requirements are funded. You must be a registered graduate student, have a paper or poster that you are presenting at the conference, and not have received a travel grant already during the previous cycle July 1–June 30 (except under extenuating circumstances). See the website cited at the end of this section for more information and the travel grant form. Be aware that applications must be received the first day of the month BEFORE the conference (e.g. if the conference is May 23, the application must be turned in April 1).

If you are on a fellowship, it may pay for travel to a conference as well. You should contact the funding agency, or check the materials they gave you, to determine what they will pay for and how to get reimbursed.

The Graduate School will also give some travel awards to pay for research-related travel within the United States. The grants are available only to students who have passed their A exam before the date of travel, and the travel must be dissertation related and several weeks or months in duration.

If you need travel support to do research at a location outside the United States, you can also apply to the Einaudi Center at Cornell for funding. More information about research travel awards and online application forms are available at <http://www.gradschool.cornell.edu/index.php?p=30>.

3.5 Safety

3.5.1 Police

The campus police station is located in Barton Hall (D6) and is open 24 hours a day, 7 days a week. In case of emergency, you should call 911. The 911 system responds to medical emergencies, fires, and crimes in progress. Note that if you dial 911 by mistake, for example when trying to make an international phone call, do not hang up. Stay on the line until somebody answers, and then explain that you misdialed. Otherwise, the police may show up at your door to check on you.

For non-emergency situations, you can call Cornell security at 255-1111. Non-emergency situations that security will handle include reporting thefts or letting you into your office if you get locked out. For more information on the services they provide, you can visit their webpage at <http://www.cupolice.cornell.edu/>.

3.5.2 Night Bus Service

Blue Light buses operate daily from 6:30 PM to 2:30 AM except during the week between Christmas and New Years and during the summer. They are free to anyone with a Cornell ID and cover most of campus and adjacent areas. For routes of blue light buses, check out routes 92 and 93 on the website: <http://www.tcatbus.com>.

However, as of Fall 2007, all matriculated students will be able to receive unlimited rides on all TCAT buses after 6:00PM on weekdays, and anytime on Saturday and Sunday. Students must swipe their Cornell ID card at the individual bus farebox to make use of this privilege. See the Graduate Student Commuting and Parking Options website link for night and weekend service: http://www.transportation.cornell.edu/Commuter_and_Parking_Services/pdf/Night-Weekend%20Tcat.pdf.

3.5.3 Blue Light Escorts

The Blue Light escort service provides night escorts around the Cornell campus and the closely surrounding area. Escorts are paid and trained

students. A pair of escorts can be requested by calling 255-7373 or using a blue light phone between 8:00 PM and 1:00 AM 7 days a week during the fall and spring semesters. Patrols include central campus, Collegetown, North Campus, and Cayuga Heights. Originally funded by a \$2500 gift from the class of 1982, the program has since been sponsored by the Cornell University Police.

3.5.4 Blue Light Phones

Blue Light telephones are emergency phones with direct lines to Public Safety. They are scattered around campus, each marked by a blue light. There are also phones located inside some buildings with emergency stickers on them. In all, there are 86 Blue Light phones outside buildings, another 275 inside, and 40 entry phones with public safety buttons. If you pick up any of these phones, you will be immediately connected to the CU police, who can deal with an emergency. You can use these phones in non-emergency situations as well, such as if you are lost, your car broke down, etc.

3.5.5 Lost and Found

Many individual buildings have their own lost and found areas, but if an item is not reclaimed from any of these, it will eventually find its way to the CU police lost and found located in Barton Hall (D6). If you have lost an item, you can contact them at 255-7197 or email lostandfound@cornell.edu.

3.6 Organizations at Cornell

3.6.1 Graduate and Professional Student Assembly (GPSA)

The Graduate and Professional Student Assembly is the student government for graduate students at Cornell; their webpage is located at <http://www.assembly.cornell.edu>. The Council of Representatives is composed of a representative from each of the majors within the Graduate School. From this Council a total of 18 people are elected to serve on the actual Assembly which is the voting body of the student government. One of the primary responsibilities of the GPSA is to set the Graduate Student Activity Fee, which is used to fund campus activities. A branch organization of the GPSA is the GPSA

Finance Commission (GPSAFC). This organization is responsible for the direct administration of funds to graduate student groups.

The GPSA is a member of the National Association of Graduate and Professional Students (NAGPS). NAGPS offers many benefits for graduate students. These benefits include health insurance, dental insurance, a job bank, student discounts, and much more. See their webpage at <http://www.nagps.org/> for more information.

3.6.2 Engineering Graduate Student Association (EGSA)

<http://www.egsa.cornell.edu/>

The Engineering Graduate Student Association (EGSA) is a volunteer graduate student organization that partners with the administration, faculty, and staff of the College of Engineering at Cornell to enrich graduate student life and build community across graduate fields. EGSA was created to provide a unifying representative body for the engineering graduate student population and in turn, the EGSA evolved into a focused planning board for graduate activities. The EGSA maintains a presence within the College of Engineering by sponsoring many activities designed specifically to bring together engineering graduate students. EGSA events are open to all Engineering graduate students, researchers, and faculty. These activities include monthly seminars, professional development workshops, contests, picnics, and study breaks. We represent graduate student concerns to the College and the Engineering departments by serving on committees and issuing position statements. We also help organize the Engineering Graduate Student Orientation and compile this handbook. The EGSA supports several pilot projects within the College and represents graduate student interests to the College and University. If you would like to have more information about the EGSA and our activities, please visit our website or email us at egsa@cornell.edu. We operate two listservs to keep people informed of EGSA events. For general information and announcements, subscribe to EGSA-L@cornell.edu. For more detailed information and discussions about planning EGSA activities, subscribe to EGSAMEMBERS-L@cornell.edu. (For detailed instructions on subscribing to these lists, see our webpage.)

3.6.3 Teaching Outreach

The Graduate Student School Outreach Project (GSSOP) provides graduate students the unique opportunity to teach mini-courses at local elementary and secondary schools. Annually, about 20 graduate students repre-

senting a wide range of fields such as architecture, literature, engineering, physics etc. participate in this project. An example of a recent engineering mini-course was an introduction to modern telecommunication for high school students. Each mini-course is typically 6-8 sessions. The participating graduate students receive an honorarium of \$250 and reimbursement for travel and material expenses. The following is a quote from the project description:

Graduate students report benefiting in a wide variety of ways by participating in the program. Students find that breaking down their area of expertise for elementary, middle and high school students and collaborating with the teachers, actually enhances their own understanding of their subject. The program provides an opportunity for students to make a positive contribution to the community. As one graduate student stated, 'Perhaps the biggest benefit to me is when I can tell that I've reached a student.' In addition, graduate students inspire grade school students by exposing them to particular fields and related careers, while allowing teachers to expand their own knowledge and incorporate new information and activities into their curriculum.

Applications including mini-course proposals are typically due in late fall, around November. There is an informal interview, and then the proposals are sent out to teachers in Ithaca area schools. If accepted, all mini-courses are offered during the spring semester. For more information, contact GSSOP, Cornell Public Service Center, 200 Barnes Hall (gssop@cornell.edu, 255-0255).

3.6.4 Area-specific Professional Societies

There are some professional societies with chapters on campus. Often, these organizations are organized and administered by undergraduates, but being involved with these organizations as a graduate student can be very beneficial.

American Institute of Aeronautics and Aerospace (AIAA)
 American Institute of Chemical Engineers (AIChE)
 <<http://www.aiche.org>>
 American Society of Agricultural Engineers (ASAE)
 American Society of Civil Engineers (ASCE)
 <<http://ceeserver.cee.cornell.edu/asce/>>
 American Society of Mechanical Engineers (ASME)
 <<http://www.rso.cornell.edu/ASME/>>
 Institute of Electrical and Electronics Engineers (IEEE)
 <<http://iee.ece.cornell.edu/>>
 Materials Research Society (MRS)
 <<http://www.mrs.org/>>
 Pi Tau Sigma (Mechanical Engineering Honor Society)
 Society of Automotive Engineers (SAE)
 Tau Beta Pi (National Engineering Honor Society)
 <<http://www.tbp.cornell.edu/>>

There are also some local engineering oriented organizations:

Cornell Engineering Physics Society (CEPS)
 Earthquake Engineering Research Institute (EERI)
 <<http://www.eeri.org>>
 Engineers for a Sustainable World (ESW)
 <<http://www.rso.cornell.edu/esw>>
 Engineering Student Council (ESC)
 <<http://esc-cornell.org/index.asp>>
 Materials Science and Engineering Club
 Civil Engineering Graduate Student Association

Other engineering groups can be found by using the search engine on the Student Activities Office website:

<<http://sao.cornell.edu/SO/search.php>>

3.6.5 Support/Networking Organizations

The College of Engineering has created an office, the Diversity Programs Office, located in 146 Olin Hall. This program provides support and encouragement, advocacy and friendship to the community of women and minorities in the Engineering College. They serve undergraduates, graduate students, post-docs, lecturers, and faculty. In so doing, they seek to improve the professional, academic and social climate for all members of the Cornell Engineering community. Their objectives are listed on their

website <<http://www.engineering.cornell.edu/diversity/office-diversity-programs/strategic-plan/index.cfm>> and they include:

- to increase the recruitment and retention rates of underrepresented minority (URM), women, and students from other underrepresented groups
- to recruit and retain a diverse faculty
- to enhance existing efforts and develop new plans to improve the climate for URMS, women students, and faculty
- to implement outreach programs for gifted students in grades 9-12 to attract underrepresented, women, and/or underprivileged students to Cornell Engineering
- to involve alumni and families of URM and women students in the recruiting process
- to develop programs for faculty mentoring of URMs and women graduate students and junior faculty
- to maintain and strengthen existing activities for undergraduate mentoring

There are a number of other organizations which offer support to engineers, and to minority engineers in particular. Almost all of the events of all of these organizations are open to any member of the Cornell community.

Advisory Committee on the Status of Women (ACSW)

<<http://web.cornell.edu/acsw>>

This group functions to ensure equal access, opportunity, and protection for women in all areas and activities among the Cornell community.

American Indian Science & Engineering Society (AISES)

<<http://www.aip.cornell.edu>>

Cornell has an active AISES chapter that sponsors a number of both cultural and support activities throughout the year, including recruitment efforts for high school students and an annual Pow Wow and Smoke Dance Competition.

Cornell Engineering Alumni Association (CEAA)

<<http://www.ceaa.cornell.edu>>

The CEAA is the College of Engineering alumni group. As well as coordinating alumni fund-raising for the College they sponsor an annual Engineering Conference, bring alumni back to Cornell to give seminars, and facilitate contacts between alumni and Cornell faculty. They hold a conference on campus each spring and offer great networking opportunities to their members. If you received your BS from Cornell you are eligible to join now, otherwise you have to wait until you receive your graduate degree.

National Society of Black Engineers (NSBE)

<<http://www.rso.cornell.edu/nsbe/>>

The NSBE work to stimulate interest in engineering and increase the enrollment of black students in engineering programs.

Out in the World (OIW)

OIW is a social organization for gay, lesbian, and bisexual students at Cornell. They organize monthly coffee hours at the Big Red Barn and hold other social events throughout the year.

Queer Association of Scientists and Researchers (QuASAR)

QuASAR is an organization designed to support gay, lesbian, and bisexual graduate students in the sciences at Cornell. Several events are planned throughout the year to provide opportunities and support for members of the Cornell Community.

Society of Hispanic Professional Engineers (SHPE)

<<http://www.rso.cornell.edu/SHPE/>>

The SHPE works to advance Hispanic representation at Cornell and to help Hispanic students succeed at their academics and in their future careers. They sponsor workshops, seminars, and social activities.

Society of Women Engineers (SWE)

<<http://www.swe.cornell.edu>>

The Society of Women Engineers was founded at Cornell University and the tradition of serving the female engineering students continues to this day. Monthly meetings are held and seminars convene on topics specific to the interests of women in engineering. This group is primarily undergraduates, but the organization has been making a conscious effort to create a subgroup for grad students.

The Cornell Student Section of the Society of Women Engineers promotes women in engineering by advocating the importance of diversity and by uniting resources to encourage academic, leadership, professional, and personal excellence for the entire engineering community of today and tomorrow.

3.6.6 Resources for Women

Besides the resources for engineering women described in the previous section, the University runs the Cornell Women's Resource Center (<http://wrc.dos.cornell.edu>) in Willard Straight Hall. They run seminars and have a lending library to educate the Cornell community about women's issues and promote awareness and activism. They can also help you find out about or get involved with resources and programs for women around Cornell and Ithaca.

One example of a useful women's resource that Cornell supports are the new lactation rooms for nursing or pumping. One such room exists in basement of Baker Laboratory, and five more are being created around campus, including on the Engineering Quad. You can find out more about this another ask about other resources by contacting the Women's Resource Center, or signing up for their listserv to get regular announcements of their activities.

3.7 Getting Help

Graduate school, like anything, has its occasional rough spots. You may have questions about meeting program requirements, your funding situation, working with an advisor or in a research group, or getting a job after grad school. Most graduate students get frustrated with their research at times, and many graduate students wonder if they should stay in graduate school when things get difficult. There are a number of people that you can talk to who can help solve your problems or gain perspective. The most important thing is to talk to somebody when things are going badly, even if it is just a friend or family member. Graduate school only becomes harder if you isolate yourself.

3.7.1 Office of Research and Graduate Studies

The Office of Research and Graduate Studies, located in 222 Carpenter Hall (C6), is responsible for the academic oversight and support of engineering graduate programs, leadership toward expanding professional education, services to graduate students and graduate fields, and the college-level efforts in research resource development. One of the programs they run is the annual Graduate Research Showcase.

Graduate students should feel that the Office is their “one-stop” shop for information, venting concerns, and or asking a quick question when navigating their way around Cornell. Office hours are from 8:00–4:30, M–F, 255-7413. Their webpage is at <http://www.engineering.cornell.edu/grad/>

3.7.2 People to Turn To

The following list of people and offices are available to help graduate students with different types of problems. Not all of these resources are necessarily right for everybody. It’s important to find someone who can help you, and who you are comfortable approaching with your problem. These are just some suggestions:

Your Advisor The most obvious person to talk to when things are going badly is your advisor. They can suggest classes to take, let you know what conferences and journals you should be keeping track of, and give you general information about the resources available for grad students in their research group. If you’re getting stuck in your research, they can help get you back on track, or spot what you are doing wrong. They are also a good person to talk to about possible funding problems. They can also be a good resource for feedback on career decisions.

Your Advisor’s Administrative Assistant If you have simple questions about paying for research equipment or photocopies, arranging for travel to conferences, or other administrative questions, your advisor’s administrative assistant may be able to help you out.

Other Committee Members The other faculty on your committee may also be able to give you useful information, similar to what your advisor can help you with. It is valuable to get perspectives other than your advisor’s on the research process and your field. If you are

having problems with your advisor, particularly with regards to your A exam or your B exam, your committee members may be able to help mediate.

Other Faculty in the Department Even if they aren't on your committee, many faculty are happy to talk to graduate students in their department, particularly about their research. If you are having trouble with your research group, other faculty in your department may be able to make suggestions or even help you find a different project.

Other Faculty in the College Talking to faculty outside your department can offer opportunities to make research connections across fields, which can reinvigorate a research project or help you find new people to collaborate with. You may be surprised how similar the research done in different departments can be.

Director of Graduate Studies (DGS) Each graduate field has a Director of Graduate Studies who is in charge of graduate student admissions and administration of the graduate students after they arrive. They keep track of your progress through the program, and sign off on important forms for you along the way. This makes them a natural person to talk to if you are having trouble finding an advisor, or making progress with your current advisor. They also often keep track of fellowship information for your field. In some departments, the DGS acts as an advisor for students who do not yet have a research advisor.

Graduate Field Assistant (GFA) The assistant to the Director of Graduate Studies is the Graduate Field Assistant. They can help with many of the things that the DGS office handles. The GFA also is often the right person to talk to about problems with your bursar bill or getting your stipend.

Chair/Director If your field is part of a department or center, the chair or director is another person you can approach if you are not able to approach or find a solution to your problem with your advisor or the DGS.

HR Director Some departments have a Human Resources Director who is available to talk to graduate students as well as staff members in the department. If your department has one, you can ask if they are a resource for grad students as well. If you're having what seems like an "employment" problem, such as with funding, department provided

resources, or conflicts with someone you are working with, they may be able to help.

College of Engineering Administration There are a number of people in the College who are available to help graduate students. If you are having serious problems with your advisor, your committee, or your department and you need advice, this is a good place to go. You can get assistance in mediating with your advisor or committee if necessary, or advice on how to deal with them yourselves, or on getting out of your situation. You can also get assistance here with problems you might be having at the University or Graduate School level.

Safe Havens In order to sustain a community where students, staff, and faculty can all succeed, the College of Engineering is training members of the College community to act as safe havens. Safe havens are trained to help resolve conflicts and formulate positive actions that can be taken to counter problems. Conversations with safe havens are confidential unless they discover evidence of illegal activity or possible risks to an individual's physical well-being. Safe havens are being solicited from a range of departments and positions within the College. You are welcome to contact any safe haven, not just ones within your department; in some cases, you may prefer to talk to someone outside of your work environment.

Dean of the Graduate School The Dean of the Graduate School, currently Dean Alison G. Power, can help handle problems that are occurring at the University level. If you have questions or concerns about the Graduate School and aren't sure if they are important enough to go to a Dean with, you can talk to Dean Power informally at his weekly open lunch in the Big Red Barn. These lunches are held during the academic year and the date and time is listed in the graduate bulletin, in the Cornell Chronicle, and on the Graduate School webpage (<http://www.gradschool.cornell.edu/>).

University Ombudsman The University Ombudsman's office hears and investigates complaints about the operation of the University, especially complaints of injustice and the abuse of power. The office's main purpose is to provide resolution of conflicts within the

university, ensuring that all parties involved are handed with equitability and due process. Its services include providing information on University policies and practices, helping examine alternatives, finding proper authorities to resolve situations, or otherwise seeking a resolution to problems. All communications with the Ombudsman are confidential. The office has the power to access any official files and information needed to resolve a given situation.

Gannett Gannett Health Services offers a variety of formal and informal counseling and support services, many of which are free. They are described in detail in Section 4.6.4. If you're feeling overwhelmed by academic pressures, or if you are suffering from other (personal or interpersonal) stressors in your life, Gannett can provide a confidential outlet to talk about your situation, and make plans to get back on your feet again.

International Students and Scholars Office (ISSO) For all of the difficulties of being a graduate student, there are a host of unique problems that international students face. The ISSO works to help international students adjust to living in the United States and advising them on immigration, employment, and other administrative issues. They have an extensive web site (<http://www.isso.cornell.edu/>) and you are also welcome to go to their office to talk to them in person.

Student Groups If none of these resources seem like the right place for you to turn to, there are a number of student groups that you may want to talk to. A number of support and networking organizations are listed in Section 3.6.5. Groups for international students from particular countries are mentioned in Chapter 5. These groups, and others such as the Engineering Graduate Student Association, give you an opportunity to meet with other grad students. Often, you'll find that other people have faced similar problems, and they may be able to give you suggestions, or at least point you to the right person to approach about your problem. And if you are just feeling frustrated, whether about research, your advisor, the Ithaca weather, or something else, having an understanding ear to gripe to can make you feel less alone or overwhelmed.

Chapter 4

Welcome to Ithaca!

The first few months of graduate school can be a major transition. In addition to an academic experience different from your undergraduate experience, you are probably also in a new place. Ithaca is student friendly, but you may still need some help finding your way for the first few weeks. The purpose of this chapter is to tell you what you need to know to thrive in Ithaca. We begin by addressing the most pressing subject of all: where to live. After that we'll look at shopping, transportation, and health care in Ithaca and finally at other lifestyle topics which may impact some graduate students.

Despite our best efforts, this chapter may not answer all of your questions about living in Ithaca. There is also a guide to Ithaca published for free in the free newspaper "Ithaca Times" each September. There is also a book called "Everything Ithaca" that is quite good but unfortunately out of print. We also recommend that you find your way in Ithaca by asking people! Ithacans are usually very happy to help you find what you need in this community - so ask questions of fellow graduate students, professors, and staff. If you think your question is one that should be answered by a future handbook, then please email egsa@cornell.edu.

Best of luck in making Ithaca your home!

4.1 Housing

4.1.1 Finding a Place to Live

There is housing available in Ithaca at any time of the year. Some people arrange their housing many months in advance, while others begin several days in advance!

Most graduate students rent apartments. ("Lease" and "Rent" are essentially the same). To rent an apartment, you typically sign a lease, which is a contract that protects both you and your landlord. Most leases last for 12 months, and many leases in town expire on either June 1 or August 1. (Note that since many people move on those days, it is hard to rent a moving truck then!) Some companies, including Cornell University, offer 10-month leases in some cases.

If people sign a lease and then leave town for several months, they often try to "sublet" their place during these months. If you rent a sublet, it can be a convenient way to find a good place for little money for a short time. You can (and should) request to sign a sublease agreement (a contract similar to a lease) to make your sublet official. This will help you avoid losing money, as well as proving that you were a resident of Ithaca during

that time.

A landlord is someone who takes care of a rental property. Your landlord may be the actual owner of your apartment, or a professional property manager. We strongly recommend that you keep your own records of what you paid you landlord, and when, for confusion about accounting is surprisngly common.

Several agencies and services exist to help you find housing. Many local landlords maintain rental offices and will be happy to show their apartments to you. Some openings will be listed in the classified ads of the Ithaca Journal and Ithaca Times. Others, especially sublets, may be found online on <http://ithaca.craigslist.org> or on the cornell.marketplace newsgroup. The Cornell Housing Office maintains a listing of apartments available for rent that can be sorted according to several different categories. You can access this list at the following website http://campuslife.cornell.edu/housing_residential/offcampus.asp. They also have a list of local apartment complexes (includes price, distance to campus and other info) which you can pick up at their office in 201 Robert Purcell Campus Center (E1). Finally, Housing Solutions in Collegetown will help you to find your ideal living space, for a small fee.

A small number of graduate students decide to purchase a house. This can make sense if the value of the house is increasing rapidly. While this is common in places like California, it is very rare in Ithaca. Another downside is that in the early years of a morgtage, your payments mostly go to interest and not to priciple. Thus you build very little equity, and are mostly just replacing payments to a landlord with payments to a bank! On the bright side, interest payments on a morgtage are tax deductible, so this may reduce your taxes significantly. In conclusion, think carefully before considering this seriously, investments of this size can be financially destructive for your entire life if they go wrong.

4.1.2 Housing Options

The University offers several housing alternatives, including some designed with families in mind. Hasbrouck (F1) and Maplewood (F7) apartments are self-contained living units with kitchens, living rooms, and private bedrooms. Thurston Hall (B2) has smaller one- and two-person units with kitchens. Schuyler House (A7) offers a more dorm-like setting, with communal recreation and cooking areas. Although there are some advantages to University housing, a determined renter can usually find a larger apartment for the same amount of money on the private market. Thus many

graduate students who live in these units during their first year do not renew their leases.

On the private market, the area closest to the engineering quad is Collegetown. Although there are exceptions, housing here tends to be expensive, small, and populated by undergraduates. On weekend nights the streets can be filled with noisy and drunk people. If you can afford the expensive rent, there are a few luxury apartment complexes along College Avenue and Dryden Road.

Because most undergraduates want to be very close to the center of collegetown, the “edges” of collegetown can be less expensive and quieter. Roughly, these edges are defined by Cornell Ave to the East, Stewart Ave to the West, and State Street (route 79) to the South.

Downhill (West) from Cornell are two neighborhoods that we recommend - “downtown” and “fall creek.” There are many excellent apartments here, as well as some terrible ones. Prices are generally less than in collegetown, and the life is quieter and nicer, in our opinion. Your neighbors will be families and professionals, some other graduate students, and very few undergraduates. You will be able to walk to shopping, bars, restaurants and groceries. Getting to campus will require a 10-30 minute walk uphill (depending on your speed and location) or a bus ride. Busses are convenient from downtown, less so from Fall Creek. In the summer, the Cascadilla gorge trail provides a scenic route up to campus from both downtown and fall creek.

There is a neighborhood between North campus and Cayuga Heights which has some good apartments. It is far from Collegetown, and thus has lower rents and is quieter. Unlike downtown and fall creek, it is almost the same altitude as campus, so the walk/bike ride is much easier. Consider Ridgewood Rd to be an approximate definition of this neighborhood.

Various other areas have their own distinct character. South Hill has an active housing market that caters mostly to the Ithaca College student crowd. Cayuga Heights is mainly the realm of stately manors owned by senior Cornell faculty, but there are a few affordable apartment complexes as well. The Snyder Hill area has a number of duplex houses for rent, and a bus line serving them. West Hill, across the lake from campus, has some nice apartment complexes, although the commute is fairly long. You can even find a house on Cayuga Lake, but make sure to consider what it will be like in winter! Some students choose to live in outlying towns where the rent is cheapest. Rumor has it that one enterprising student even built himself a tree-house in a sheep field. Whatever the option, somebody has probably tried it before.

4.1.3 Housing Considerations

The most-overlooked consideration in finding a place to live is the heating cost. If heating is not included, it can run about \$200 per month, sometimes even more, for the approximately 6 very cold months (though this is changing with Global Warming!). Current tenants should be able to tell you what the rough cost is. Many apartments include the price of heat in their rent, mostly because the equipment to monitor heating fuel usage is expensive. If you like to be warm without thinking about what it costs you, find one of these!

Another thing to consider when looking for a place to live is the distance to campus. Prices of accommodation tend to decrease with increasing distance from the University, leading to a classic tradeoff between convenience and price. Complicating the picture is the University's parking fee structure, which can make it expensive to drive to school. A seemingly moderately-priced apartment located far from the campus may become more expensive when transportation costs are taken into account. Luckily, the local bus system (TCAT) provides coverage to nearly all residential areas, giving another option to those thrifty enough to take public transportation. (See section 4.5.1 for more details on TCAT.) If you have a car, make sure to check the availability and price of parking when making your housing decision. If parking is available it can range from free to \$1000 a year. Be wary of a landlord's promise of "plentiful on-street parking". Also, be aware of the number of spots allocated to each apartment in a complex. A promise of "parking provided" might actually mean "each apartment has one spot" – even if it's a four-bedroom apartment!

Another important consideration is who will be in charge of maintenance in your apartment. Ithaca has many old houses and apartment complexes, which may require regular upkeep. Many landlords will keep their own maintenance staff on hand, or sub-contract the maintenance work to independent agencies: usually, this arrangement works fairly well. However, be wary of landlords who claim that they will do all the repair work themselves, especially if they are responsible for multiple houses. In such situations, it may take a while for the landlord to handle any repairs, should the need arise – and you definitely do not want to wait an extra day if your thermostat starts malfunctioning in the middle of winter! So, before renting be sure to inquire who handles the maintenance, and what is their policy for responding to maintenance requests. If possible, speak with the prior tenants: ask them how often does the place need repairs, and how good are the response times. Also, find out who is responsible for grounds-keeping work, such as snow removal – it may be you!

Furthermore, be sure to find out who pays for utilities in the apartment. Utility costs in Ithaca can be quite high. This is especially true of heating costs, as it is usually necessary to run the thermostat for six months out of the year, from mid-October through mid-April. During the coldest winter months (December through February), heating costs could be especially high.

On a related note, it is important to find out who controls the temperature of the apartment/room. There are places where the temperature is set by the landlord. Also, in some apartment complexes the heat is not turned on before a set day of the year. This is mostly a problem for students from warmer climates whose idea of a “comfortable” temperature may not be the same as their landlord’s.

A good way to determine if a complex is right for you is to figure out who else lives there. If you’re the quiet, studious type, you might not want to rent an apartment in a complex that caters primarily to undergraduates. Ask the landlord if the complex houses primarily undergraduates, graduates, or those who aren’t in school.

4.2 Utilities and Amenities

Once you have found a place to live, you will need to ensure that all the basic utilities are hooked up. The major utility companies in Ithaca are:

Electric, Gas: NYSEG (1-800-572-1111 or 607-347-4131)
Cable TV, Cable Modem, Internet Access (Roadrunner):
Time Warner (607-272-3456)
Phone, DSL: Verizon (607-890-7100)
Phone, eLEC Communications (1-800-644-1850)

4.2.1 Electric and Gas

NYSEG is the area provider of gas and electricity. Unless you choose to live in University housing or your landlord takes care of these utilities for you, NYSEG is probably the first company you will want to contact. If possible, try to contact the previous tenant and have the service transferred to your name: doing so may be less expensive than signing up as a new customer.

4.2.2 Phone

Verizon is major area provider of phone service. However, local telephone service is now competitive in New York State. For instance, eLEC Commu-

nications might be a less expensive alternative for phone service in many cases. Many of the major long distance carriers (AT&T, MCI, etc.) also have local calling plans for the Ithaca area. In addition, those seeking high speed Internet access via DSL may find that they are forced to choose a specific local phone company. If you decide to shop around for local phone service, be sure to find out how much the company charges to establish new service. Verizon charges about \$35 to setup new service; some companies have been known to charge as much as \$150.

As elsewhere in the United States, tele-marketers can become a major annoyance to anyone with a phone service. Fortunately, the state of New York has set up a “No Call” registry, and enacted legislature forbidding commercial tele-marketers from making unsolicited calls to any phone number listed in that registry. The registry is free, available online, and is highly effective in eliminating unwanted tele-marketing calls. Visit <<http://www.nynocall.com>> to learn more.

Cellular Phones

Over the past few years, cell phone use has become ubiquitous in the Ithaca area. Many students forego standard phone service altogether. There are multiple cell phone carriers in Ithaca, including Cingular Wireless, Verizon, At&T, Sprint, T-Mobile, and others. Many of these companies offer competitive service plans featuring a large amount of free minutes or free use of the cell phone on nights and weekends.

According to an informal survey, the most popular service provider among engineering graduate students is Verizon, which was praised for its reliability and wide coverage area, as well as its reasonable prices. Cingular and T-Mobile were also recommended as less-costly but reliable alternatives.

4.2.3 Internet

One of the cheaper ways to get dial-up Internet access is through Cornell’s EZ-Remote. The service features a flat monthly fee, as well as access to Cornell’s online databases and publications. You can find out more <<http://www.cit.cornell.edu/ezremote/>>.

If you want high speed Internet access, you have several options in Ithaca. Time Warner cable offers high speed access via cable modem (its RoadRunner service). DSL Internet service is also available in much of the Ithaca area, from such providers as Verizon. Both DSL and high speed cable have approximately the same mostly costs (around \$40 a month), so the

deciding factors when choosing between the two are reliability and quality of service. Many students prefer high-speed cable, finding it sufficiently reliable and slightly faster. Others, however, complain of frequent and prolonged service outages with cable, and choose DSL.

4.2.4 Trash and Recycling

Trash and recycling services are taken care of if you choose dorm-style accommodations or an apartment complex with a Dumpster. Those with apartments in smaller buildings will need to buy trash tags to put on their cans for curbside pickup. Trash is picked up once a week, and each can or bag must be marked with one or more tags (based on weight) bought at local grocery stores and various other locations. Ithaca also has a successful recycling program, taking paper products, newspaper, glass, and many plastics. Recycling pickup takes place every other week. Don't forget to recycle: it's the environmentally friendly way to save money on trash tags!

4.3 Shopping and Services

4.3.1 Malls and Districts

Is shopping your hobby, or just something you are forced to do sometimes? If it is your hobby, you may be surprised by Ithaca's unique and nontraditional shopping options. If it is something you are forced to do, then you will enjoy Ithaca's decentralized shopping options.

The shopping district closest to Cornell is Collegetown, and you will probably get to know it quite quickly. Often overlooked in colleegtown is the Asian grocery "Tung Fong co", which has fresh vegetables, videos, and makes keys. Also overlooked in Collegetown is the Indian market "Universal Grocery."

The main shopping downtown is in a paved pedestrian mall called Ithaca Commons, or just "the Commons". Bounded by Green, Seneca, Aurora, and Cayuga streets, the Commons is one of the few places in America where you can find things other than what is typically found in malls. The Commons actually draws tourists, due to its unique shopping offerings. In addition, it has many stores similar to those in the mall, but with private owners. This allows the stores more freedom to treat their workers well and only sell goods that are produced with care for the environment and the laborers. You will find a number of craft stores, several used/vintage clothing stores, an outdoor/camping store, several new and used book stores, a

kitchen store, 3 record stores, and much more. One clothing store, “Trader K’s” is a used clothing store that specializes in up-to-date fashions, providing clothes that look like they just came from the mall, but at a much lower price. There is also a store called “Race Office Supply” which is basically a general store. Prices are a little high, but it is rare in America these days to find a small store with a wide variety in a downtown area!

In addition, there is a small mall called Center Ithaca located on the Commons that features a food court (including one of the places to get decent falafel in town), public restaurants, an entrance to Cinemapolis (the downtown movie theater), and more shops. Although most of the shopping in the downtown core is on the paved pedestrian area, there are also a number of shops and restaurants along the surrounding blocks, so it is worth poking around to check them out.

A second small mall near the Commons is the Dewitt Mall, which has a world-renowned shop for stringed instruments, a world-renowned vegetarian restaurant (“The Moosewood”), and one of the few remaining independent bookstores in America (“The Bookery”).

If you drive to the Commons, you will find lots of metered on-street parking and two public parking garages, all of which have nominal fees during the week, but are free on evenings and weekends. Additionally, all Ithaca municipal parking lots offer two hour free parking every day. Be careful, though – some lots that look like municipal lots are not, and do not offer two hour free parking (if this is the case, the lot will usually have a sign to that effect posted somewhere).

If you are looking for a “normal” mall, however, you will need to drive (or take the bus — see the TCAT bus schedule for more information) to the mall area of Ithaca, at the intersection of Triphammer Road and Route 13. There are three malls at this intersection, the Triphammer and Cayuga Malls, both of which are in strip mall format, and the Shops at Ithaca Mall, which is more of a true “mall” (in the great American sense of the word.) The Triphammer Mall is located on Triphammer Road on the side of Route 13 closest to Cornell, and contains several small restaurants/take-out places, a crafts store, a toy store, and a laundromat, among other things. There is plenty of parking in the lots around the mall.

Behind Triphammer mall is Bishop’s Small Mall, home of the large Asian Grocery called “Ithaca Tofu.” Across Route 13, but still on Triphammer Road, is the Cayuga Mall. Neighbored by a Mobil gas station and a Friendly’s restaurant, the Cayuga Mall has a P&C grocery store, a drug store, a Marshall’s clothing store, a video store, a pet store, a few take-out restaurants, and others.

The Shops at Ithaca Mall is located across Triphammer Road (on the far side of Route 13) from the Cayuga Mall, behind the Ramada Inn. It has parking lots both in front of and behind the mall. Although its small size and lack of selection is often much lamented, the Shops at Ithaca Mall does have anchor department stores such as Sears, the BonTon, and Target; clothing stores such as the Gap, Old Navy, Eddie Bauer, Victoria's Secret, Abercrombie and Fitch, NYLerner's, and American Eagle; several shoe stores; three sporting-goods stores (including Dick's, a national chain); a record store; a pet store; a food court; a Borders bookstore; a Best Buy electronics store; and a number of other gift and novelty shops. Additionally, a Hollywood Video store and several restaurants can be found on Catherwood Road right before the mall. The largest cinema multiplex is also here (see section 7.4) and is best served by the rear parking lots.

If you are looking for "big box" retailers, they have just arrived in Ithaca (to the joy of some citizens, and the disappointment of others). Most of the ones that do exist, however, are located along Route 13, south of downtown. There you will find K-Mart, Walmart, Staples, Home Depot, Lowe's, Rite-Aid, CVS, EMS, Eckerd, and Hollywood Video, and Barnes & Noble and Borders bookstores. Also along Route 13 are many grocery stores, automobile dealers, repair shops, oil change shops, tire places, and car washes. There is also a large Asian grocery here, Win Li market. If you hear about poor quality water in Cayuga Lake, it is because these shops are built on top of the wetlands that used to clean the incoming lake water.

Although most of the shopping in Ithaca is in these districts, there are also a number of stores scattered throughout the city, especially downtown. For larger malls, however, you will have to travel farther afield to Syracuse, Horseheads, or Waterloo. The Carousel Mall in Syracuse is located on the north side of the city and is about an hour away (take Route 13 north to Route 81 north toward and through the city and look for signs). Slightly closer than the Carousel Mall is the Arnot Mall in Horseheads which is only about 45 minutes away (take Route 13 south). The Arnot Mall is smaller than the Carousel Mall, but both are substantially larger than Ithaca's own the Shops at Ithaca Mall. Located about one hour north in Waterloo (off Route 318), the Fingerlakes Outlet Mall boasts a huge number of factory outlet stores with discount prices, on everything from clothing to books to housewares to toys. If you are looking for chain outlet stores, you can try Elmira (about 30 minutes south of Ithaca on Rt. 13) or Cortland (about 30 minutes north of Ithaca on Rt. 13). And if you are a real shopping aficionado and have some time to spare, try Rochester, Buffalo, Toronto, or New York City!

4.3.2 Grocery Stores

Ithaca has been blessed with a plethora of grocery stores, from super large ones that require their own zip-code to small, organic ones, and everything in between. To cover them all, let us start with the largest on the hierarchy of size and work our way down.

Wegman's is the most prominent grocery store in Ithaca, as a result of its size, selection, and usually reasonable prices. Located on Route 13 south, it spans a huge block. Because of this size, Wegman's maintains an immense selection — simply put, if you can't find it at Wegman's, it may not be in Ithaca. But, if you are navigationally challenged, then be sure to leave yourself plenty of time to shop, since the store can be somewhat overwhelming. Wegman's boasts a large produce section (with organic fruits and veggies too), a health food section, a deli, a sushi bar, a reasonably good International food section, a cafe, a pet store, a garden store, and even a section like a mini K Mart, all under one roof — giving new meaning to the concept of one-stop shopping!

Those who like a slightly more intimate setting without sacrificing selection might want to try Tops instead. There is one located right next door to Wegman's and one next to the Shops at Ithaca Mall (on Triphammer Road). The Tops next to Wegman's is slightly larger and features a reasonably good produce section, a fabulous, money-saving, bulk food section (with everything from baking supplies to pasta to dried fruits to candy), and the strongest international section of the large grocery stores in Ithaca.

For an even better selection of international foods, especially Asian cuisine, check out one of the couple of specialty shops in Ithaca. One, Universal Deli and Grocery, is located on Eddy Street in Collegetown at the top of Buffalo Street, and the other, Win Li Supermarket (277-6790), is on Route 13 south on the way to Buttermilk Falls. Another one, Ithaca Tofu (266-0336), is located in the Small Mall (next to Triphammer Mall). If you're willing to drive a little farther afield, try the bulk foods store on Rt. 13 in Dryden. The selection isn't fantastic, but it's got a neat atmosphere, and the prices are reasonable.

A slightly smaller grocery store than Tops or Wegman's is P&C Foods. There are three P&C's in Ithaca: one in the East Hill Plaza complex; one in the Cayuga Mall (see Section 4.3.1); and one near downtown in the Fall Creek neighborhood. They vary in size, with the Fall Creek store being the smallest, but all of them have reasonable produce sections and a fairly good selection of food. The East Hill Plaza store was recently remodeled to expand its space and selections.

If you're really looking to save money on basic staple foods, check out

ALDI on Rt. 13. They offer a pretty decent selection of basic foods like cereal, bread, eggs, etc., at very low prices (where else can you find a 39 cent loaf of bread?). They also have occasional special buys of name-brand groceries at reduced prices. A few notes if you plan to shop here: 1) they don't accept credit cards or checks, only cash, ATM/debit cards, and food stamps; 2) there is a charge for shopping bags (5 cents for paper, 10 cents for plastic), so bring your own or use a box from the store; and 3) bring a quarter with you – the shopping carts are locked together with coin-return locks. In order to get one, you insert a quarter into the lock; you get the quarter back when you return the cart.

Of course, Ithaca wouldn't be Ithaca without its share of organic/health food stores and co-ops. The largest of these is the GreenStar Co-op, which has two locations. The large store is on the corner of Buffalo and Fulton Street (Route 13 south) downtown. The convenient downtown store is in the DeWitt mall, and also accessible from the corner of Buffalo street and Cayuga street. Entirely member run, GreenStar features a vast selection of organic foods and produce, natural and health foods, many vegetarian and vegan specialties, and bulk spices and foods. Although membership is not required to shop at the store, it does give you a discount on groceries and a voice in store politics and decisions. For even greater savings and participation, you can volunteer to be a working member, a job which entails working the registers or stocking the shelves several hours a month. Perhaps the least well-known local, natural grocery store is Ludgate Farms, located on Hanshaw Road near Sapsucker Woods. An overgrown farm stand, Ludgate's features locally grown produce, many natural and organic foods, and vegan and vegetarian specialty items. With its bare wood beams and gravel floor, Ludgate's is the closest thing Ithaca has to an indoor farmer's market — and it's open year round.

Which brings us to the farmer's market... Yes, indeed, Ithaca does have a farmer's market. It is located in Steamboat Landing, just off of Route 13 near the Sciencenter, and is open from March to December. Although the local produce is most available during the summer and early fall, the farmer's market does sell local crafts at all times of year that it is open, offers takeout food, and often features music from local musicians to enhance the shopping experience. Many of the best ethnic restaurants can be found only at the Farmer's Market, such as Cambor Angkor Cambodian food, which serves imported Taro root and homemade Tofu. The hours of the farmer's market are from 9 to 2 on Saturdays and 9 to 1 on Sundays. Be aware, though: especially during the peak season (June-August), parking at the farmer's market can be a real hassle. However, there is a TCAT bus

route that runs directly to it. In addition, there is a smaller version of the farmer's market located in DeWitt Park, one block from the Commons, on Tuesdays around noon.

4.3.3 Banks

There are a number of bank options, the most popular of which are summarized below:

Cornell Fingerlakes Credit Union (257-8500)

- Branch office in Bailey Hall (D4)
- ATM's throughout Ithaca, including Jason's Deli in Collegetown and Mayer's magazine shop near the Commons

M&T Bank (<<http://www.mandtbank.com/>>, 1-800-724-2440)

- Branch office in Willard Straight Hall (B5)
- ATM's in Willard Straight Hall (B5), Collegetown, and downtown, as well as many other locations in Ithaca

The Tompkins Trust Company

(<<http://www.tompkinstrust.com/>>, 273-3210)

- Has a branch in the campus store
- ATM machine in Collegetown and numerous branches and machines throughout the Ithaca area.
- Internet banking available

Bank of America (<<http://www.bankofamerica.com>>)

- Has a branch in the Commons
- ATM machine in Collegetown, in the Commons, and in other locations throughout Ithaca.
- Internet banking available
- Branches throughout the eastern United States.

There are a few other options that are not as convenient in terms of ATM placement but may be desirable for other reasons. Of particular note is the Alternatives Federal Credit Union, located downtown, which specializes in making loans to local poor and needy causes. They also will do your taxes for you for free if your income is less than a certain amount! As a rule of thumb, small and local banks usually offer better interest rates and lower cost than do larger ones. Check the Yellow Pages for other local and regional banks. In addition, for CDs and money market accounts, Smith Barney (downtown) often has better deals than the banks do.

Graduate students who receive stipend checks from Cornell may be interested in Cornell's direct deposit program. See section 3.3.2 for more information. In addition, most utility and phone companies offer electronic funds transfer payments, and will simply take the money for bills out of your account each month.

4.3.4 Pharmacies

There are quite a few pharmacies throughout Ithaca. Perhaps the most convenient one is the one in Gannett Health Center, which sells over-the-counter items such as cold medicine, sunscreen, and condoms at a discounted price.

Among other options are the Eckerd and Rite Aid pharmacies, both with locations around East Hill Plaza and near the "Big Box" stores in downtown Ithaca. There you will also find the CVS and K-Mart pharmacies. Wegmans, too, has a pharmacy; however, unlike the rest of the store, the pharmacy does not remain open for 24 hours. Walmart and Target also have pharmacies.

It is worth pointing out that, as of last verification, all pharmacies in Ithaca close by 10:00 p.m. at the latest, so make sure to fill your prescriptions earlier during the day. If you are in an emergency need of prescription medication in the middle of the night, contact the Cayuga Medical Center at 274-4411.

4.3.5 Bookstores

Ithaca is a book lover's dream. The large chain bookstores are just beginning to gain a foothold in town, so the market is dominated by small, independent stores. In addition, the semiannual Friends of the Library book sale is among the largest of its kind. Prices drop throughout the sale as the selection decreases, so it is worth going more than once. For the dates of the sale and more information, see <<http://www.BookSale.org/>>.

The greatest concentration of bookstores is downtown around the Commons area. Offerings here include two used book stores, a comic book store, and a children's book store, as well as several general-purpose stores selling new books. In general, they can order anything in print that they don't have in stock. Some run discount programs for dedicated customers.

The primary location for purchasing books for your classes is the Campus Store (C5), located near the clock tower, across from Willard Straight Hall. This store carries all the textbooks for the classes offered in the engineering college, provided that they are in stock. The campus bookstore also carries a wide variety of general books, office supplies, snack foods, computer hardware and software, and Cornell souvenirs (see section 3.2.1).

If you are looking for alternative sources for your textbooks or if you need a book that you can't get at one of Ithaca's smaller bookstores, the world wide web is another source for books. Some of the better known online bookstores are amazon.com, alibris.com, barnesandnoble.com, borders.com, ecampus.com, and fatbrain.com. Processing times for your order can vary and should be taken into account if you choose this means of textbook purchase. Also, don't forget to include in your calculations the cost of shipping and handling, which might make the discounted book less attractive.

Books may be found in other areas around Ithaca as well. The stores seem to come and go, so you may see another open while you're in Ithaca.

4.3.6 Barber Shops and Beauty Salons

From the men we spoke with about barber shops in the Ithaca area, three shops were recommended.

- University Barber Shop, 111 Dryden Road 277-2509
- Cornell Barber Shop (downtown) 224 E. State St. 273-6022

For men who want their hair cut with scissors, not with clippers, but do not want to sit in a fancy spa-like atmosphere, or pay large prices, we suggest Studio 108 in Collegetown, and especially recommend their employee Wayne.

The women we spoke to were more generous with their recommendations.

- Alta Spa (especially recommended for all types of hairs, perms etc.)
308 E State St. 273-6818
- Transformations Hair Studio, 431 N. Cayuga 277-3943

- Innovations Beauty Salon, 114 N. Cayuga 273-5008
- Resistance Salon, The Commons 272-5532
- Renaissance Hairstyles, 210A Dryden Rd. 273-1337
- A Personal Touch Hair Salon, Triphammer Mall 257-6098
- Changes Cutting Studio, 120 N Aurora 272-0090

4.3.7 Mail and Package Services

There are two post office branches on the Cornell campus: one in Kennedy Hall (D5) and one in Ives Hall (D5). They close at 4:00 sharp. The downtown branch office, formerly the main office, closes at 5:00 pm, and is on Tioga street between Buffalo and Seneca streets. The main post office for the Ithaca area moved several years ago to its current location off Warren Road near the airport, much to the regret of downtown residents.

Several delivery services also have offices near the airport. Both Federal Express and UPS have walk-in services during the day at these locations. FedEx and other overnight delivery services will pick up on campus during the day. When having packages delivered, it is often a good idea to give your campus address rather than your home address in case a signature is required, though you should check if you are permitted to have personal mail sent to your department, as not all allow this.

On the commons is the UPS Store (formerly Mailboxes Etc.), which provides a range of shipping and packaging services. You can purchase all of your shipping supplies right in the store, and you can even rent a post office box from them. A similar business is open in Colletgetown, most recently named Pak-Mail.

4.3.8 Online Marketplaces

If you're looking to furnish your apartment or office, but don't have a lot of money to spend (not an infrequent occurrence!), check out Ithaca Craigslist (<http://ithaca.craigslist.org/>). This site is essentially a place for Ithacans to advertise items for sale (or items that they are looking to buy). You can usually find just about anything that you need here (from houses to textbooks to cookware to couches to boyfriends/girlfriends!), and the listings change every day. Be especially sure to check frequently during peak move-out times (December/January, May/June, and August/September),

since this is when everyone is moving out and is trying to get rid of their stuff cheap.

You can also try the *ithaca.marketplace* newsgroup. You can access this newsgroup via the Cornell news server, or via the Google archive at <http://groups.google.com/groups?group=ithaca.marketplace>. Also, be sure to check out the *cornell.marketplace* newsgroup – it serves the same purpose as *ithaca.marketplace*, but is targeted more narrowly at the Cornell community.

4.4 Owning a Car in Ithaca

4.4.1 To Drive or Not to Drive

Owning a car in Ithaca has both its advantages and its drawbacks. Before plunging into the details of car ownership, consider some of the following thoughts on whether it is worth having a car during your graduate study in Cornell in the first place.

On the one hand, having a car will greatly extend your freedom of movement. Ithaca is a relatively small town with few traffic problems, so driving around is easy. During after hours, having a car becomes especially advantageous, since public transportation during that time is at best spotty and often non-existent. By car, the Cornell campus is no more than 10 minutes away from virtually anywhere in Ithaca. Grocery shopping is far more convenient if you have a car, especially if you tend to buy a lot during individual trips, or only have time to go shopping during after hours. On nights and weekends, parking is free in most lots on Cornell campus and in downtown Ithaca, making it especially easy drive just about everywhere within the town. Finally, having a car will make it much easier to get out of Ithaca once in a while: places like New York City, Washington DC., Montreal and the Niagara falls are a few hundred miles away from Ithaca, and are reachable by car in several hours.

On the other hand, owning a car in Ithaca can entail considerable costs and hassles. First there is the mandatory auto insurance. The costs vary widely in New York state, but depending on your age, gender, type of car, and the kind of coverage you choose, you could be paying between \$500 and \$1200 (or more!) a year. Then there are the maintenance costs. Ithaca's uneven topography, cold snowy winters, and weather-beaten roads will take their toll on your car, so if you own or plan to buy an older model, be prepared to spend a few hundred dollars per year for repairs. Furthermore, you will likely incur additional parking costs. All Cornell housing parking lots,

and many of the private apartment complex lots require parking permits, which may cost between \$100 and \$600 for a year. You will also need to buy an additional permit if you want to park on campus during the day. With all these costs adding up, owning a car in Ithaca can become quite expensive.

It is also worth considering that, despite some obvious advantages, owning a car is not necessary for a typical Cornell graduate student. Ithaca's layout is very accommodating to alternate modes of travel. Walking and bicycling are very common in Ithaca, and are a good way to get some exercise while traveling from point A to point B. Those not so fond of walking, or living too far off-campus, will find that the local bus service (TCAT) covers nearly all residential and shopping areas. Long-range buses can provide coverage to cities like New York, Washington, etc., although the trip times will be longer due to multiple stops and transfers. And if you find that you really need a car, you can always rent one for a few days at fairly reasonable rates. Therefore many grad students, even those who had cars before starting Cornell, find that life in Ithaca without a car is still quite comfortable.

In short, there are good reasons to own and not to own a car while in Ithaca. Your particular situation will likely dictate your choice: however, if you do not have a car, do not feel pressured to rush out and buy one - it is not a necessity by far. If you already have a car, or are interested in acquiring one once you get to Ithaca, read on! Otherwise, you may want to skip to the section 4.5.

4.4.2 Acquiring a Car

So, you have decided that you want to have a car in Ithaca after all? If you don't already have a car, or intend to leave your current car behind when you come to Ithaca, then this section is for you!

Since Ithaca is a college town, people come and leave here quite frequently. Upon leaving Ithaca, car owners often decide to sell their cars, either because they no longer need the vehicles, or because they are relocating to a completely different part of the world. Thus, with a bit of luck, the astute buyer can find a fairly good bargain on a used car. Perhaps the first place to look for such a bargain are the `ithaca.marketplace` and `cornell.marketplace` newsgroups (see section 4.3.8 for more details). In addition, you will want to check out the classified ads in publications such as the *Ithaca Journal* (see section 4.10.3). Finally, you may want to check with the local car dealerships, which offer new and used cars for sale. Buying a

car at a dealership is generally more costly, but you can obtain a warranty that will cover some of the subsequent repair costs, should they arise.

4.4.3 License and Registration

In order to legally drive in New York state, you will need a valid driver's license, and your car must be registered. Usually, this entails obtaining a NY state driver's license and vehicle registration. If you already have a driver's license from any US state, you can simply trade it in: otherwise, you will need to pass a driver's test to obtain the license. A typical NY state driver's license is issued for a period of six years, and costs about \$40.

In order to obtain a New York state vehicle registration, you will need to first acquire an NY driver's license. You will also need to have auto insurance (see the next section), and your car will need to pass a New York state inspection. Registration in New York state costs about \$40 for a period of two years for an average car. Vehicle inspection must be conducted on an annual basis: it can be done at just about any local mechanic's shop, and usually costs about \$10.

If you bring your car with you from another US state, and choose to remain a resident of that state, then you may opt to keep your current license and registration (assuming, of course, that they are valid, and that you renew them as necessary). You may still consider re-registering your car in New York, however. For one, it might be cheaper, both in terms of registration fees, and, more significantly, insurance costs. Also, it would help you avoid unnecessary hassles, such as having to travel to your home state for vehicle inspection. Finally, it is important to note that you can only keep your out-of-state registration if you are non-resident of New York state. If you do become a resident, you will have **30 days** to register your car in NY.

You must obtain your license and registration through the New York State Division of Motor Vehicles (DMV). The Ithaca DMV branch is located is located at 301 Third Street. Their phone number is (607) 273-7187. You can also find more information about licenses, registration, and other issues of car ownership in NY at the DMV web site:

<<http://www.nysdmv.com>>.

4.4.4 Car Insurance

New York state law requires that you all drivers in New York state must be covered by liability insurance. Insurance prices in upstate NY are not low, though they can be considerably lower than those in other states. Insurance

costs will depend on many factors, such as age, gender, previous driving record, the type of car you drive, etc. Even basic liability insurance costs may be hefty: you can easily find yourself paying over \$1000 a year! The actual costs will vary widely from company to company, so it is important to shop around. Based on a narrow survey of graduate students, one recommended company is Progressive Auto Insurance (<www.progressive.com>). Progressive offers competitive rates, good customer service, and generally responds to claims quickly. Furthermore, you can quickly obtain insurance quotes and buy a policy over the web. Other possible insurers are Geico Direct (<www.geico.com>), All State (<www.allstate.com>), State Farm (<www.statefarm.com>), etc. You can obtain quotes and find the offices of their local underwriters through their websites. In general, it is advisable to obtain quotes from as many insurers as possible, as it is often hard to predict who will have the best rates. You may also want to check out section 5.5.2 for additional information about buying car insurance.

4.4.5 Parking on Campus

Parking on campus during the day is expensive (though many lots are free, with or without a parking permit, after 5:00 PM and on weekends). There are buses that run from the more distant lots to central campus, so you may want to consider getting a permit for such a lot and taking the bus to your office (check a map before you buy a parking pass). The various options are available at <www.transportation.cornell.edu/Commuter_and_Parking_Services>. There are also many parking options near campus for those who don't mind parallel parking and/or taking a risk on having to walk. For example, Buffalo St., Stewart Ave., University Ave., and many of the roads in Collegetown offer unmetered on-street parking every day, but you might have difficulty finding a spot if you come in later in the day.

Everyone who intends to park on campus at any time (even if only "after hours") should register their car with Cornell, even if they do not intend to buy a parking permit. Note that you can register your car for free without purchasing a parking permit. You can download the form at <http://www.transportation.cornell.edu/Commuter_and_Parking_Services/tms3_gradoption.html>

This web page also contains extensive information about transportation options for graduate students at Cornell, including information about buses, biking, and parking. Note that bicycles must also be registered with the Transportation department at <http://www.transportation.cornell.edu/Commuter_and_Parking_Services/forms/tms3_bikeregform.html>.

If you do park on campus, be sure to check the posted parking limitations on the lot you choose. Cornell public safety is notorious for giving parking tickets. Although many lots are free after 5 PM and on weekends, there are several that are restricted to permit holders almost all the time.

4.4.6 Car Services

When we polled grad students about car repair places, they recommended the following:

- Monro Muffler/Brake & Service, 338 Elmira Rd 266-6443
- Patterson's Service Station of Ithaca Inc, 221 N Aurora 273-0322
- Varna Auto Service, 933 Dryden Rd 273-3776
- Hunt's Auto Service, 225 Elmira Rd 273-9325
- Taber Street Auto, 805 Taber St 277-3346
- Walters Chevy/Olds/Pontiac, 308 Main St, Groton 898-5833

4.5 Transportation

4.5.1 Buses

Information and schedules for buses throughout Tompkins County (including Cornell) are available at <<http://www.tcatbus.com/>>. Some routes only run during the day, but others run fairly late into the night (such as the Blue Light Buses, section 3.5.2). Weekend bus schedules differ from weekday schedules, with relatively few buses running on Sundays. However, there is fairly extensive coverage, with local buses ranging over campus, Collegetown, downtown, Ithaca College, and further away to some stops on Rt. 13 and near the mall. There are also routes that go farther afield. For 2007, "OmniRide" Bus passes are given to all new to Cornell students. Note that this does not include students who graduate from an undergraduate program and then matriculate into a graduate program. For these students, TCAT buses are free in the evenings (after 6PM) and on the weekends. Otherwise, the fare is \$1.50 for weekday rides and \$200 for a year long pass.

4.5.2 Transportation to/from Ithaca

If you want to go outside the immediate Ithaca vicinity, it's often easiest to drive, and even if you don't have a car it is sometimes most cost-efficient to rent a car. However, there are major bus companies that have stops at the downtown bus stop in Ithaca on the corner of Seneca and Rt. 13 S. The companies that stop there are Greyhound (272-7930), Shortline (277-8800), and Trailways (800-295-5555). Shortline in particular provides frequent daily service to New York City, with many routes including pick-ups in Collegetown and North Campus. See their website, <<http://www.shortlinebus.com>>, for schedules and fare information. In addition, Cornell offers a luxury campus-to-campus bus service from the Ithaca campus to the New York City Medical campus for more than twice the price of other bus services. See <http://travel.cornell.edu/c_to_c.html> for more details.

If you want to fly out of Ithaca, the closest airport is the Ithaca-Tompkins Regional Airport, only a ten minute drive from downtown Ithaca, and also on the bus routes. There are only a few flights in and out of this airport each day, with its only airlines being USAirways, Northwest Airlines, and United Airlines. However, the location makes it very convenient. The airport limousine from the airport is convenient, though slow, and they always stay open until the last plane of the night lands, even if it arrives late.

If you want to fly on a different airline, or are willing to drive a little to get a cheaper ticket, the Syracuse Airport is larger and has more options. People without cars will have trouble using the Syracuse airport due to the lack of public bus service to the airport. At the time of writing, there is early morning daily service to the Syracuse airport, but there is no return service. Another option to go to the Syracuse airport is using the Airport Limousine (273-3030), although the amount of money that you save from flying out of Syracuse will likely be less than the cost of this service. You may also find, if you are going to fly overseas, that it is worthwhile to fly out of New York City or Philadelphia and drive or take a bus there.

4.6 Health

4.6.1 Gannett Health Services

Whether you are seeking to maintain, maximize, or regain your health, Gannett Health Services can help. Gannett offers accredited medical, coun-

seling, and health promotion services and is centrally-located on campus (110 Ho Plaza). All members of the Cornell community (including graduate and undergraduate students, student spouses or same sex partners, and children over the age of 14; postdoctoral fellows; and university employees) are welcome to use Gannett. Any full-time registered student may use their services whether he/she has private health insurance or Cornell's Student Health Insurance Plan (SHIP).

Services available through Gannett include general medicine, counseling and psychological services, allergy shots, immunizations, alcohol and other drug services, sexuality services, physical therapy, radiology (X-ray) and laboratory services, sports medicine, travel clinic, pharmacy services, nutrition counseling, victim advocacy and patient advocacy. The Gannett website (<www.gannett.cornell.edu>) provides a great deal of information about these services. It also provides information about some of the most popular health concerns expressed by Cornell students. (See special pages for graduate students and/or international students.) The site is a terrific means of accessing student health information when Gannett is closed. You can also consult by phone with a Gannett health-care provider 24 hours a day, 7 days a week. Call 255-5155.

Many Gannett visits involve only a \$10 charge for enrolled students. Fees are charged for X-ray, lab tests, medications, appointments for non-students, other services, and missed appointments, but many expenses may be covered by your health insurance plan. (Remember: every full-time registered student must have adequate health insurance. See Section 4.6.5.) Bills for Gannett services must be paid at the time of the visit with cash, personal check, or credit card. During the academic year, students can apply such charges to their bursar bills. All charges covered by SHIP will be submitted automatically. If you have other insurance, Gannett can provide a bill you can submit for reimbursement. You should not let financial concerns be a barrier to receiving health care. Talk with a member of Gannett's billing department if you need help deferring fees, extending payment, or accessing financial assistance. Also, rest assured about your privacy: Medical care and counseling at Gannett are both confidential, and health care records are completely separate from all other university records.

Appointments at Gannett can be made by calling 255-5155. When possible, schedule visits for non-urgent problems in advance. In the case of illness or injury that cannot wait for a regular appointment, you can request a same-day appointment. (Call first thing in the morning if possible.) When Gannett is closed and you need urgent walk-in care, please consult with

Gannett's on-call provider who will assist you in making arrangements for evaluation and treatment. In the case of a health emergency (i.e., requiring immediate attention) call 911 anywhere in Cornell or Ithaca or use a campus Blue Light Phone to access services. Emergency care is provided at Cayuga Medical Center's Emergency Room, open 24 hours a day, every day. The ER treats severe injuries, alcohol emergencies, and illnesses that require immediate attention. For additional information about making appointments at Gannett, see the Gannett website <<http://www.gannett.cornell.edu/>>.

Hours at Gannett:

Fall and Spring semesters:

8:30 AM – 5 PM Mon–Fri,

10 AM – 4 PM Sat

January winter session:

8:30 AM – 4:30 PM Mon–Fri

Summer:

8:30 AM – 4:30 PM Mon–Fri

University holidays: building closed; use the 24/7 phone consultation

For all inquiries and appointments in Gannett, call **255-5155**. For expediency, some additional phone numbers are listed below:

Physical Therapy, 255-7217

Billing information, 255-7492

Counseling and Psychological Services, 255-5208

Health Promotion, 255-4782

Medical Records, 255-4082

Office of Student Health Insurance, 255-6363

Patient Advocate, 255-3564

4.6.2 Local Hospitals

Cayuga Medical Center (CMC)

Emergency Room Phone: 274-4411. Contact Cayuga Medical Center for emergency service, or for urgent treatment when Gannett is closed.

Convenient Care Center

For outpatient services, the wait at the Convenient Care Center might be shorter. It's located off Warren Road at 10 Arrowwood Drive. Their phone is 274-4150.

4.6.3 Dental Services

There are a large number of dentists practicing in the Ithaca area. A complete list is available at Gannett. Officially Gannett will not recommend a dentist; if you ask nicely, though, some of the nurses will circle a few names for you.

A survey of engineering graduate students produced the following list of recommendations:

Fall Creek Family Dentistry (272-8118)
Dr. James Fey (272-7200)
Dr. Richard Gardner (272-9264)
Dr. Marc Purdy (272-2040)
Dr. Chris Purdy (272-6127)
Dr. Matthew Thompson (272-0901)
Dr. Edward Ambis (272-1874)

Prices for dental work vary widely. Be sure to ask about the price of a cleaning when you call. Many places give discounts to Cornell Students, so be sure to ask.

If you are looking for the least expensive option and are willing to drive to the Binghamton area, then Broome County Community College has a dental hygiene program. For \$10 one of the trainees will clean your teeth and take X-rays. They take their time and do a very careful job, we've heard, and they will give you copies of your X-rays to take to another dentist.

If you are in pain, you may be able to get Gannett to do something for you until you are able to see a dentist, depending on what the problem turns out to be.

As a side note, Ithaca, unlike almost every other city in the US, does not put fluoride in the water. This surprises many people. If you go to a dentist outside the Ithaca area, you might want to mention this fact. Many dentists do not give fluoride treatments as a matter of course but will do so if you are not getting fluoride in your water.

4.6.4 Counseling Services

Counseling and support are available through the following departments/groups:

Gannett Health Services

Counseling and Psychological Services (CAPS) (B5) are available to all full-time, registered students at Cornell. Services include assessment, crisis in-

tervention, group counseling, individual and couple's counseling, and referrals to community clinicians. Call CAPS (255-5208) to talk with a counselor who can assess your needs and help you find the support you need (for yourself, a friend, or a colleague at Cornell). Staff is also available for consultation and support during free and confidential "Let's Talk" hours, offered at multiple locations across campus. (View <www.gannett.cornell.edu/LetsTalk> for the schedule of hours and locations.)

EARS (Empathy Assistance Referral Service)

Phone: 255-3277

Information: 211 Willard Straight Hall, 255-7243

Hours: Sun–Th 3–11

Fri 3–10

Sat 6–10

EARS operates only during the academic year. Stop by during their hours without an appointment to talk.

Mental Health Association in Tompkins County

Phone: 273-9250

Address: 518 W. State St.

Hours: M–F 8:30–4:30

Available services include information and referral service, educational presentations, and training. They sponsor Aurora St. Friends, a program that matches community volunteers with former mental health patients. They also publish the "States of Mind" newsletter, the "Pieces of the Puzzle" manual for parents of children with social/emotional/behavioral problems, a Therapist Guide, a Private Practice Guide, and a Support Group Directory.

Suicide Prevention and Crisis Service

Phone: 272-1616

Services provided include 24-hour crisis line, counseling, and referral, SIPS (Sexual Identity and Peer Support), and after hours mental health referral.

Family and Children's Service

Phone: 273-7494

Address: 204 N. Cayuga Street

Hours: M–T 8:30–5:30 W–Th 8:30–8 F 8:30–5

Services provided include family and marital counseling, youth services, home health care, community services, and other counseling. Fees are charged on a sliding scale. Cornell has a contract with Family and Children's Services through their Employee Assistance services, giving Cornell employees psychological services as part of their benefit package.

Alpha House Outreach Center

Contact: Bill Rusen, Exec. Director 273-5500

Address: 334 W. State Street

Hours: M–Th 9:00–8:00, F 9:00–7:00

Substance abuse services, nine full time counselors, educational and assessment services, individual or group counseling, and licensed medical ambulatory service are provided. Third Party Reimbursement Insurance is accepted and they operate on a sliding fee scale. They also have an outpatient clinic in Groton and an inpatient clinic in Trumansburg.

4.6.5 Health Insurance

Cornell University requires all students to have quality health insurance. All registered students in the Graduate School are automatically enrolled in Cornell's Student Health Insurance Plan (SHIP). The SHIP is an accident and illness policy that offers extensive coverage for most on- or off-campus medical care from August 17 to August 16 each year (January 16 to August 16 for spring entrants). Optional dental and vision plans are also available for an additional fee.

The Graduate School will pay the premium for all graduate students registered with the Graduate School who are receiving full tuition and a full stipend from or through Cornell. All students registered with the Graduate School who are not receiving full tuition and a full stipend will be charged the mandatory premium for the SHIP. Only those students who can demonstrate that they have other insurance that meets all of Cornell's requirements will be allowed to appeal the charge for the SHIP.

Students who are responsible for the premium can choose to pay in monthly installments (with a small service charge). The deadline for signing

up for this service is September 30 for Fall entrants, and February 28 for Spring entrants.

You can enroll dependents in the SHIP for an additional fee. Eligible dependents include a spouse, same-sex partner, and unmarried children age 19 and under. Dependents are not enrolled automatically. If you wish to enroll one or more dependents, complete the necessary enrollment forms at the Office of Student Health Insurance (in Collegetown, next to Ruloff's) before September 30 for Fall entrants, and February 28 for Spring entrants. Dependents of international students must be enrolled within thirty days of their arrival in the United States.

Complete, current details of the SHIP and the appeal process are mailed annually in July for Fall entrants and January for Spring entrants.

Cornell's Student Health Insurance Plan (SHIP) has been developed especially for Cornell University students (and their eligible dependents), and provides access to convenient, high-quality health care that complements services offered on campus. Cornell's SHIP is an accident and sickness policy designed to: –provide extensive coverage at a reasonable cost for most on- or off-campus medical care. –guard against catastrophic expenses. –cover pre-existing medical conditions. –provide coverage 24 hours a day 365 days a year anywhere in the world from August 17 through August 16. –provide medical evacuation and repatriation coverage. –provide optional dental and vision plans. –provide convenient insurance assistance –meet or exceed all F-1 and J-1 visa requirements

For students and dependents (over the age of 14) enrolled in the SHIP, Gannett Health Services is your primary care provider. Except in emergencies or for OBGYN services, whenever you need health care, you must begin at Gannett to receive the maximum benefit for services. If your care cannot be provided by Gannett, your primary care provider may refer you to a preferred provider. (To receive the maximum benefit for services covered by the SHIP, you must have a written referral to a preferred provider for specialty care. Referrals have to be re-written each plan year.)

Emergency services are typically covered by the SHIP, but make sure you notify the Chickering Group as soon as possible, preferably within 24 hours of receiving care in order to make sure you understand any payment obligations.

Outside of Ithaca, the situation is somewhat different for non-emergency care. (Emergency care is still fully covered, though you will need to notify the Chickering group ASAP.) If you are away from Ithaca for a prolonged period of time and are in need of medical care, you will not need a referral. However, there are a couple of limitations. First, in order to reduce your

medical costs, it is preferable to go to an Aetna “in-network provider”. To find a list of such providers in your area, go to <http://www.aetna.com/docfind>, enter your geographic information, and specify “OpenChoice PPO” as your health plan. Usually, the list of Aetna in-network providers is rather extensive, so finding one near you is likely to be quite easy. However, out-of-area care is not fully covered by SHIP – in most cases, you will be responsible for 20 percent of the bill. Since medical costs in the US tend to be very high, 20 percent can quickly translate into a significant amount. So if you need to receive non-emergency medical care outside of the Ithaca area, be sure check with your provider and find out the cost of their services.

The SHIP health insurance plan also covers prescription drugs (up to \$2000 in 07-08). As with health care providers, in order to receive full benefits from SHIP, your pharmacy must be in the Aetna network. Fortunately, virtually all pharmacies in Ithaca are “in-network”, as are most major pharmacy chains throughout the United States. (See section 4.3.4 for more information on Ithaca pharmacies.) There is no difference in cost between filling your prescription in and out of the Ithaca area, so you can fill them from anywhere you go, as long as you have your insurance card with you. The co-pays for filling your prescription are \$25 for brand-name drugs, and \$10 generic drugs. Since the difference in co-pays is rather large, make sure to ask your provider if any generic alternatives are available when they prescribe brand-name drugs.

Be sure to read the SHIP brochure, as it describes in detail the situations under which you are covered by SHIP, as well as the type of coverage you have. For more information, contact the Office of Student Health Insurance, 409 College Avenue (Suite 211), Ithaca, NY 14850-3101, USA; Web: www.studentinsurance.cornell.edu; e-mail: sicu@cornell.edu; phone: (607) 255-6363.

4.7 Religious Life

There is ample support for religious life in Ithaca, be it traditional or alternative. Anabel Taylor Hall (B6) serves as a center for religious groups on campus, and is a good place to start looking for information. There are many places of worship in the city of Ithaca, most of which are listed in the Yellow Pages. Weekly services are listed in the Ithaca Journal on Saturdays.

Cornell United Religious Works is the interfaith department for all religious activities on campus. CURW coordinates nineteen member groups and administers both Anabel Taylor Hall and Sage Chapel. Weekly wor-

ship services, special lectures, social fellowship, personal counseling, and work/study encounters are just some of the opportunities sponsored by CURW.

A fairly complete list of religious services held in Ithaca is posted at <<http://www.curw.cornell.edu/worship.html>>. A more up-to-date version is available from CURW in Anabel Taylor Hall. They can also give you current contact information for all of the religious student groups on campus.

4.8 Childcare

See the excellent essay in Section 9.7 for a parent's perspective.

The Ithaca area has excellent schools, with modern facilities, experienced and motivated staff, and strong community support. Over 90% of students go on to college. The School District places emphasis on family and community involvement and seeks participation in many aspects of school life. There are many outstanding private schools at all levels.

Childcare is of concern to many families, and the area is fortunate to have many programs and services. Complete information is available from the Day Care and Child Development Council. Contact information is also provided for on-campus childcare.

Day Care and Child Development Council of Tompkins County, Inc.

609 West Clinton Street
Ithaca, New York 14850
(607) 273-0259
Hours: 9:00–4:30 weekdays
<<http://www.daycarecouncil.org/>>

University Cooperative Nursery School

Robert Purcell Community Center, Room 214 (E1)
266-9680
Registrar: Kathy Notch

Early Childcare Center

Martha Van Rensselaer Hall, EG04 MVR (DE4)
255-3288
Director: Elizabeth Stilwell

4.9 Legal Advice

Most graduate students never need legal services. At some point during your graduate career, however, you may find that you are in need of an attorney. Perhaps you believe that your landlord is treating you unfairly or perhaps you are involved in an accident and find yourself named in a lawsuit. Or maybe you just need a will or some other legal document. In any case, if you are in need of legal advice, you're probably looking to find it quickly. Here are some resources to help.

Most of the graduate students we asked had never used a lawyer — in the Ithaca area or otherwise. One graduate student, though, highly recommended William Seldin (273-3900). For a convenient option, the Cornell legal aid office is located in the law school on the ground floor level.

You may also want to check out <http://www.lawyers.com/>. This site is operated by the publishers of The Martindale-Hubbell Law Directory. The site provides free access to profiles of hundreds of thousands of attorneys and firms worldwide. In addition, the site includes a good collection of essays to help you understand the law, decide whether or not you need legal representation, and find a lawyer who can help you.

4.10 Media

4.10.1 Television

Due to the very hilly nature of the Ithaca area, it is nearly impossible to receive any television stations through an antenna. The one exception, depending on your location in Ithaca, is FOX-68 from Syracuse, NY. Most people who want to enjoy television subscribe to Time Warner Cable's basic cable service. You can also sign up for more extensive cable service through Time Warner to receive sports, movie, and other specialty channels.

4.10.2 Radio

Ithaca has several radio stations that provide many of the basic types of music people like to listen to now. The glaring omission is a Hip-Hop/R&B station, although WICB (91.7) has a hip-hop program one night a week. Some of the stations from further away are hard to receive in certain parts of Ithaca, and many die out entirely as one leaves the general Ithaca vicinity. The following list is a few of the stations that come in fairly consistently throughout Ithaca.

Radio Stations (FM only)

- 90.9 WSQG — Classical, NPR (from Ithaca, repeats WSKG from Binghamton)
- 91.3 WCNY — Classical, NPR (from Syracuse)
- 91.7 WICB — Ithaca College Radio, Modern Rock (from Ithaca)
- 93.5 & 105.5 WVBR — New and classic rock (from Ithaca)
- 95.5 & 97.3 WYXL — Lite [sic] rock and pop (from Ithaca, 97.3 is the main station, 95.5 is in downtown Ithaca)
- 98.3 & 106.9 WHCD — More rock (98.3 from downtown Ithaca, repeats 106.9 from Auburn, NY)
- 99.9 & 100.3 WIII — Classic rock (from Ithaca & Cortland)
- 103.7 WQNY — Country (from Ithaca)

4.10.3 Publications

There are a large number of community and student produced publications that you can find around Ithaca and Cornell. This section contains descriptions of major publications of interest to engineering graduate students.

Cornell Chronicle

Cornell's "official" newspaper, the Chronicle is published every Thursday (every other Thursday in the summer), 40 weeks of the year. Special issues are published for Commencement and Reunions. The Cornell Chronicle includes a calendar of weekly events, lectures, and movies. It is available for free throughout the campus, including at student unions, IRC, residence halls, academic and administrative buildings and mailrooms.

Cornell Daily Sun

<<http://www.cornelldailysun.com/>>

Independent daily student newspaper funded by ads and subscriptions. The Daily Sun focuses on matters affecting undergraduate life at Cornell, but it is often an interesting read for graduate students as well.

Cornell Engineering Magazine

Cornell Engineering Magazine is published three times a year by the College of Engineering. It features articles about students, faculty members, and research projects in the College of Engineering.

The Cornellian

The annual Cornell yearbook.

Ithaca Journal

<<http://www.ithacajournal.com/>>

Ithaca town newspaper, sold at many locations, or available with delivery by subscription. Published daily Monday–Saturday.

Ithaca Times

<<http://www.ithacatimes.com/>>

Free local newspaper published weekly on Thursdays; contains articles and an entertainment section listing shows, movies, and other events scheduled for the coming week.

4.11 Weather in Ithaca

Upstate New York is in the middle of the temperate zone and thus has a distinct autumn, winter, spring, and summer. Summertime temperatures can rise into the 90's (30+ degrees Celsius), while cold snaps in winter can reach the single digits (−15 degrees Celsius). Ithaca does not suffer lake-effect snow, unlike the neighboring cities of Syracuse and Rochester, but does usually receive several substantial snowfalls each winter.

Ithaca has gained itself a reputation for having a gray, rainy climate and long, harsh winters. While the winters can bring large snowstorms and bitter cold, and the springs are characterized by bouts of gray skies and persistent drizzle, the region also enjoys stretches of dry, clear weather. Grads' perceptions of the weather seem to be largely relative to the weather they are used to from their home city — some find it dreary and gloomy while others find the weather normal, if not pleasant.

The most important thing to keep in mind about Ithaca weather is that it does reach very low temperatures during the winter, particularly at night. Frostbite can be a serious concern, but only if you don't dress appropriately. You will need to have a heavy winter coat, good boots, a hat (or hood), and gloves. It's worth investing in a good all-weather winter jacket (if the lining zips out, it can also be used as a raincoat in warmer weather). Sturdy, waterproof footwear is also not a bad idea, both for navigating the local hills and for keeping your feet dry in snow and rain.

See the essay in section 9.6 on surviving an Ithaca winter.

4.12 Other Universities

Though certainly the largest, Cornell is not the only university in town. Situated atop South Hill, Ithaca College (or IC for short) comprises a population of about 5500 undergraduates, with well-rated programs in the arts and communications. With a main base in Dryden, Tompkins-Cortland Community College (TC3) offers associate degrees and continuing education. Going farther afield, the State University of New York (SUNY) has campuses in Binghamton, Oneonta, and Cortland. Finally, those hungering for some serious college sports action may want to pay a visit to Syracuse University, about an hour's drive to the north.

Chapter 5

International Student Resources

Welcome to Cornell! Adjusting to the rigors of graduate student life is both rewarding and challenging. It can be even more challenging for international students who may have to adjust to a new society, culture (see section 5.7), language, and weather, and who must be aware of the immigration regulations that govern their stay. It is important to remember that you are not alone. The international students around you - there are more than 3,000 international faculty and students in the Engineering college - have gone through what you are going through right now. You should approach them for support and advice.

If you need information on immigration matters, however, we urge you not to rely only on the advice of friends and acquaintances. Immigration regulations are complex and are subject to frequent changes, especially in the recent years. You should always consult with the International Students and Scholars Office (ISSO) if you have questions about your immigration status, including employment authorization.

The ISSO is dedicated to serving the needs of international students and foreign academic staff and their families. They are located at B-50 Caldwell Hall. We encourage you to utilize their services. The contents of the following pages will hopefully be useful in facilitating your adjustment to the US and to life as an international student at Cornell. Most of the following information, and a great deal more, can also be found at the ISSO web site: <<http://www.issocornell.edu/>>. Their business hours are Monday-Friday from 9 am to 4:30 pm with the exception of Wednesday, which is from 1 pm to 4:30 pm.

ISSO maintains two electronic mailing lists: iPrograms-L and International-L. The instructions for subscribing to them are available on the web site of ISSO.

iPrograms-L e-list is used for receiving announcements about activities organized by the ISSO, like trips, and non-immigration programs. If you want to receive this information you need to subscribe to it.

International-L serves as a more informal channel to share opinions and information. It is mostly used as a bulletin board for information by international student organizations, people trying to sell or buy items (everything from yard sales to cars) or looking for ride shares. International-L is also a place to ask for international student related advice from peers. Note that International-L is not a channel to get in touch with staff at the ISSO.

Other invaluable sources of information are student organizations. This could be the easiest way to meet students from your own country. For the most recent listing of student organizations check out

<http://sao.cornell.edu/>). There are more than 150 different international student groups on campus; many countries and cultures are represented. Furthermore, anyone can join any international student group; if your home country is not represented or if you are interested in learning about another culture, these groups can be a great resource.

5.1 After Arrival

Right after you arrive there are several important things to do. We describe the common ones here; for other issues you can also check the ISSO web page at:

<http://www.isso.cornell.edu/>

1. **Get a Cornell and TCAT bus map.** You can get one from Day Hall Lobby and Info Booth during the daytime. TCAT is the local bus service. Besides the system map you can also get bus schedules from Day Hall Lobby or at <http://tcatbus.com/>.
2. **Have your SEVIS I-20 signed at the ISSO office.** This office is located at B-50 Caldwell Hall. In order for your papers to be in order, you must have your I-20 signed once a year by a staff member at the ISSO (you have 30 days after your start date to have it signed, otherwise you may lose your valid immigration status). If you leave the country without a valid signature on your I-20 you might be in trouble re-entering the United States (trust me, I've been there, and that was before September 11, 2001).
3. **Pick up all the information sheets at the ISSO.** Since you're already at the ISSO to get your SEVIS I-20 form signed, you might also pick all the sheets with information about life in Ithaca and Cornell. They contain information about Shopping Areas, Addresses and Phone Numbers of services, like doctors, telephone providers, etc. They also contain information about maintaining legal status and taxes. You don't have to study and read them all in the first weeks, when you're likely already overwhelmed with all the information that is being thrown at you. Rather, keep them and look the information up when you need it—for example the phone number of an optician if your glasses break.
4. **Get a Social Security Number (SSN).** You are likely to need (verify at the ISSO):

Certification of your student status from the ISSO
Passport
I-94 card
I-20 or DS-2019

You can apply for a SSN at the Social Security Administration Office located on the Commons. The address is: 127 W. State Street (second floor) Ithaca, NY 14850 Phone: (607) 256-3651. J-2 dependents are also eligible for a social security number, but only after receiving approved work authorization (*EAD*: Employment Authorization Document) from the Immigration and Naturalization Service. Applications for J-2 work authorization are available at the ISSO. All other foreign nationals (including spouses and children) should obtain an individual taxpayer identification number (ITIN) by filing IRS Form W-7 with original documentation described in the instructions. The W-7 is available from the IRS web site: <<http://www.irs.gov>>.

5. **Get a Cornell ID.** The Cornell Identification is required to access most services on campus including access to labs, laundry in grad housing and to borrow books from the libraries. Usually you get them when you register as a new student. You can also get a Cornell ID in Day Hall Cornell ID upon presentation of official documentation of relationship, photo identification and the ID card fee. Note that you will be liable to pay for any lost books, or late charges incurred by your spouse.
6. **Get a NetID.** Usually you will get your NetID by mail before you even arrive on campus. If not, you can also get your NetID from the Computing and Communications Center (CCC), (607) 255-8990 Even if you have another email address, remember to check your Cornell account for important immigration and University information. You can put a forward on your Cornell account so that all incoming mail is forwarded to the account that you use. See section 3.2.5.3 for more information about a NetID. It is recommended to visit take the online course for the "Travelers of the Electronic Highways" (TEH) from CIT: <<http://traindoc.cit.cornell.edu/teh/>>
7. **Visit to Gannett Health Services.** All new students must provide proof that you have had mandatory vaccinations in the 3 weeks after arriving to Cornell. Please drop (or call at 255-4364) by Gannett Health Service to verify that you need the immunization requirements and schedule an appointment for your required vaccines, if needed.

Furthermore, all international students are required to have a tuberculosis test after arrival in the US. You can also have this done at Gannett Health Service for a *10charge*.

8. **Open a Bank Account.** To open an account, you must present proof of identification (passport, driver's license or Cornell ID) and/or proof of affiliation with Cornell. They may ask you for a SSN, but you don't need one to open an account. You may want to open a checking account to pay monthly bills and a savings account to stash your leftovers and get some interest. See Section 5.4.1 for more information on banks, and also refer to ISSO web page for more details. To find out how to write a check see Section 5.4.2 below. Local banks will be present on Ho Plaza in August trying to get you as a new customer.

5.2 Visa Matters

Most of the information in this section is found on the web page of the ISSO. We need to point out that some of the regulations and rules described in this section change frequently. Even though we review the information in the handbook every spring, by the time you read this section some rules may already have changed again. Please consult the ISSO webpage and the advisors for the most recent updates.

5.2.1 Maintaining F-1 or J-1 student status

It is very important to be aware of the immigration regulations that govern your status in the U.S. Falling out of legal status can have serious consequences. To ensure that your legal status is maintained, you must remember these conditions:

Keep your **passport** valid. Consult your country's consulate or embassy in the U.S. to renew your passport. The ISSO has a list of the embassy/consulate addresses and telephone numbers. Embassy web sites include:

The Embassy Page: <<http://projectvisa.com/>>

The Electronic Embassy: <<http://www.embassy.org/>>

Maintain **full-time enrollment** during the academic year. You must register full-time as a student during the academic year. Full-time means that as an undergraduate, you must register and complete at least 12 credits each semester; as a graduate student, full-time usually requires that you

be a registered student maintaining progress towards your degree; however, some departments require that you specifically register for 12 or more credits even though they are just research credits. If you take a leave of absence, you will need to leave the U.S. within 15 days or apply for an Optional Practical Training permit. We strongly recommend discussing any of these issues with an advisor at the ISSO office, should you consider taking a leave of absence.

Apply for **extensions of stay** before the end date on your SEVIS I-20 or DS-2019. Please check your SEVIS I-20 student copy item #5, and DS-2019 item #3 for J-1 students and scholars. You will need to extend your program before it expires.

Do not accept off-campus **employment** without official permission (see the ISSO for details). You may forfeit your visa and ultimately face deportation from the U.S. Also see section 5.2.6 for more information.

5.2.2 SEVIS system

SEVIS (Student and Exchange Visitor Information System) went into full effect on 2003. The U.S. government implemented this new tracking system with new regulations. Every international student will have a new SEVIS I-20 form to enter or re-enter the U.S.

What is SEVIS? Every F and J visa holder must understand the Student and Exchange Visitor Information System (SEVIS), the new mechanism employed by the U.S. government to track the arrival, enrollment and departures of international students and their dependents. After 2003, Cornell University, and every other college and university in the United States, is required to use SEVIS.

SEVIS is an internet-based system that requires schools and the United States Citizenship and Immigration Services (USCIS) to exchange data on the immigration and academic status of international students and their dependents. Information pertaining to an F-1 or J-1 student or dependent's stay in the United States is available to U.S. embassies and consulates as well as to the USCIS.

Data schools must report

- Name, date of birth, country of birth, country of citizenship, source and amount of financial resources, academic program, level of study, program start and end dates
- Arrival and enrollment or failure to enroll

- A change of the student or dependent's legal name or address
- Graduation prior to the end date listed on the I-20 or DS-2019
- Academic or disciplinary actions taken due to criminal conviction
- Registration for less than a full course of study without PRIOR authorization from the ISSO
- Termination date and reason for termination
- Other data generated by standard procedures such as: program extension, school transfer, change in level of study, employment authorization, and reinstatement
- Failure to complete the academic program or program objective

5.2.3 Reporting your address to USCIS

Updating your address: You **MUST** update your address whenever you move within the U.S. The University allows you to do this on-line with "Studentcenter" (<www.studentcenter.cornell.edu>). In addition you **MUST** inform the ISSO within 10 days after moving, using the on-line form at: <<http://www.isso.cornell.edu/about/addresschange.php>>

This applies even if you are subject to Special Registration (NSEERS) requirements.

Note, the address you provide, should be the place you actually live, rather than a P.O. Box, and **No office addresses may be utilized**. Privacy can be maintained by checking the appropriate box in "Just the Facts". Failure to complete the address change could result in fines, imprisonment or deportation.

5.2.4 Re-entry After a Temporary Absence

To re-enter the U.S. with a F-1 or a J-1 visa, you must have the following documents:

- Valid passport (including your I-94)
- F-1 or J-1 visa (except Canadians) with a current US visa stamp
- Current SEVIS I-20 or DS-2019 with a valid signature
- Proof of financial support

It is recommended that you also carry the following documents:

- A certificate of enrollment. This form provides documentation that you are currently and have been a registered student at Cornell University. While this is not a required form for re-entry it will ease in your re-entry to the U.S. if you are questioned at the border. You may download this form at <http://certification.cornell.edu/>. There is no fee for this document. You can also obtain the document in Day Hall (basement).
- A transcript. You can obtain a free transcript in Day Hall (basement).
- A letter from your advisor or DGS with the following:
 - your degree and program
 - financial support
 - contact person in case there are questions

See section 5.8.2 for a sample letter.

5.2.5 Temporary Visa and Immigration Status

It is very important to clarify two legal terms in order to fully understand how to maintain your legal status in the US. People are often confused about the terms “visa” and “immigration status”. We frequently hear students say “My visa is expired. How do I get my visa extended?” Some of the students are referring to the visa stamp in their passport, but others are referring to the end date on their I-20 or DS-2019. It is important to know the meaning of the terms “visa” and “immigration status”. The following paragraphs should help to clarify the difference.

The **visa stamp** in your passport was obtained at a U.S. embassy or consulate abroad and is used for entering the U.S. The visa shows the latest date on which you can apply to enter this country. It does not show how long you can stay here. When arriving at a U.S. “port of entry,” the U.S. Immigration inspector examines your passport, your visa, and your Certificate of Eligibility (I-20 or DS-2019), and determines whether you are admissible to the United States. The visa functions as a key to enter the U.S. Once you have opened the door and entered, you do not need to worry about whether your visa is valid or expired. When you are leaving and need to re-enter the U.S., you must be sure that you have a valid key (U.S. visa) for return.

U.S. visa stamps are typically obtained at a U.S. embassy in your home country. It may, however, be possible that your visa has expired and you need to be able to enter the U.S. from some other place abroad without going back to your home country. In such a situation you may be able to obtain a U.S. visa by making a short trip to Canada if you have the pertinent documentation with you. In order to do this, you will need to make an advance appointment with a U.S. Embassy in Canada. You should contact the ISSO for information regarding this before making this choice. It can be very difficult and have serious consequences if you are denied a visa in Canada.

After the immigration inspector determines you are admissible, an **immigration status** is granted, which shows on your I-94 card and your I-20 (for F-1) or DS-2019 (for J-1). Most international graduate and professional students have either an F-1 or J-1 student status, or J-1 visiting scholar status. In most situations, your visa type and immigration status are the same, unless you have changed your immigration status after entering the U.S. For instance, some F-1 students change their status to F-2 (the dependent of F-1 student) or to another temporary immigration status. To maintain your legal status in the U.S., check your visa documents such as I-20, DS-2019 and I-94 card (not the visa stamp in your passport) and register full-time. For F-1 students, check the ending date under item 5 on your I-20 Form. For J-1 students, check item 3 on your DS-2019 Form. Also, if you are going out of this country, do make sure that your I-20 has been signed at least once in previous 12 months from the intended date of your re-entry. The signatures should be obtained at the ISSO office.

5.2.6 Employment with F-1 and J-1 status

“Employment” refers to any type of work or services performed in exchange for money, tuition, fees, books, supplies, room, food or any other benefit.

On-campus: F-1 students are eligible to be employed on the campus without obtaining permission for 20 hours per week during the academic year and 40 hours per week during summer and winter breaks. J-1 students must obtain the written permission of their sponsor before being authorized for on-campus employment. Note that “on-campus employment” typically refers to being an employee of the university.

Off-campus: A work permit is required before any off campus employment is allowed. Please contact the ISSO about the required procedures. It is a good idea to plan well in advance since obtaining

work authorization may take several months. If you are approaching your graduation you should start looking into H1-B visas or Optional Practical Training about one year before you plan to start working.

H1-B are visas that your employer will sponsor. They will do most of the paperwork for you and typically pay for the application fee. There is a fairly tight cap on the number of H1-B visas that are available each year. Right now the USCIS issues H1-B once a year; in 2007, the USCIS started accepting applications for such visas on April 2nd and the cap was reached that same day!. However, procedures change frequently and deadlines may be different for each year. It is a good idea to check with the ISSO at the beginning of the year to learn of the current deadlines and start dates.

An “Optional Practical Training” (**OPT**) gives you permission to work off campus of up to 12 month. International students often use this work permit for internships. The OPT regulation changed in 2008. If you have a H1-B application pending (type: “Change of status”) and whose OPT runs out before October 1st, your OPT will be automatically up to the point where a decision on your H1-B visa application is made. For students in STEM fields (science, technology, engineering, or mathematics – see list at <<http://www.isso.cornell.edu/immigration>> and whose employer is part of the E-Verify program, you can apply for a 17 months extension (for a total of 29 months) to your OPT in the last 90 days of your initial 12 months OPT. The information on this new legislation is still sparse and has changed few times during Spring 2008. Please consult the ISSO to get the latest update. If you need to obtain a work permit for an Internship, you can also ask your advisor to help you file a “Curricular Practical Training” (**CPT**). The CPT work permit is for internships that are part of your studies at Cornell. You will need your advisor to consent to the fact that the internship is a crucial, if not mandatory, part of your studies at Cornell. That can be a hard case to make, depending on your advisor and the internship. For more details, please, check the ISSO web site, it has a great deal of information on all these subjects.

In addition to these resources, the ISSO holds a biannual program, called “Visas After Graduation”. Please check the ISSO webpage for time and location.

We want to stress again that it is absolutely necessary to consult the ISSO if you want to apply for off campus work permits. I applied for an H1-B this spring and at the same time applied for an OPT

to be able to start working before October 1st. I made numerous(!) trips to talk with the ISSO advisors about various complex problems that arose. I found that they are very competent and very friendly and helpful people.

5.2.7 Inviting Friends and Relatives to the U.S. for Graduation

Visitors coming to the U.S. to attend your graduation ceremony may have to apply for a B-2 visitors visas at the U.S. Consulate in their home country. Some countries operate a Visa waiver program with the U.S. which allows their citizens to visit the U.S. for up to 30 days without the need for a Visa. Please consult the ISSO on whether that is the case for your relatives. The applicants should bring the following items to the U.S. Consulate:

- A letter of invitation in English from the student graduating. This letter should mention the purpose of the visit and the length of the visit. If you are providing financial support for the visit, that should also be mentioned and you should include supporting documentation, such as a current bank statement.
- A copy of the SEVIS I-20 form for F-1 students, or the DS-2019 form for J-1 students.
- A letter of support from the Graduate Records Office, 172 Caldwell Hall, indicating that you are scheduled to participate in the graduation ceremony. (It is not necessary that the letter indicates the names of the friends or relatives who will attend. The letter provided by the Graduate Records Office will only certify that you are graduating and the date of the graduation.)

If further information is required, please visit the ISSO.

5.3 English Programs

If you are a non-native English speaker, you will probably benefit from programs dedicated to improving the participants' speaking, writing, and comprehension skills in English.

5.3.1 On-campus English Programs

Cornell University offers several programs in English as a Second Language (ESL) to help satisfy the diverse needs of the non-native English-speaking

community.

International Teaching Assistants Training Program (ITATP)

Theresa Pettit, Director, tp64@cornell.edu, 255-6917

The program is designed to make your appointment as a first time teaching assistant as effective as possible. As a first-time teaching assistant you will be required to participate in a 20-minute oral interview if you will not be attending the Summer International TA Development Program (SITADP). The interview, which will be scheduled through your department, is designed to identify teaching assistants who can benefit from the International TA Training Program (ITATP) and/or English language courses.

SITADP is a two week intensive pre-semester orientation program designed for international graduate students who will be teaching assistants. The program involves regular features of the ITATP for development of teaching skills, intercultural sensitivity, and language skills, in addition to some new features like campus tours and activities and a visit to Taughannock Falls. The summer program will end with an exit test which will be similar to the normal screening interview to determine one of the three alternatives mentioned further below. The participants of this program will be paid a stipend as well.

The interview will consist of two parts: an informal, conversational part and a simulated teaching exercise for which you will be asked to give a short five to seven minute lecture-presentation on a field specific topic. You will have the opportunity to prepare your presentation in advance.

The interview has no bearing upon support promised by the graduate field, but it will determine whether (a) your participation in the ITATP, Education 578 is optional; (b) you will be required to enroll in an English as a Second Language course before assuming classroom responsibilities; or (c) you will be required to participate in the ITATP, Education 578 in oral communication and the dynamics of American classrooms as you carry out your departmental responsibilities. This training program requires roughly three hours a week. The three major components of the program are: Pronunciation, Cross-cultural Classroom Dynamics, and Teaching Practicum.

Former participants found that this program was helpful to them both in their teaching and in preparing for graduate level oral presentations and examinations.

English for Academic Purposes (EngAP)

Deborah Campbell, Director, cuiep@cornell.edu, 255-4863

Courses open to all Cornell registered students whose native language is not English. Supplemental academic writing, speaking, research-paper writing, and all-skills classes assist students with their academic English language needs.

English for International Students and Scholars (EISS)

Donna Colunio, program coordinator, cusp@cornell.edu, 255-7259

A non-credit course for all visiting scholars who seek improvement in any basic English language skill, with special emphasis on speaking and listening. All language learning activities are oriented toward what will be most useful to the scholars during their stay here. Offered through School of Continuing Education and Summer Sessions.

Cornell Campus Club (ESL)

<<http://www.campusclub.cornell.edu/ESL/ESL.html>>

Julia Samorodnitsky, program coordinator, ccc_esl@cornell.edu, 257-1085

Open to all members of the Cornell Community, but especially directed to spouses of students and visiting scholars. The focus of these daytime and evening non-credit classes is functional English skills. Classes are conducted by volunteers. There is \$20 fee per semester (no refunds), and you can take up to 3 classes per week.

5.3.2 Off-campus English Programs

Another alternative for improving your English is:

BOCES

273-4095 Office hours: 8:30am-5pm

Its office and classes are located at several locations in downtown Ithaca. It is **free** (though you may need to buy books) to the spouses of Cornell students and employees, as well as other residents of the Ithaca area. Please note that people with F1 visas may not study in the program. Students are placed accordingly to their level of English proficiency as judged by both reading and speaking/listening skills. There are ten classes every morning, two every afternoon, and two every evening. The program is coordinated by fifteen experienced and well trained teachers who are allowed the autonomy to create classroom activities that meet the learning needs of their students. You have to be at least 18 years old to be able to take courses.

5.4 Finances

5.4.1 Opening a bank account

One of the first things you should do after arriving in Ithaca is open an account in a local bank. To open an account, you must present proof of identification (passport, driver's license or Cornell ID). While it is not necessary to have a social security card to open an account, if you work in the U.S. (includes working as a Graduate Research Assistant), you must obtain a social security number (See section 5.1 for instructions on how to apply for a social security card), as soon as possible and inform the bank. In essence the services provided by banks in the US are similar to those in other countries, however the terms used may differ from what you may be familiar with in your country.

The cost and terms of opening and maintaining an account differ from bank to bank. Some commercial banks charge you for services that you might assume are free. You might get charged \$1-\$2 for transactions such as depositing money into your account or every time you talk to a teller at the branch. There might be a basic monthly fee. There might be an additional monthly fee of up to \$4 if you don't keep a minimal balance of \$500 at all times during a month. You might also only get interest if you keep a certain minimum balance. Read carefully what fees the bank will charge you before you open an account. The author suggests to open your first account with the **CFCU Community Credit Union** <<http://www.mycfcu.com/>> ,

formerly the *Cornell Fingerlakes Credit Union*, since they have almost none of these fees. There is a \$1 monthly checking card usage fee which you can avoid by depositing your Cornell payments into the account and maintaining a minimum balance of \$500. It has ATMs at several locations on campus and in town and a branch in the Campus Store and on several other locations in Ithaca. You can have your stipend directly deposited into any bank account, so you don't have to pick up your paycheck twice a month. A monthly statement of all transactions made during the preceding month, and/or your cancelled checks (checks written by you and cashed and cleared by the bank from your account) will be sent to you every month by most banks. Most banks also let you access and control your account over the web. You must keep an accurate record of your account to make sure you have enough money for each check you write. Writing a check without enough money in your account to cover it (bouncing a check), will lead to serious financial and legal consequences. Once you open an account you will be given numbered checks printed with your name, address, and account number.

Note that non-US citizens will have to provide a foreign "home" address due to government regulations. The author encountered problems with his checking card being sent to his foreign address multiple times instead of his Ithaca address. Living for over a month without a checking card proved very inconvenient which is why you should pay extra attention on the bank sending your documents to the correct address. You might consider not choosing Tompkins Trust for banking since similar problems occurred to multiple students who banked with them.

One of the most common points of confusion is the distinction between a Savings account and a Checking account.

Savings Account

A savings account enables you to save money and accumulate interest on your savings account balance. Different banks pay different rates of interest and require different terms and conditions in order to receive interest. While it is easy to transfer money from a savings account to a checking account or vice versa, you cannot write checks of payment from a savings account. CFCU requires you to carry a minimum balance of \$100 to earn interest on your savings account. (Source: <<http://www.isso.cornell.edu/>>).

Checking Account

A checking account allows the convenience of paying for goods and services without having to carry cash with you. Checks are most often used to pay monthly bills (telephone, rent, utilities, university bursar bills, etc.). See the following section on how to write and endorse a check. Most area stores and establishments, including grocery stores, accept checks for all purchases. However, most establishments require your name, address and telephone number printed on the check, in order for them to accept your check for any transactions. Most banks will also give you a debit or check card that you can also use to pay in most stores. You simply swipe the card through a machine at the register and enter a secret security code. The money will be deducted from your checking account. The CFCU check card can be used as a Credit Card for most purposes, but will not get you a Credit History. See more on Credit Cards in section 5.4.3.

Automatic Teller Machines

Automatic Teller Machines (ATMs) or Money Access Centers (MACs) are computerized banking machines, available 24 hours a day. These machines are operated with a special card and a secret access number, and can be used for all basic banking such as depositing, transferring, and withdrawing money. All the banks have a number of such machines located on campus as well as at different locations around the city. In most cases you are charged a fee of up to \$2 if you don't use an ATM provided by your bank. Find out where the ATMs from your bank are located. (Source: <<http://www.isso.cornell.edu/>>).

5.4.2 How to Write and Endorse a Check

Always remember to use ink when writing a check, and make sure you fill it out completely and accurately (see Figure 5.1). Never tear a check out of your checkbook until you have entered the same information from your check on your check stub or in your check register and subtracted the amount to obtain a new balance.

How to Write a Check

1. Start with the date; you may use any format, as long as it is legible. Use either the current date or a future date for a post-dated check (you should check out the policy on post-dated checks with your bank). A

Figure 5.1: A properly written check

post-dated check is a check which has a later date on it than the actual date on which the check was actually written. This means that the check can be endorsed only after the date written on it.

2. Write the name of the person or company (the payee) receiving your check on the line that starts with “Pay to the Order of” or “Payable to”.
3. Write the numerical dollar amount of the check in the small space that starts with a dollar sign (\$) so that it reads like this: \$123.45
4. Write the same amount using words for whole dollar amounts and fractional figure (like 45/100) for cents and a straight line to fill up the remaining space on the line ending with the word “Dollars”.
Example: One hundred twenty-three and 45/100 — Dollars.
5. Sign on the signature line at the lower right.
6. Note the check number, date, payee and amount on the check stub or in the check ledger at the front of your checkbook.
7. Subtract the amount of the check so that you will know how much you have left in your account.

Tip: Keep up with the balance in your checking account because banks will fine you for non-sufficient funds (NSF) to cover a check (also called a “bounced check”). List all deposits, record all checks, and keep up with the addition and subtraction. If you lose your checkbook report the loss to your bank immediately. For a fee you can block the checks that you lost. You will not be held liable if somebody fills it out in your name on his or her behalf.

Warnings: If you are paying someone with a post-dated check, let them know so that they aren't surprised when their bank doesn't credit the check to their account immediately. Completely destroy any voided checks or unused checks and deposit slips so that no one can copy the MICR (Magnetic Ink Character Recognition) code – the computer numbers at the bottom of checks – for the purpose of counterfeiting.

How to Endorse a Check

When you want to cash, deposit, or transfer a check made payable to you, you must sign or “endorse” it on the back (you may also have to give the date and your account number). The endorsement is placed on the back of the check along the short edge on the side where the words “Pay to the Order of” or “Payable to” appear. The endorsement area is marked on the back of many checks; keep your endorsement small, as you are usually limited to the first 1 1/2 inches from the edge of the check.

“Blank” endorsement. When you want to cash a check, endorse the check at the indicated place. But do not endorse it until you are at the bank. Once you have endorsed a check, it can be cashed by anyone.

“Restricted” endorsement. When you want to deposit the full amount of a check, write “For deposit only” and then endorse the check. You should always use this method when mailing a check to the bank.

5.4.3 Credit and Debit Cards

Credit cards will buy you goods from stores and online where checks and cash are not convenient to use. Credit cards are by now the most common

form of payment in the USA. In a lot of situations they are the only acceptable form of payment. However, for some people, having credit cards is an invitation to spend money without thinking twice about it. The difference to a debit card from your bank is that for a debit card the charges are immediately deducted from your checking account, while with a credit card you pay the amount charged to your card back to the credit card company at a later point. People have been in big trouble because they charged more to their card than they could later repay! Typically you make a minimum payment each month to pay your bills. If you don't pay your balance in complete within one month, you will be charged interest fees, which can be as high as 18% per year.

Why should I get a credit card? If you own a credit card you will begin building your credit history or credit report. That is important as the credit history is frequently used to assess your financial reliability. The following are just a few of the situations where your credit history is of significance:

1. *Applying for a job:* Your employer will likely look into your credit history before hiring you. You have to give him/her permission to do so, however. This helps him/her assess you reliability. If you missed a lot of payments that might, for example, be a warning that you might not be as organized as your resume may make it look.
2. *Applying for an apartment:* This is not often the case here in Ithaca, but when you need to find an apartment, the landlord will likely want to see your credit history. Again, he is not allowed to do so without your consent. If you have a poor or no credit history you might be denied or you might have to pay very high security deposits.
3. *Renting a car:* You just simply cannot rent a car without a valid credit card.
4. *Applying for a bank loan:* If you are applying for a bank loan to buy a car, house etc. the quality of your credit history will most likely decide whether you will be approved or not.
5. *Buying a cell phone:* If you have poor or no credit history you will be asked to pay a (refundable) security deposit. I had to pay \$500 because I didn't have any credit history at the time I wanted to buy my first cell phone.
6. *Buying a new computer* If you buy a new laptop, but do not have the \$1500 to pay for it, you may be able to finance it. The store

may allow you to pay for the computer in installments. However, this again depends on your credit history.

While getting a debit card is relatively easy, getting a credit card appears to depend upon a mysterious scoring system, basically your credit history! Some people get cards immediately, while others only receive rejection letters. The major factors in deciding whether you'll receive a credit card or not are:

- Time at present job
- Occupation (professionals are given heavy weight)
- Time at present address
- Ratio of balances to available credit lines
- Home ownership
- Number of recent inquiries
- Age
- Number of credit lines on your credit report
- Years you have had a credit in the credit bureau database
- Timeliness of payments

If you are new to the United States, these conditions are not in your favor. So, how are you to get a credit card if you already need a credit history for getting one? Several credit companies set up booths during the "student fair" which is organized 1 or 2 days before registration. These are a good start for applying for credit. These booths start from the Campus Store's door opening towards Willard Straight Hall. We recommend you start by applying for the American Express Student credit card, called **Blue for Students** ®. You will almost surely get approved, even if you just arrived in the U.S., and it has no annual fee. Check out <<http://www.americanexpress.com>> for more detail and to apply online. As an alternative you might consider applying for a credit card with a local bank. Both Tompkins Trust and CFCU Community Credit Union offer credit cards to people without credit history. They do, however, only offer a very low credit limit (\$500) and require you to also have a checking account with them. If the low credit limit is a problem for you, one trick is to

add a negative balance to your credit card by paying in more money than you owe. This way you can make purchases larger than your credit limit.

A few things to keep in mind when applying for and using a credit card:

- Be sure to make monthly payments on time to avoid a poor credit history and a late payment fee of \$30-\$50 depending on your credit card
- Be sure to not exceed your credit limit. The credit limit is the maximal amount you can charge to your card. In the beginning this will likely be \$2500. It shows in your credit report (and does not look good there!) and you are fined up to \$50 by the credit card company. Some companies don't let you go over the credit limit.
- Most credit cards can also be used to withdraw cash from an ATM. Be aware, however, that you will be charged an additional fee for doing so! Typically that fee is in the range of 3% of the amount you withdraw or \$5.00 whichever is greater, with no maximum!
- Be careful who you give your credit card number to! Whoever gets your credit card number can use it to make purchases. Check on your account and make sure that the amount charged to your account equals what you authorized with your signature or online. Be especially careful when using the card online. If you don't trust the website entirely, don't give them your card number!
- Report a lost card immediately! Your credit card company will give you an emergency number to call and block a lost or stolen card. A friend of mine had her wallet stolen on Times Square. It took her about an hour to realize the theft and block her credit card. The thieves had already gone shopping and bought TVs and Radios for over \$1500 with her card! Luckily she didn't have to pay those charges. Call your credit company to report the card stolen as soon as you notice the missing to avoid paying for charges thieves might put on your credit card.
- Suppose that you have a charge on your card that you didn't authorize. What can you do? First get in contact with the party who made the charge and try to have the charge removed. If that doesn't work you can contact your credit card company and dispute the charge. They will remove the charge from your card and then try to get their money back from whoever charged you. Unfortunately this shows up

in your credit history and doesn't look too good there. That's why you should try to resolve the dispute directly first. In the only case I had to deal with so far, the company immediately complied after I told them that I will dispute the charge if they don't refund me. The same applies if your card is stolen and used. You can dispute the charges and will not have to pay for them.

- Be careful to read the small print before you apply for or accept a card. Some cards have hidden fees and can be incredibly expensive to use. They may have annual fees of \$100, independent of whether you use them or not. I read about cards where it would cost you \$400 in fees to get a credit limit of \$500! Talk to Americans or friends who been in the US for some years and ask them what credit cards they have. We can recommend **Blue for Students** ® cards as they do not have any hidden costs and no annual fee, making it a very cheap card.

5.4.4 Financial Assistance

Short Term Emergency Loans

If you are experiencing a short-term, temporary financial need of \$750 or less, you may request a Short Term Emergency Loan from the ISSO. This loan is not available to pay any Bursar bills and usually must be repaid within thirty days. After 30 days a finance charge will begin to accrue at the rate of 1.25% per month. If it is repaid on time it is not subject to any finance charge or interest. Short-term loans are available to international undergraduate, graduate, and professional students.

(Source: <<http://www.isso.cornell.edu/>>)

Assistance for Graduate and Professional Students

Graduate and professional students are encouraged to talk to an advisor at the ISSO if they run into financial difficulties. Cornell also has an on-line Fellowship database that can be searched. The site contains information that the Graduate Fellowship office has on more than 150 outside fellowships. The address is <<http://www.gradschool.cornell.edu/index.php?p=105>>.

Current graduate students in Ph.D. programs who have lost or reduced funding for their final term of study may qualify for partial financial assistance from funds administered at the ISSO. Check with Brendan O'Brien, Director of ISSO, for more information.

More information on financial assistance in the US can be found at <http://www.edupass.org/finaid/>.

In addition, NAFSA, the Association of International Educators, has a financial aid page:

<http://www.nafsa.org/>.

(Source: <http://www.isso.cornell.edu/>)

5.4.5 Taxes

Taxes in the United States can be very complicated. It is important that you educate yourself about your tax responsibilities and rights. Valuable information about your tax rights and duties, as well as links to other resources, can be found at

<http://www.isso.cornell.edu/tax/tax.php>.

The Payroll office provides a very helpful Q&A “Tax Information For Foreign Nationals”, which can be found at:

http://www.payments.cornell.edu/Tax_FAQ_For_Foreign_Nationals.cfm

In addition, you now have access to the new On-line Tax Return Software for all International Students and Academic Staff at Cornell. The web-based software is available to the Cornell international community by mid-February. You are able to do your federal tax return forms with the on-line software. You need to enter your Net ID and password to gain access to the tax software.

The following are the most important facts to keep in mind about taxes in the USA:

- As a foreign national living in the United States you will in most cases have to pay New York State and Federal Income Tax, but not local taxes and FICA Taxes (Social Security and Medicaid). The United States has Tax Treaties with most countries that govern where Nationals from those countries pay their taxes. The ISSO has a booklet with a summary of all the tax treaties with foreign countries. In some cases the treaty will just say that as long as you stay at Cornell University, you will not have to pay taxes in your home country, but in the United States instead. In other cases the treaty might say that you're exempt from paying taxes here, lucky you! We suggest that you talk with people from your country, who have been here for some time and ask them how they pay taxes! The language of Tax treaties can be quite difficult and confusing and it is your responsibility to file taxes in accordance with the treaty that your country signed with the USA.

- Typically your taxes will be withheld by Cornell. That means that a certain percentage of your salary will not be paid to you but withheld. When you file your taxes, you will fill in how much has been withheld and compare it with the amount you need to pay. Typically you will be entitled to a refund, as too much has been withheld.
- Tax season starts in January when the Payroll Office mails your W2 from to you. The W2 form lists the amount of money you earned and the amount of money that has been withheld in State and Federal taxes from you. You have to attach portions of it to your completed tax declarations. Check “Studentcenter” on <www.studentcenter.cornell.edu> in December to make sure that your “W2 Mailing Address” is your local address. You don’t want your W2 to be mailed home to your parents. They might not understand the importance of the document and you might wonder where your W2 got lost.
- You have to file State and Federal taxes on separate forms. You can get the forms from the ISSO or the IRS (Internal Revenue Service, the tax department of the United States government) web site. Typically you will need the form **1040NR** or **1040NR-EZ** for your federal taxes and **IT-203** for your New York state taxes. Although for federal taxes, you can use the On-line Tax Return application.
- To help you with your taxes, the ISSO sponsors several tax information sessions. The staff at the ISSO and the students who will hold these sessions are not trained tax advisors. Nevertheless the seminars are very helpful and it is recommended that you visit one of them if you’re about to file your taxes for the first time. The sessions begin in mid-march. Look for announcements about times and locations in the ISSO electronic newsletter or on the ISSO web site. As an alternative you can ask a senior student from you country to help you fill out the tax declaration forms. She or he has done that before and hence should be able to help you.
- One thing to be aware of is that while there are accounting companies such as H&R Block that help individuals file their tax returns for a small fee, they do not typically deal with international students and may be ignorant of tax requirements for non-resident aliens.
- The deadline to file your taxes is around mid-April. Your tax declaration needs to be post marked no later than the deadline date! Usually there are long lines at the Post Office on that day, so it is a smart

idea to file your taxes early. You're most likely waiting for a refund of possibly several hundred dollars. The earlier you file the earlier you will get your refund.

5.5 Driving and buying a car

5.5.1 Driving

You must have a valid driver's license to drive in the U.S., and the vehicle you drive must be registered and have insurance. Valid licenses are those obtained from any American state or Canadian province and some other countries, or an international driver's license. If you do not have a driver's license, you may want to check the web page <<http://www.nysdmv.com>> about the detailed steps for obtaining one. You can also contact the local Department of Motor Vehicles (DMV) office located at 301 Third Street, 273-7187. The major steps include: showing proof of name, age and address, passing vision and written tests to get a learner's permit, completing a safe driving course, and then finally passing the road test. If you hold a license from another country and let DMV know about it, they may dispose of it (so plan accordingly).

You can own a vehicle even if you only have a learner's permit, though you may only drive when accompanied by someone with a driver's license. You must, however, purchase car insurance before you register your car. See the next section for more information on car insurance. After you buy insurance, you can go to the DMV to fill out some forms, register your car, and get license plates. If you buy a car from a dealer, usually they will do all this for you.

5.5.2 Car insurance

Car insurance rates can vary dramatically among insurance companies and also depend on the kind of coverage you choose and your background information. Examples of such background information are the nationality of your license, your driving experience, age, marital status, vehicle safety equipment, and driving frequency. Without the right auto insurance coverage, you could lose your savings and other assets if you are held responsible for injuries to another person or damage to their property. To make sure you have the right auto insurance talk to a car Insurance agent. But make sure you do some research first. Here are some things to take into account.

5.5.2.1 State Requirements

In most states, you are required to carry minimum auto liability coverage (or post a bond) and provide proof of insurance before you can license your vehicle or renew your driver's license. If you are caught driving without insurance, you may have to pay a large fine and have your driver's license suspended.

5.5.2.2 What is liability insurance?

Insurance protecting the insured against financial loss arising out of legal liability imposed upon him/her in connection with bodily injuries (or death) suffered, or alleged to have suffered, by persons of the public, or damage caused to property other than property owned by or in the custody of the insured as a result of the maintenance of the premises, or the business operations of the insured. Who is typically covered:

- You, family members or relatives who live with you when (1) driving your car or (2) driving other cars with that vehicle owner's permission.
- Other people driving your car when you've given them permission.

What is typically covered:

- It pays for you (and those covered by the policy) for legal defense costs, cost of bail bonds, and emergency first aid to others.
- It pays the people you've injured for property damage, loss of services, bodily injury, sickness, medical services, disease, loss of income and death.

Contact your local insurance agent to find out more details on the specific requirements in NY state.

5.5.2.3 Types of Auto Insurance Coverage

In addition to the liability insurance, there are many different types of auto insurance coverage for you to choose from. An agent can work with you to decide what coverage combinations provide the best protection at a price that fits your budget.

Collision - Pays for damages to your own vehicle. This coverage typically pays for damages to your car as a result of an accident with another car or something else (e.g. a tree). This coverage provides for the repair or replacement of your insured vehicle, up to the Actual Cash Value of the

vehicle. Actual Cash Value takes into account depreciation of your car due to age, use, and wear and tear.

Comprehensive - Pays for losses from fire, theft, storm, etc. Comprehensive coverage typically covers damage to your insured car not caused by collision (a covered accident with another car). This coverage typically includes, among other things, damage caused by falling objects, fire, theft and vandalism, explosion, earthquake and more.

Bodily Injury - Pays for injury to others when you are at fault.

Property Damage - Pays for property damage when you are at fault.

Medical Payments - Pays for your own or your passenger's medical expenses. Medical Payments coverage provides payment for reasonable and necessary medical treatment for bodily injury caused by a covered accident, regardless of who was at fault. That treatment includes, among other things, x-rays, surgery, ambulance, physicians, hospital, and funeral expenses.

Personal Injury Protection - In no-fault states, this covers a broad assortment of medical expenses. This typically provides coverage for an insured person for certain reasonable and necessary expenses. The types of expenses vary by state. Some examples of typical expenses include: medical and hospital expenses, income continuation, loss of services, funeral expenses, and child care expenses for bodily injury caused by a covered accident, regardless of who was at fault. It's only available in certain states.

Uninsured/Underinsured Motorist - Coverage for you if other driver is not insured or is underinsured.

In addition to basic auto insurance, consider these optional services to provide added protection for your vehicle:

Mechanical breakdown insurance Emergency Roadside Assistance and Towing Service When you or your loved ones are stranded and need help, they're as close as the telephone. With an optional Towing and Road Service, you can reach them 24 hours a day, 365 days a year. It only takes one toll-free call. If you choose a Sign and Drive Road Service, you won't need a credit card or check to get the help you need.

Car Rental Reimbursement After a car accident, you may need to rent a car while yours is being repaired. This coverage can usually be bought from your car insurance company. As an alternative you can also purchase it from AAA at <<http://www.aaa.com>>. Car rental reimbursement coverage pays a flat sum to assist you with the expenses that you may incur following an auto accident.

Auto Glass Replacement Auto Glass Replacement is an optional program that takes the headache out of repairing or replacing damaged or

broken auto glass. Sometimes included in a comprehensive coverage.

There are several places where you can buy insurance for your car in Ithaca:

Allstate Insurance

<<http://www.allstate.com>>

Amica Mutual Insurance Company

<<http://www.amica.com/auto/auto.html>>

Nationwide Mutual Insurance Company

<<http://www.nationwide.com/>>

Farmers Insurance Group

<<http://www.farmers.com>>

Geico Insurance

<<http://www.geico.com>>

For more options you should look in the yellow pages or ask your friends about their insurance provider.

5.5.3 Buying a car

One of the most valuable piece of advice we can give you is that if you are thinking of buying a car it is really helpful to bring someone that has bought a car before in the U.S. and it would be a plus if they also know about cars. (It won't hurt if they are comfortable bargaining if you go to a dealer).

Used cars are an option as the best automotive values. A good source on the reliability of car models, both new and used, is the *Consumer Reports* magazine. Cornell University has a subscription to this magazine, and it can be found on the web at <<http://www.consumerreports.com>>.

5.5.4 Licenses from Home

A valid driver license from another country is also valid in NYS in most cases. You do not need to apply for a NYS driver license unless you become a resident of NYS. According to NYS law, a resident of another country can get a NYS driver license, but the DMV does not recommend this because:

- NYS recognizes your foreign driver license if you remain a resident of the nation that issued the license. You do not need to have a NYS driver license to drive in NYS unless you become a resident of NYS.
- If you have a driver license from any nation, except Canada, you must pass a written test, complete a 5-hour pre-licensing course and pass a road test to qualify for a NYS driver's license.

However, your car insurance may be more expensive if you stay on a foreign drivers license. If you decide to stay on a foreign drivers license, you will need to make a certified English translation or bring an "International Drivers License" from your home country. Most countries in the world offer these in addition to you normal drivers license. Usually you have to make that translation yourself and then have it certified. Certification can be done by a Cornell language department. For example, translation of German licenses can be obtained from the German language department at Cornell.

5.5.5 Ithaca Carshare

If you do not plan on driving daily you should consider not having your own car but becoming a member of Ithaca Carshare. Ithaca Carshare is an organization who have eight cars in convenient locations across town. As a member you can reserve any car at any time and use it as long as you return it to its original position. There is an hourly and a per mile cost as well as a yearly membership fee. For more information on pricing plans you should check www.ithacacarshare.org. The author uses Ithaca Carshare and uses the car for grocery shopping and occasional weekend trips paying approximately 80permonthonaverage.

5.6 Survive the Winter

For International students, your first Winter in Ithaca might be a challenge. The weather in Ithaca might be fairly different from your home country. If you choose to slightly modify the way you dress and follow the recommendations from the ISSO (see <<http://www.isso.cornell.edu/ithacalife/winter.php>>), you will be able to fully enjoy living in a region where you can go skiing, skate on lakes and rivers and sledge down some slopes. Even for me, coming from Canada, I can say that the Winter in Ithaca was colder than what I expected (but definitely warmer than my home town!). You should consider buying a good pair of boots to avoid slipping on the ice or snow (it is usually snowing at least once a week throughout the Winter), warm layered clothes so can avoid getting cold or getting too warm and humid, a woolen hat for cold weather since you loose over 60

/smallskip

For people driving a car, winter tires are a must. They provide improved traction of snow and ice (your car is no different than you... you are slipping on the ice; your car will do it too). The most slippery zones when driving

are overpass, bridges and the areas right before stop signs and traffic light because cars preceding you might have slipped there make the ice more smooth. Make sure your drive carefully and breaking earlier before stop signs and traffic lights.

/smallskip Make sure you enroll in the winter activities trips and excursions from ISSO. Your experience in Ithaca will be greatly improved by your memories of the first time you go down a slope in alpine ski or by skating on Lynah rink.

(see section ??)

5.7 Culture Shock

In the first weeks and month here at Cornell you will most likely experience something called culture shock. The following essay was taken from:

<<http://www.einaudi.cornell.edu/>>

It raises and discusses a lot of points that you will encounter yourself being thrown into a new culture and foreign society.

“Living in another country for an extended period of time will give you an opportunity to develop an in-depth understanding of another culture, confront different customs and ways of thinking, and adapt to a new daily routine. While this experience is extremely exciting and rewarding, it can also be disorienting and challenging to be far away from your family, friends, and cultural norms. For most people, the study abroad experience consists of a series of emotional highs and lows, known as culture shock.

“When you first arrive in the host country, everything around you will probably be new, different, and exciting. You may enjoy the distinct character of the sights, sounds, gestures, and other aspects of culture that can flood your senses. You will expect everything around you to be different during the first few weeks in your new environment. The initial period is called the honeymoon stage of culture shock, and it is characterized by feelings of fascination, excitement, and a desire to learn more about the culture.

“After several weeks, when you have settled into a daily routine, you may become aware of some of the subtle differences in gestures, manners, clothing, tone and rhythm of voices, banking, telephones, etc. These cultural differences may be a source of frustration or make you feel out of place or miss everything about home. You may even feel disappointed in yourself if it is difficult to communicate, fit in, and enjoy every moment of your time abroad.

“As you learn more about your host country, develop friendships, and establish a life for yourself abroad, you will probably begin to feel more comfortable in your new environment. Some of the cultural differences that were frustrating or annoying may become a part of life that you accept or learn to tolerate. By the end of your stay, you probably won’t want to leave your new home. After returning from abroad, you may even experience some degree of re-entry stress or ‘reverse culture shock’.

“The suggestions that follow may help you deal with culture shock and get the most out of your study abroad experience.

- “Remember that the symptoms associated with culture shock are natural and common reactions related to cultural differences and the adjustment process. If you fail to admit that you are experiencing culture shock, adjusting to your new environment will probably be a long and arduous process.
- “Make the effort to meet local people. It is easy to befriend other international students because you might share a common language, culture and situation. It usually requires more thought, effort and creativity to meet locals, but interacting with people from your host country will enable you to learn more about the culture, practice your language skills, and develop lasting ties. The easiest way to meet people is to join a group or take a class that will allow you to pursue an interest or hobby and interact socially. Participating in musical groups, sports, and volunteer projects is effective.
- “Become familiar with the area and frequent local establishments. Take some time to walk around and carefully observe your surroundings, the people, buildings, stores, etc. Find interesting places and frequent particular coffee shops, newsstands, and stores. You may get to know the waiters, proprietors, and other regular customers. You will also feel more comfortable in your new home.
- “Read and speak English and try to learn as much as possible about local viewpoints and customs. Read newspapers and popular magazines, and watch local TV programs and movies. Ask questions and don’t be afraid to make mistakes. Your efforts will help you integrate into the culture.
- “Keep a journal. Record your experiences, thoughts and observations. Writing in your journal can be a time to reflect and assess your progress in understanding and adjusting to your host country. You

will be glad to have a written account of your experiences to look back on when you come home.

- “Take lots of pictures that you will treasure forever.
- “Don’t glue yourself to e-mail contact for hours every day; unplug from home and plug into the culture.”

The ISSO has a wealth of material that provide insight into the American Culture. The following points are part of two essays that can be found at: <<http://www.isso.cornell.edu/>>

While often general and sometimes oversimplifying in nature, they may help you to understand the way Americans think and interact with each other and you.

What’s typical about US Americans?

“There are so many aspects to any one culture that it is difficult to describe what a specific culture is like in only a few words. Most people living in the U.S. are either immigrants themselves or descendants of immigrants who have been arriving since the beginning of the 1600’s. It is not surprising, therefore, that the U.S. contains many different cultures and ethnic groups. How then can one talk about “Americans?” When people try to describe Americans, they are often referring to the behaviors, values, and ideas of the white middle class, since historically people in this group have held the most prominent positions and have exerted the greatest amount of influence on the predominant ideals of society. Not all Americans are white or middle class, nor do they necessarily agree with white middle class values, but these values are widely evident in the U.S. To help you understand better the behavior you may observe in the United States, some characteristics of American culture are described below. But bear in mind that not everyone in this culture will display these traits.

“Control of Nature and the Environment. Americans usually think of nature as something that can be altered, conquered, and controlled for people’s comfort and use, for example, to minimize the effects of fierce weather conditions. In contrast, many cultures accept nature as a force greater than people and as something to which people must adapt, not something they can or should change and control.

“Progress and Change. Most people in this country accept change as an inevitable part of life. Non-western people tend to look upon their traditions as a guide to the future. Americans are more inclined to make

decisions based on the anticipated or desired immediate future. Achievement, positive change, and progress are all seen as the result of effort, hard work, and the control of nature and one's destiny or future.

“Individualism. Americans generally believe that people should strive to be autonomous and self-reliant. Most Americans see themselves as separate individuals, more than members of a nation, family or community. They dislike being dependent on other people or having others dependent on them. Some people from other countries view this attitude as “self-centeredness;” others may view it as a healthy freedom from constraints imposed by family, clan, or social class. Members of a traditional society are more likely to regard their role in life as unavoidable and seldom to be questioned or changed. Social and cultural factors may be viewed simply as barriers that need to be overcome in order for them to get ahead. A result of this attitude is the competitiveness of American life. Achievement is a dominant motivation in American culture.

“Moralistic Orientation. Americans tend to want to win other people over to their way of thinking and are likely to judge other societies in terms of the U.S.. Americans often think that other countries should follow their example and adopt their way of doing things; they tend to think that their way is the best, despite the many serious social and environmental problems in the U.S.. Other cultures are often evaluated as better or worse than this one, rather than simply different.

“Time Orientation. Americans place considerable value on punctuality. Because they tend to organize their activities by means of schedules, they may seem hurried, always running from one thing to the next and unable to relax and enjoy themselves. Since Americans are so time conscious, the pace of life may seem very hectic. Being on time is regarded as very important, and in the U.S. most people make an effort to arrive on time. Not all Americans are punctual, but almost everyone is conscious of time. Different types of activities have different conventions. One should arrive at the exact time specified for meals, and for appointments with professors, doctors, and other professionals. You can arrive any time between the hours specified for parties, receptions, and cocktail parties. Plan to arrive a few minutes before the specified time for public meetings, plays, concerts, movies, sports events, classes, church services, and weddings. If you are unable to keep an appointment, it is expected that you inform the other party that you will be late or unable to arrive.

“Doing Rather Than Being. Americans consider activity to be a good thing; thus, the expressions “keeping busy” and “keeping on the move.” Rather than simply getting together with friends to spend time

together, Americans frequently will plan a particular activity so that there is a focus to the time spent with friends. People in other cultures often comment on this American emphasis on “doing.”

“Work Relations and Social Relations. It is common for Americans to make a distinction between friends in their work or professional world and friends in their social world. Although Americans are friendly with their colleagues, they usually do not develop deeper relationships with them outside the office. Americans also tend to be rather formal with customers, clients, and professional colleagues. In a meeting for example, they may exchange brief greetings with each other but then want to concentrate immediately on the business at hand. Therefore they may have difficulties functioning in cultures where you must cultivate a social relationship with someone first before they can transact business. It can be frustrating for Americans to have to develop a social relationship over some period of time before talking about more serious matters.

“Egalitarianism. Although there are many differences in social, economic, and educational levels, a notion of equality runs through social relationships in the United States. Because Americans emphasize individual merit rather than a fixed social position and believe that anyone with industry can achieve and succeed in life, they tend not to recognize certain social differences when interacting with each other. For example, Americans do not often show deference to people of greater wealth, greater age, or higher social status. Visitors from other cultures who hold high positions sometimes feel that Americans do not treat them with proper respect and deference. On the other hand, when visiting other countries, Americans may find it confusing to be treated as someone of a distinctly higher or lower status because of the way people in that culture perceive them. In the U.S., there is generally an attempt to equalize the relationship between two people and to avoid calling attention to rank and authority. Americans call each other by their first names much sooner and more often than people in most other countries. In the U.S., people are seen as having equal rights, equal social obligations, and equal opportunities to develop their own potential, even though in reality things are not always so equal.

“Prejudice. There exists in all societies people with rigid, preconceived notions about other people, ideas, or customs different from their own; the U.S. is no exception. One of the most serious of these attitudes is racial prejudice, or racism. Many international students coming to the U.S. are shocked to find racism in many places and situations. Even though they may have read about cases of racism in the U.S., they are still dismayed when they experience it for themselves. Some Americans recognize that

racial prejudice is a problem in the U.S., but progress in changing attitudes is, unfortunately, slow.

“Role of Women. There is a strong feminist movement in the U.S. which aims to ensure that women have responsibilities and opportunities equal to those that men have. Although there are still many aspects of society in which women have not yet achieved this equality, women play a fairly public and visible role in this country and have more responsibility and authority than they do in many other countries. At the same time, some people may find that American society is more sexist than their own in certain respects. You may find that the dress and behavior of women here are quite different from those in your country. Some male international students have difficulty adjusting to circumstances in which a woman is in a position of authority because such situations do not occur in their own country. They need to be sensitive to this difference in women’s roles. What some people consider the “proper” role for women is considered by others to reflect sexism or male chauvinism.

“Problem-Solving. Because Americans feel that they can and should control their own environment, they also feel that any problem can be analyzed, discussed, and eventually solved. In some societies people can think of a national problem in terms of a hundred or more years. Americans do not think in such a long-range fashion. They want to solve problems as quickly as possible, and they have difficulty accepting the idea that some problems may not have solutions. This approach to problems sometimes leads to confrontations that are shocking to people from other cultures. When faced with a problem, Americans like to get the facts, talk to the necessary people, and make some plan of action. If the problem is interpersonal—a problem between two people—an American is likely to talk directly to the other person about the issue, in an effort to reach an understanding. If the two people involved cannot solve the problem, they may go to a third person such as a counselor, adviser or mutual friend, who can act as an arbitrator. The idea is still to confront the situation directly and try to solve the interpersonal problem. This direct approach to people sometimes leads to difficulties for Americans when dealing with people who come from cultures where such directness is considered offensive or insulting.

“Hygiene. Americans are generally very concerned with personal hygiene, and it is not unusual for them to take a bath every day, change their clothes every day, and wash their hair several times a week. Americans tend to find natural body odors unpleasant. In addition to frequent bathing, they use perfume, cologne, and deodorants on a regular basis. Oc-

asionally a person may be shunned by Americans and not realize that it is because they find body odor offensive. Frequent bathing and the use of chemical deodorants, perfumes, and soaps may not be necessary for one's health, but they may have an effect on a person's social relationships in the U.S.

“Friendliness and Openness. Different people have different ideas of whom they would call a friend. In the U.S., “a friend” could mean anyone from a mere acquaintance to a life-long intimate, and the friend's company may depend on a particular activity. Americans have friendships that revolve around work, political activity, volunteer activities, special interests, etc., and different groups of friends may never meet one another. An American may have many friendships on a casual, occasional basis, but only a few deep, meaningful friendships that would last throughout life. People from other cultures sometimes see the large number of casual relationships that Americans have as their reluctance to become deeply involved with others. In some circumstances when a person in another culture would turn to a friend for help or support, an American may turn to a professional such as a counselor, because they feel they would be burdening friends with their problems.

“When people visit the United States, they usually notice immediately the friendliness and openness of Americans and the extreme ease of social relationships. This casual friendliness should not be mistaken for deep or intimate friendships which are developed over a long period of time. Americans live in a mobile society and tend to move frequently; they therefore tend to be able to form friendships and give up friendships much more easily and less stressfully than people in many other cultures. Casual social life is especially evident in colleges and universities, because everyone is there for a relatively short period of time. These easy or casual relations are sometimes troubling to international students. They have left their own friends and family at home and are learning to live in a new place. They naturally are looking for new friends, and they sometimes find it very difficult to develop close relationships with Americans, because they cannot seem to get beyond a very superficial acquaintance with them. Occasionally it may be easier to relate to other international students who may have the same problems in developing friendships with Americans. In American culture casual, often temporary friendships are easily developed, but it is much more difficult to develop close, deep relationships. By contrast, in many other cultures, there are fewer casual friendships and people are much less open and friendly toward strangers. But once people have become friends, it is relatively easier to develop closer relationships. Some people coming

to the U.S. get frustrated and give up making American friends, choosing only to have friends among other international students here. Others have said that they have been able to become good friends with Americans but that it took repeated efforts and perseverance. As you meet more Americans and start to become aware of the individual characteristics of different people, you will find that, just as for your own culture and country, there are exceptions to any generalization about the culture and the people here. Nonetheless, the characteristics described here are a starting place for you to begin to understand Americans and American culture.

“A Support Network. As you read these questions, think about your own country and the life that you led there before you came to the United States. How would you respond to the following situations and questions?

“1. When you learned that you were coming to Ithaca and would soon go abroad, with whom did you share the news? Father, mother, brothers, sisters, other family members, neighbors, friends, teachers? What were their reactions?

“2. If you had been in a traffic accident in your country and were in the hospital, who would visit you? Who would visit you everyday? Who besides your family would offer to help you after you returned home?

“3. If you had an important decision to make about your career, with whom would you discuss that decision? With certain family members? With leaders in your community? With two or three good friends? With a professional career counselor? Whose advice would you listen to?

“4. If you were feeling sad or depressed, would you share these feelings with other people? If so, with whom? Are there only certain family members with whom you would want to discuss personal matters? Would you discuss them with some friends? How would they respond to you?

“What is a Support Network? In all these situations, you may well turn to those people near you whom you know, trust, like, and who provide you with companionship. These are people who are concerned about you. This group of people—family members, friends, teachers, other people you may know—are the people to whom you turn in times of need and to whom you can express your true emotions. These people, who form your support network, may also turn to you for support, help and companionship. Networks form slowly; they are an important part of our lives. We need these people around us, just as they need us around them.

“Leaving Behind One Network of Support. When you leave your culture and enter a new one, as you have done in coming to the U.S., you leave your support network behind. It exists—the people are still there—but because of distance it is more difficult to turn to them for compan-

ionship, affection, help, and support when you need them. You can write, telephone, and perhaps even visit them, but they are not constantly near you and are not part of your daily life in this country.

“Need for a New Network of Support. When students first come to this country to study, they frequently feel somewhat lost and lonely because they have left their support network at home but do not yet have one here. At home, you may have had daily contact with people in your support network, such as family and friends. Sometimes you may want to ask someone’s opinion about a matter; you may need some support when you are in a difficult situation, you may want to tell someone about something that is bothering you, or you may just want to chat. You need people here to whom you can turn for support and companionship, people with whom you can discuss your life, your problems, and your feelings. If you do not develop such ties in this country, you may find yourself very isolated and homesick.

“How to Develop a New Support Network. How one develops a new support network is very much an individual matter. You may feel a natural rapport with other students from your country, and they will certainly be able to understand you and help you in some ways that others cannot. You will also have the opportunity to meet students from the United States and from around the world, and you may develop some good friendships in that way. If you join a student organization, or attend activities on campus, you may meet people who will become friends of yours and will become part of your support network. In the U.S. many people are willing to go outside their own families and close friends when they develop a support network. For example, there might be a professor they respect who is willing to discuss various matters with them. Americans will sometimes consult a counselor to discuss personal problems, professional issues, or important decisions they must make. Other people may turn to their religious leader or to a chaplain on the university campus. Many Americans are willing to consult professionals such as these because they are trusted as “experts” in certain matters or objective observers.

“Cornell University, like most universities in the U.S., has counselors available to talk confidentially with students about their concerns. International student advisers sometimes serve the same function; they are willing to talk with international students about anything of concern. Many international students who have chosen to consult these counselors have found the discussions to be helpful. At home, you had a circle of people around you—people with whom you shared your life and people whose life you shared. Now that you are in this country, you need to develop a new circle

of people with whom you can share this sort of relationship. By developing close relationships like these, you will be able to share your experiences and feelings, and receive help and support from them. You, in turn, can give them help and support when they need it.”

Friendship, American Style

(by Alice Wu, November 1995, Cornell University, Ithaca, NY)

“Do you wonder how to get to know Americans, or feel that it is difficult to meet them? Do you wonder what to talk about with your classmates or officemates, or when you go to social gatherings? The topic of friendship is one that everyone is interested in, but can be a bit difficult to describe. In this article, we will look at the experiences of some international and American students at Cornell and see how they relate to the topic of friendship.

“Friendliness and Openness. A student from Japan was visited by her sister, and when they went to a department store, a clerk came over to them. “Hi!” she said, “How are you today?” Surprised, the sister asked: “Do you know her?” A student from Germany was confused that everyone was so nice and polite to her right away.

“Americans are often very friendly and helpful to people that they do not know well, and they may also be more open in what they talk about than people from many other countries. This can be confusing to someone who comes from a country where people are initially more reserved. An international student may also feel that Americans are superficial or are not good friends when this initial friendliness does not continue as friendship. A model of friendship referred to by Margaret Pusch, president of the National Association of International Educators, may help us understand some of the differences. Sometimes known as the “wall theory,” it describes two patterns of friendship: one “American” and one found in many other countries. The American pattern shows how Americans are initially very friendly and open: as symbolized by the first wall being very low. However, American values stress privacy and independence, and the walls become higher and higher before one reaches the stage of a good friendship. Thus, many international students are very happy when the American they meet is so friendly and open. However, when the American does not continue to act in a way that the international student expects of a friend, the international student is disappointed and confused. They may sometimes conclude that Americans are superficial and do not really know how to be friends. What the international student may not realize is that they have not yet reached the stage of being good friends with the American: they need to go over some “higher walls” before reaching the center and a good

friendship. Alternatively, Americans living in a country where people are more reserved and not as initially friendly as in the US, may sometimes become discouraged about ever making friends in that country: they may feel that people in their host country are very unfriendly.

“When meeting people from other countries, it may be helpful to keep this model in mind, or to think about what model might be used to describe your own country’s patterns of friendship. It is also important to be aware that ways of getting to know someone may be different in different countries, and to try to avoid making judgments about the people of that country.

“**Expectations.** A student from China said that her American friends got mad if she asked them to do too many things for her, so she always asked her Chinese friends. She said that in China, if your friend asked you to do something, and you had your own things to do, you did your friend’s thing first. A student from Switzerland was asked if he and the American girl he was speaking to were friends. He said no, which insulted the girl, as she considered them to be friends. He told her that in Switzerland it took time to make friends, and that friendship really meant something. Two important American values are privacy and independence. Thus, Americans may prefer to do something themselves rather than asking for help, as they do not want to impose on the other person’s privacy. They may also expect others to do the same. This can create misunderstandings with people from societies with more interdependent relationships, who assume more obligation to friends.

“In addition, expectations of friendship may be very different in various countries. Americans tend to use the word “friend” where people in some countries might use the word “acquaintance;” and they often have different types of friends: friends just to do activities with, close friends, and best friends. In some countries, people reserve the word “friend” for a few people who are very close.

“**Topics.** What is considered an appropriate topic to talk about with friends or acquaintances can vary somewhat between countries. Many international students comment that they do not know how to start a conversation with Americans, because of a lack of shared background. When speaking to someone they do not know well, Americans tend to talk about fairly neutral topics and to look for similarities. Conversation generally begins with “small talk”: people may discuss the weather, or the immediate situation (the class, professor, party, host, decorations, etc.) It might continue with questions or comments about common acquaintances, sports, movies, work or school. As they get to know someone better, Americans

will gradually talk about increasingly personal topics.

“Style. Regarding style, Americans frequently use “self-disclosure” about personal preferences or activities, and they often ask questions about someone’s background or interests. They usually avoid potentially controversial topics, such as politics, religion, or opinions about certain social issues. Debate about politics tends to be less common in the US than in many countries, where people may be much more accustomed to analyzing and debating about politics or religion with both friends and acquaintances. When discussing current events, Americans may often begin with questions, rather than with strong opinions. Even between good friends, vigorous debate about controversial topics is uncommon: Americans often choose to focus on their similarities instead of their differences.

“Conclusions. So, you may ask, how can I actually make friends? Here are a few suggestions:

- “Don’t be afraid to take the initiative: Start a conversation, show interest in others by asking questions, ask someone to go to lunch after class, or to go to a movie. Even if they can’t go, once you have taken the initiative, they are much more likely to be open or to even invite you the next time.
- “Be positive: Don’t assume someone doesn’t like you if they don’t respond in a way that you expect, they may just be busy or preoccupied with school or work.
- “Be informed: Read the Cornell Daily Sun, the Cornell Chronicle, the Ithaca Times, the Ithaca Journal, etc. This way you will be more aware of what is happening on campus and in the area. This may help create a more common background to start conversations and let you know what activities are going on.
- “Take advantage of Cornell’s international activities. Many Americans who have traveled or lived abroad particularly enjoy meeting people from other countries. Activities sponsored by the International Living Center, Language House, and various international clubs (such as the Scandinavian Club, the Japan-USA Society) are a good place to meet people who have an interest in other cultures.
- “Take advantage of campus and area clubs and activities that sponsor activities that you enjoy: Sing in a chorus, take a pottery class or a dance class, participate in team sports. Sharing activities is a good way to meet people with common interests, which makes it is easier to become friends.

- “Be aware that difference in expectations about making and having friends may sometimes be confusing or frustrating, and that misunderstandings or miscommunications may occur.
- “Remember to be patient with yourself and others. Try to suspend your judgement, and don’t take things too personally if you run into difficulties.
- “Finally, relax, have fun, and realize that it takes time to make friends, no matter what country you are from!”

5.8 Miscellaneous

5.8.1 Tips for seeking medical, dental, and vision care in Ithaca

A challenge most of us face when moving to a new community is finding health care providers who will meet our personal and family health needs. If you are coming to Cornell from another country, learning to navigate the U.S. health-care system can be especially challenging.

Gannett Health Services provides a wide range of medical, mental health, and health promotion services for the Cornell community. Its staff includes health advocates who can help you find the information and services you need. For starters, go to the Gannett website:

<<http://www.gannett.cornell.edu/>>

and search “International Student.” There are links to several pages you may find particularly useful, including:

- Getting Comprehensive Medical Care
- Understanding U.S. Medical Care
- Understanding U.S. Health Insurance

While accredited medical, mental health, and health promotion services are all available at Gannett, dental and vision care are *not* offered on campus, so students and their families need to identify resources in the greater Ithaca area to provide these service.

If, as a member of the Student Health Insurance Plan (SHIP), *you purchased the optional dental and/or vision plans provided by Aetna Insurance*, you can contact Aetna for a list of their preferred “in network” providers. With these plans, you can also choose a provider who is not on this list,

but keep in mind their fees may be above the negotiated fees contracted by Aetna. In that case, if the provider's fee is above the negotiated fee set by the insurance plan, you will need to pay the difference.

The "International Student" section of the Gannett website includes special tips for international students seeking dental care. Some of these tips (e.g., what to expect and questions to ask) will also apply to the process of seeking vision care. Please visit:

<http://www.gannett.cornell.edu/whoareyou/international/>

to view information entitled "Lets talk about dental care." Additional questions about the optional dental and vision plans available to SHIP members can be directed to Cornell's Office of Student Health Insurance, sicu@cornell.edu, 255-6363.

For problems accessing health information or services related to care, please call Gannett's International Student Health Advocate (255-4782) or e-mail gannett@cornell.edu

5.8.1.1 Dentists and Opticians

As mentioned above, any dental and vision services are not covered by the Student Health Insurance Plan (SHIP), unless they are emergency procedures or you acquire the optional plans. Otherwise, this means that you must pay for visits to a dentist for a check up and cleaning, to get a filling or even if you need a root canal. The same applies for visits to an optician if you need new glasses or lenses. The following is an overview over the estimated costs for such services, taken from the GPSA website at:

<http://assembly.cornell.edu/GPSA/Home/>.

As you realize, the prices are most likely higher than what you are used to from your home country!

Dental Procedure	Price Range
Exam	\$45-\$90
Cleaning	\$45-\$90
X-rays (comprehensive)	\$70-\$100
Filling †	\$70-\$350
Extraction	\$70-\$200
Root Canal	\$350-\$750
Post Core Build up ‡	\$175-\$550
Wisdom Tooth Removal	\$90-\$350
Crown	\$650-\$900

† Price range reflect variability based on severity and tooth location.

‡ A post core build up is typically performed following a root canal procedure to provide durability to a week tooth.

A survey of engineering graduate students produced the following list of recommendations:

- Dr. Mark Welsh (272-1921), 324 Dryden Rd. - Dr. Ira Kamp, Dr. Chris Devenpeck (272-4331), 1025 N Tioga St.
- Fall Creek Family Dentistry (272-8118), 501 N Cayuga St.
- Dr. James Fey (272-7200), 402 3rd St.
- Dr. Richard Gardner (272-9264), 450 N Aurora St.
- Dr. Marc Purdy (272-2040), 1018 Ellis Hollow Rd.
- Dr. Matthew Thompson (272-0901), 101 Snyder Hill Rd.

Note that these dentist are not necessarily the ones that GPSA used for its price estimates. See also section 4.6.3 for more information on dental care in Ithaca.

GPSA also provides the following price estimates, collected from 6 local opticians.

Vision Procedure	Price Range
Basic Eye Exam	\$45-\$125
Contact Lens Fitting	\$75-\$235

We recommend the following opticians, which are not necessarily included in the sample that GPSA used for its price study:

- Classic Optical (273-1234), 106 Dryden Rd. (Collegietown). 10% rebate with Cornell Health Insurance card
- Opti Vision Of Ithaca, (272-7441), 106 E State St. (Commons).

5.8.2 Checklist: before visiting home over summer or winter breaks

Consult the following checklist before going home over or traveling abroad the U.S. during a break to visit your family:

- Visit the ISSO with your passport and your SEVIS I-20 or DS-2019 to make sure that all your papers are in order and complete.
- Obtain a statement of financial support from your Director of Graduate Studies on a school letterhead. The following is a sample letter that I have used in the past. To use the letter, just replace the *italicized example information with the actual information of you and your field*:

To whom it may concern:

This letter certifies that *Petra Mueller* is a PhD student at the *School of Operations Research and Information Engineering* at Cornell University. *She* receives full financial support in the form of a *Teaching*

Assistantship until her graduation in *Summer 2008*. The financial support consists of full payment of her tuition and health insurance and a stipend of currently \$1 per month. Questions regarding *Petra Mueller's* financial status should be directed to the *School of Operations Research and Information Engineering, (607) 255-0000*.

Sincerely,

John Director

Director Graduate Studies

Field of Operations Research

You may not need this letter for re-entry, but I have been asked to show proof of funds at the port of entry. The letter always satisfied the immigration agent.

- Obtain a Certification of Enrollment. You can print one yourself under “Student Services” on “Bear Access”. This document is not necessary for re-entry, but it is recommended.
- Put your mail on hold. If you do not do this, you may find your mailbox filled up. Subsequent mail will be returned to the sender. Your phone company usually doesn’t take it very well when their bill is returned to them. You can get a form instructing the post office to hold your mail up to one month at any post office.
- Arrange to pay your bills before you leave. This will help you avoid late fees. In a lot of cases you can set up payment over the Internet and then pay your bill from home if you have Internet access. Also return all the books you borrowed to the library. They might get recalled while you are away and you end up paying \$3 per day per book in late fees!
- Make sure your car is parked legally! Otherwise your car will get towed away. This happens to a lot of students every break. Because the towing company runs out of parking space it has to rent space to park your towed car. Guess who pays for all that? You’re right, it’s you! You don’t want to come back after winter break and find out that your car has been towed and that you owe the towing company \$1000 for towing and storage costs!!

5.8.3 Cell Phones and Phone Service

See section 4.2.2 for the basic phone service. The slight disadvantage of only getting a fixed phone at home is that this service does not always allow you

to make long distance or international phone calls. As an alternative or addition to a fixed phone line, you might want to consider buying a cell or mobile phone. That option might be more expensive though.

If you're from Europe or Asia you will find that you can't buy the latest models you saw at home yet. The market in the USA is still about half an year to an year behind with the technology compared to those countries.

You can choose from a variety of plans and phones from about four providers in the Ithaca area. Make sure to get a plan that fits your needs! Typically you can choose between 2 type of plans. They differ in their home area. That is the area from which you can make phone calls or receive calls for no additional cost. Beware of the expensive roaming charges when you make or receive a call outside your home area! Local plans allow you to use your cell phone in the upstate NY area only. The more expensive nationwide plans allow you to use your cell phone anywhere in the country where coverage is provided—this area can vary drastically from provider to provider. The plans also differ in the number of minutes that they allow you to spend on your phone. Oftentimes, plans come with special feature such as a large number of night-time and weekend minutes.

Most of the phones allow you to send text messages to your friends' cell phones and may even have a built-in camera that allow you to take pictures that you can then send to your friends.

We definitely recommend you to talk with a friend who already has a cell phone about different plans and their advantages or disadvantages. The following is a list of the providers of cell phone service in Ithaca. Note that typically you can only use your cell phone for one provider. If you want to switch provider you will need to buy a new phone!

Verizon

<<http://www.verizonwireless.com/>>

Pyramid Mall, 40 Catherwood Rd., Ithaca, NY 14850

Tel: (607) 257-2917

Verizon-Wireless has the largest cell phone network in the USA. It also provides good service and coverage in Ithaca. You can choose from prepaid, data, America's Choice basic and select plans. Plans start from \$40. Some phones are free, while others cost between \$50 and \$250 when you sign a 2 year plan. They are mostly from Nokia, LG, Motorola, Samsung, Palm, BlackBerry, and Kyocera. Verizon phones do not use GSM technology and can therefore not be used overseas.

Sprint

<<http://www.sprint.com/>>

Pyramid Mall, 40 Catherwood Rd., Ithaca, NY 14850

Tel: (607) 257-0550

Sprint's network is much smaller than Verizon or Cingular. Coverage in Ithaca is reportedly good, but not great. The coverage in most big cities along the east coast is good. The phones are mostly from Sanyo, LG, Samsung and Motorola. Plans are Nationwide and start at \$30. Some phones are free, while others cost between \$50 and \$250. All plans include nationwide long distance calls. Sprint phones do not use GSM technology and therefore cannot be used overseas.

Cingular

<<http://www.cingular.com/>>

725 S Meadow St., Ithaca, NY 14850

Tel: (607) 273-0400

Cingular is the second largest provider in the USA after Verizon and covers most places where you might go. The coverage in Ithaca has improved a lot and is pretty good today. The phones are from all manufactures, like Nokia, LG, Apple, Motorola, Samsung, Pantech, Sony Ericsson, BlackBerry, etc.. Some models go for free with a 2 year plan, while others cost from \$50 to \$200. You can choose from prepaid, individual, family or data plans.

T-Mobile

<<http://www.t-mobile.com>>

Carousel Mall, 9837 Carousel Center Syracuse, NY. 13290

Tel: (315) 634-1171

T-Mobile has a relatively small network, but is fully on GSM. Depending on the phone model, this means you could take the phone to Europe and just get a new SIM card to use it or simply take advantage of the coverage provided by T-Mobile (careful, that is very expensive!) That is something you cannot do with phones from the other providers that do not operate on GSM. Service in Ithaca is reportedly good but, as I said, the network is small and in a lot of places you do not have coverage yet. The phones are from all big manufacturers like Motorola, Nokia, Samsung, Sony Ericsson, and BlackBerry, and cost between \$50 and \$350. Plans start at \$20 and are all nationwide with no roaming charges.

International Calls

While a basic phone service and every cell phone plan allows you to receive phone calls from your family and/or friends at home, you need to buy a special international calling card to call them. You can buy these cards in most stores in Collegetown or online. They come with a toll free number and a pin code. After calling the toll free number you are asked to enter the pin code and then you can place your call. Beware however that they have different rates and connection fees for different countries, some of them

hidden. Study the rates and the connection fees to figure out which card is right to call to your home country. Ask senior students or friends for recommendation.

Voice-Over-IP (VoIP) services such as Skype can easily replace a land-line phone or a cell phone for long international calls and are free if the person on the other end is also using Skype (or at price 10x to 100x inferior to international call rate of US carriers). However, note that if you live in Cornell Housing, the bandwidth used by your call will count toward your maximum transfer limit (10 Go in 2009-2100).

Chapter 6

Recreation Activities

Big Red Ambition: 161 TH

1. Make the library into your bedroom, find a buddy.
2. Finally meet the dazzling Denice Cassaro.
3. Camp out overnight (re: freeze to death) for hockey tickets.
4. Go to the Cornell-Harvard men's hockey game and throw fish on the ice.
5. Sing along to "We didn't go to Harvard" with Cayuga's Waiters.
6. Illegally slide down Libe Slope on a tray from Okenshield's.
7. Take H ADM 430: Introduction to Wines.
8. Streak across the Arts Quad.
9. Take Psych 101.
10. Test out Olin Library's musically calibrated steps by throwing stones on them.
11. Go sake bombing in Collegetown (for the over-21 crowd only!).
12. Order ice cream at the Dairy Bar.
13. Climb the rock wall in Bartels Hall.
14. Listen to a full chimes concert from the clock tower and guess the songs played.
15. Go on a blind Facebook date.
16. Wear flip-flops to class in January.
17. Go to the Fuertes Observatory on North Campus and gaze at meteor showers.
18. Have a snowball fight in May.
19. Milk a cow.
20. Play frisbee on the Arts Quad.
21. Pick apples at the Cornell Orchards.
22. Attend the Apple Festival on the Commons.
23. Wait in line for half an hour for a salad at the Terrace.
24. Flirt with your professor.
25. Bomb a prelim.
26. Live through an Ithaca blizzard and tell your friends how you survived frostbite.

28. Meet Happy Dave from Okenshield's.
29. Make your face turn blue by screaming at midnight before the first finals.
30. Get hearburn at the Chili Cook-off on the Commons.
31. Enjoy Ithaca's two months of warm weather by spending a summer here.
32. Go to a Shabbat dinner at 104 West! (CornellCard it).
33. Watch the AAP students parade down East Avenue on Dragon Day.
34. Enjoy corn nuggets at the Nines.
35. Build a snow penis, or count how many you see around campus.
36. Dress up and view the Rocky Horror Picture Show at Risley.
37. Take a class you think is impossible just for fun.
38. Go on a wine tour.
39. Kiss on the suspension bridge at midnight.
40. Sleep through your alarm for a 1:25 class.
41. Shop at the Friends of the Library book sale.
42. Get out of a C.U. parking ticket.
43. Buy an Ithaca is Gorges t-shirt, then get sick of wearing it and buy a variation (Ithaca is Gang).
44. Learn the "Alma mater," "Evening Song," and "Give my regards to Davy."
45. Attend an opening at the Johnson Museum of Art.
46. Smuggle food from the dining hall and run for your life as they try to get back your stolen cook.
47. Do the Walk of Shame.
48. Have dinner at a professor's house.
49. Get wasted at a professor's house.

50. Have lunch with President Skorton in the Ivy Room; ask if he's done with that Dijon Burg
51. Play a game of tag in the Kroch Library stacks.
52. See a play in the Schwartz Center.
53. Rush the field at the last home football game of the season.
54. Attend a Cornell Night.
55. Gamble at Turning Stone (try not to lose money).
56. Watch dancers fly through the air at a Bhangra show.
57. Have a midnight picnic in the Cornell Plantations.
58. Play croquet on the Arts Quad (wear your collar up).
59. Ignore any and all "No Winter Maintenance" signs.. slip and fall down the icy stairs.
60. Sit in Libe Cafe when you have no work to do and watch the worried studiers down gallon
61. Write an angry letter to the editor of The Sun.
62. Go to Wegmans on a Friday or Saturday night.
63. Pull an all-nighter in the Cocktail Lounge of Uris Library and crash the next day.
64. Go to a fraternity party as a senior; convince yourself you were never one of them.
65. Pretend you're Harry Potter and study in the Law School library (looks like Hogwarts).
66. See the brain collection in Uris Hall.
67. Eat at Banfi's and charge it to CornellCard.
68. Buy beer at Jason's in Collegetown and charge it to City Bucks.
69. Take part in a psychology experiment.
70. Take over a building.
71. Drive your car up and down Libe Slope or Ho Plaza.
72. According to legend, watch a virgin cross the Arts Quad at midnight and watch A.D. Whi
73. Ace a prelim.
74. Throw a flaming pumpkin into the gorge.
75. Play co-ed intramural inertube water polo.
76. Eat in the Risley dining hall.
77. Play at least one game of Texas hold-'em.
78. Hook up with your T.A.
79. Order a PMP at the Hot Truck.
80. Go to karaoke night at Ruloff's on Mondays.
81. 80's Night on Tuesdays at Johnny O's.
82. Go to Group Therapy on Wednesdays at Dunbar's.
83. Take PA PL 201: Magical Muchrooms, Mischievous Molds.
84. Go bowling at Helen Newman Lanes.
85. Hand out quartercards on Ho Plaza.
86. Take an unplanned nap in the library.
87. Have a friend's parents take you out to eat at John Thomas Steakhouse or Boatyard Grill.
88. Eat a chicken parm sandwich from Louie's Lunch.
89. Eat breakfast at 2 a.m. at the State Diner.
90. Boys: Get thrown out of Balch Hall.
91. Hook up with a freshman.
92. Go skinny dipping in a gorge.
93. Walk to the Commons and back.
94. Go to an a cappella concert.
95. Play trivia at Dino's on Sunday nights.
96. Eat pizza at the Nines.
97. Sell back your books; use money to buy a book of stamps.
98. Drink bubble tea.
99. Eat a Pinesburger.
100. Walk to a fraternity party with your entire freshman floor.

101. See the library's Rare Book Collection.
102. Get lost in Collegetown during Orientation Week.
103. As a freshman, get negged at a bar because the bouncer is actually friends with the person who
104. See a foreign film at Cinemapolis.
105. Get drunk on Slope Day and run into Vice President Susan H. Murphy '73.
106. See a concert at Barton Hall.
107. Gain the freshman 15, pay \$300 for a gym membership and don't go.
108. Eat brunch on North Campus.
109. Do your Freshman Reading Project before you graduate.
110. Fail your swim test, just for kicks.
111. Tailgate for Homecoming.
112. Go ice skating at Lynah Rink.
113. Host a prefrosh.
114. Request a song to be played on the clock tower.
115. Get guilt-tripped into giving blood.
116. Boys and girls: Get asked if you are pregnant at Gannett.
117. Drink with your R.A.
118. Make a chalking; weep when it rains that night.
119. Sing drunk on the Blue Light bus.
120. Meet Bill Nye '77, "The Science Guy," and give him a hug.
121. See how long you can go without doing laundry.
122. Go on a road trip to Canada, flirt with the border patrol, smuggle booze back.
123. Try to order pizza from a Blue Light phone.
124. Go to the adult shop on the Commons.
125. Cross-country ski to class.
126. Get tapped for a secret society.
127. Go to the Pyramid Mall, realize it is severely lacking, then drive to Carousel Mall in Syracuse.
128. Eat mongo at RPCC.
129. Attend Cross Country Gourmet at a dining hall near you.
130. Complain about your writing seminar to no one in particular.
131. Walk holding hands around Beebe Lake.
132. Visit the Sciencenter.
133. Watch a soccer game at Mama T's, crammed in like a sardine.
134. Get J.A.'d for urinating on the Law School.
135. Hook up with someone randomly and then see them every day afterwards.
136. Go to a coffee house in JAM.
137. See how many people you can cram into your dorm room.
138. Watch people play Dance Dance Revolution in Appel.
139. Write dirty messages with rocks in the gorge.
140. Ride a horse at Oxley Equestrian Center.
141. Ring the giant bell at the Plantations.
142. Crash a political rally on Ho Plaza.
143. Do the COE ropes course.
144. Attend a show at the State Theatre.
145. Prank call the CIT HelpDesk.
146. Wake up at 6a.m. for CoursEnroll, realize that it is still better than waiting outside Barton.
147. Ski at Greek Peak.
148. Take a night prelim near the Vet School, walk back in the dark.
149. Trespass on Alumni Fields.
150. Ask Uncle Ezra a question.
151. Take the BASICS program.

152. Study abroad.
153. Walk to class in the snow, uphill both ways.
153. Buy a Cornell-grown apple from a vending machine.
155. Skip a class to play on the Arts Quad.
156. Eat at each dining hall at least once.
157. Ask for an extension on a term paper.
158. Go to a Zinck's Night.
159. Prepare to pull an all-nighter by drinking three Mountain Dews and two cups of coffee and
160. Have the courage to tell a professor what you really think of his or her class.
161. Climb all 161 steps to the top of McGraw Tower.

1

¹“First appeared in Cornell Alumni Magazine, March 1995. Reprinted with permission.”

Contrary to popular belief, graduate school needs not be all work and no play. If you wish to survive your years here then take time to relax and explore the community outside of your office or apartment. This will keep you healthy and productive! This chapter offers a sample of the myriad recreational activities, sports, and hobbies available at Cornell and in the Ithaca area. However, there may be resources we overlooked. Please feel free to share your discoveries with us at egsa@cornell.edu.

6.1 Sports

6.1.1 Varsity Athletics

Cornell supports many varsity sports and is a member of the Ivy League, a NCAA Division I conference. You can support the teams by attending games and matches. While most events are free, the more popular spectator sport events, such as ice hockey and lacrosse, are ticketed. Tickets can be purchased three ways: over the phone (x4-BEAR), at the Bartels Hall ticket office (hours: M–F, 10 am–5 pm), or at the gate 1.5 hours before the match or game is set to begin. You can also tailgate before football games! For more information about the sports program, tickets, and tailgating, visit <http://cornellbigred.cstv.com/>.

HOCKEY: A CORNELL OBSESSION

Okay, you haunted your mailbox for weeks, but you've got the cool prize in your hot hands: Cornell hockey season tickets. But wait just a minute. You can't go lumbering off to a game without preparing yourself to be part of a highly stylized subculture: the Lynah Faithful. First off, be sure you're acquainted with the Alma Mater, verses 1 and 2. That's a prerequisite. You'll be in good shape if you're also familiar with the remainder of Lynah protocol: When you've found your seat at Lynah, you'll probably be handed a newspaper. This is not for reading or sitting on. It's a symbol of your disdain for the visiting team. Disdain is a big ticket item at hockey games. When the visiting team tromps out on the ice, Lynah Faithful lift their newspapers as if to read (upside down's fine), and chant "Boring! Boring! Boring! Boring!" It's a unique form of welcome. The Cornell Pep Band is the heartbeat of the stands. They play "Give My Regards to Davy" at every opportunity, but especially when we score a goal. And you never know exactly what else will come out of them—everything from cowbell cheers to tuba solos resounds through Lynah Rink. The band plays the Canadian national anthem (Canadians and others in the audience sing along), followed by the "Star-spangled Banner." Guess which word the entire audience HOLLERS in "and the rocket's red glare?"

Four Cheers You've Got to Know!

- | | |
|---|--|
| <p>1. "Let's go Red! Let's go Red! Let's go Red!"</p> <p>2. Should the other team have the effrontery to score, try "That's all right, that's okay, you're going to work for us someday."</p> | <p>3. "Fight! Maim! Kill!"</p> <p>4. "Sieve! Sieve! Sieve!" and "It's all your fault! It's all your fault!" shouted at the visiting goalie after we've scored.</p> |
|---|--|

6.1.2 Club Sports

There are over 75 sports clubs on campus, many of which graduate students take part. Just a sampling of sports covered are ultimate frisbee, cricket, windsurfing, sailing, rugby, and martial arts (many types). Some are strictly recreational, while others take part in competitive events off-campus. If you can't find a club that suits your sports desired, you can alternatively form your own. Visit <http://sao.cornell.edu/> for more information about how to join an existing team or how to form a club.

6.1.3 Intramural Sports

Intramural sports at Cornell are on-campus competitive sports activities open to all registered students, staff, and recognized significant others. There are both single and team events and three applicable divisions for intramural events. The co-ed division is open to all men and women who are students, faculty, or staff of the university, while the open and recreational divisions are also to these groups as well as spouses/same-sex partners. The open and co-ed divisions are competitive, but the recreational division is strictly for FUN — there are usually no officials regularly assigned to matches. The intramural program provides standard equipment needed for all activities. Most events have a registration fee, which can vary from \$5 to \$100. (Major team sports are on average \$25 per team.) Sponsored sports have included ice hockey, basketball, innertube water polo, bowling, skiing and snowboarding, table tennis, squash, sports trivia, badminton, softball, wrestling, flag football, indoor soccer, dodgeball, tennis, floor hockey, horseshoes, volleyball, golf, track and field, cross country, and ultimate frisbee. For more information on rules, schedules, and sign-up information, visit the intramural sports website <<http://intramurals.athletics.cornell.edu/IMWeb/Intramural>> or contact the Intramural Sports Program at intramurals@cornell.edu or 255-2315.

6.1.4 Sports and Fitness Facilities

Cornell is home to many sports and fitness facilities, but options do exist off-campus. Below is a listing of area facilities.

6.1.4.1 Fitness Centers

There are four fitness centers located on the Cornell campus in Teagle Hall, Helen Newman Hall, Appel Commons, and Noyes Community Center. Membership to the fitness centers gives one access to a group fitness classes, weight rooms, and cardio machines. The yearly membership fee for access to all the fitness centers and all fitness/aerobics classes is currently \$145. Membership also has other benefits, such as consultation with a certified personal trainer. Alternatively, a pass for only fitness classes can be purchased at the rate of \$100, and both full fitness and class only memberships can be purchased by semester. The centers closest to the Engineering Quad are Noyes Community Center and Teagle Hall. Note that during study and finals weeks, breaks, and holidays, the centers will change their hours. Visit the Cornell Fitness Cen-

ter website <<http://intramurals.athletics.cornell.edu/cfc/Cornell-Fitness-Centers/>> or call the CFC Hotline at x4-5CFC for more information.

Near the airport and Pyramid Mall is the YMCA of Ithaca and Tompkins County, which houses two heated indoor pools, cardio machines, a weight room, a large gym, racquetball courts, a dance room, and saunas. Fitness classes are also offered as well as several other programs for single adults and families (including childcare). An individual student membership is \$45 per month, \$158 for three months, or \$512 per year. The YMCA is located at 1 Graham Road. More information is available by visiting <http://www.ithacaymca.com/> or by calling (607) 257-0101.

Right in downtown are the City Health Club (402 W Green St) and the Finger Lakes Fitness Center (171 E State St). These centers offer fitness classes, cardio machines, and weight rooms. The Finger Lakes Fitness Center's membership rates for students are \$174 for one semester, \$319 for two semesters, and \$475 for one year. Visit <http://www.fingerlakesfitness.com/> or call (607) 256-3532 for more information about the Finger Lakes Fitness Center, and call (607) 273-8300 for information about membership at the City Health Club.

Island Health and Fitness is a relatively new facility located at the west end of downtown (310 Taughannock Blvd) and offers three heated pools, cardio and weight rooms, fitness classes, childcare, a day spa, and a conference room. Rehabilitation programs are also operated in partnership with the Cayuga Medical Center. Call (607) 277-3861 or visit <http://www.islandhealthfitness.com/> for more information and membership rates.

6.1.4.2 Swimming Pools

Two on-campus pools are free for use by graduate students. One is located at Teagle Hall, and the other is at Helen Newman Hall. Both are open during short intervals (about an hour or so) throughout the day. See <<http://bigred2.athletics.cornell.edu/wellness/poolhrs.html>> for pool hours. Hours do change, so call x5-4261 to confirm Helen Newman pool hours or x5-1318 to check on Teagle hours. The City of Ithaca operates outdoor swimming pools at both Cass Park (southwest shore of Cayuga Lake) and downtown (Alex Haley pool - 408 N Albany St) during the summer. Day passes for students are \$7.50 for the Cass Park pool and \$2 for the Alex Haley pool, and season passes are also available. See the City of Ithaca website for more details (<<http://www.ci.ithaca.ny.us/>> or call (607) 272-3622 for the Alex Haley pool and (607) 273-1090 for the Cass

Park pool. One-day admission to the YMCA's pools (see 6.1.4.1) can be purchased for \$7. For swimming in local parks and gorges, see section 6.2.10.

6.1.4.3 Fields

Jessup Field and Appel Commons, both located on North Campus, are green fields suitable for playing a number of sports, such as soccer and ultimate frisbee. Softball and baseball can also be played on the former. Several off-campus fields exist, such as the those of Ithaca High School, Stewart Park, and Cass Park. In addition, leagues such as the Ithaca Soccer Leagues (<<http://ithacasoccer.com/>>) and the Ithaca Area Ultimate Alliance (<<http://www.iaua.com/>>) bring area residents together in fun and competitive sportsmanship.

6.1.4.4 Courts

Several multi-use, tennis, and squash courts located on campus are free for use by students. However, classes have priority for usage, so be sure to check if there is available space. Multi-use on-campus indoor courts for basketball, volleyball, and badminton are located at the Noyes Community Center (x4-NCRC) and Helen Newman Hall (x5-4261). In addition, there are outdoor basketball courts west of the Hasbrouck Apartments and on the southeast corner of Jessup Field. On-campus outdoor tennis courts are located on North Campus: west of Risley Hall, the southeast corner of Jessup field, and just to the east of Appel Commons. Squash courts can be found north of Hoy Field at the Grumman Squash Courts (x5-1318). Equipment, such as rackets and balls, can usually be rented from the closest gym. The Reis Tennis Center, owned and operated by Cornell and located on East Hill Plaza, has both indoor and outdoor tennis courts as well as squash courts. (Call (607) 272-0037 for information about access to Reis.) [Note: there are no racquetball courts on campus.] Cass and Stewart Parks also have tennis courts. See section 6.2.1.1.

6.1.4.5 Running Tracks

Cornell has both an indoor and an outdoor running track. When it's just too cold or icy for outdoor running, the 200 meter indoor track in Barton Hall is your alternative to the treadmill. The track is open for public use during the week from 8 am–4 pm and from 7 pm–11 pm, the latter time interval for running only. Weekend hours vary, so call x5-7775 for exact

hours. The 400 meter outdoor track, located to the east of Bartels Hall on Campus Rd, is available for public use whenever teams and events are not using it and whenever it is free of snow. Be aware that the outdoor track will, in general, be unlit at night. There is also an outdoor track at Ithaca High School (1401 N. Cayuga St).

6.1.4.6 Ice Rinks

Three ice rinks are located in the Ithaca area. Lynah Rink, on the Cornell campus, is open during fall and winter for the lunch hour during the week for public skating and two morning sessions a week for shoot and skate. Admission is \$3 for the public skate and \$5 for shoot and skate. Skates can also be rented. Hours may change depending on events such as hockey games. Student groups sometimes organize skate nights at the Lynah Rink that are open to the Cornell community, so watch for advertisements and e-mails. For more skate time at Lynah, you can take a physical education course in hockey or figure skating (see section 6.1.5), take part in intramural hockey (see section 6.1.3), or join one of skating or hockey clubs on campus (see section 6.1.2). See the rink's website (<<http://bigred2.athletics.cornell.edu/lynah/>>) or call x5-3793 for more information about public skating.

The Cass Park Rink, located at the southwest end of Cayuga Lake, is open many more hours than Lynah. The rink's season begins the end of October and runs to mid-March. Public skating sessions run from 8:30 am–5:00 pm during the week (three separate sessions of 2.5–3 hours) plus special hours on the weekend, Wednesday, and Friday. For students, the fee is \$7.50 per session. Season passes are also available, and skates can be rented for \$3 with a photo ID. For more information, visit the City of Ithaca website <<http://www.ci.ithaca.ny.us/>> or call (607) 273-1090.

The Rink at Lansing (1767 East Shore Dr, Lansing) is open year round and offers hockey and figure skating classes and camps. Every day, the rink has varying hours for its public skating, open hockey, figure skating, and skate and shoot sessions. Entrance to public skating with free skate rental is \$7. Check the website at <<http://www.therink.org/>> for skate calendars and details on classes, or call (607) 277-7465 for information.

You may be wondering about that large body of water to the west of the Cornell campus — can you skate on Cayuga Lake? While the whole lake does not freeze over in the winter, the shallow section near Stewart Park does freeze enough to skate on. However, it's not advisable to venture too far out!

6.1.4.7 Golf Courses

The Robert Trent Jones Golf Course, owned and operated by Cornell, is an 18-hole course located north of campus on Warren Rd. Practice greens, a practice sand trap, and a 300-yard driving range are also available. The course is open to members of the Cornell community and guests. Fees for students are \$31 Mon–Thur and \$36 Fri–Sun with higher fees for guests, and season passes for April–November are available. For more details visit <http://bigred2.athletics.cornell.edu/golf/fees.htm> or call x4-6531.

There are several golf courses in the Ithaca area. Here is a list of public courses:

- Hillendale – 18 holes; 218 Applegate Rd, Ithaca; (607) 273-2363
- Newman Municipal Golf Course – 9 holes; 10 Pier Rd, Ithaca; (607) 273-6262; <http://www.hillendale.com/>
- Stonehedge’s – 18 holes, Lick Street Extension, Groton; (607) 898-3754
- Trumansburg Golf Course – 18 holes; 23 Halsey Street, Trumansburg; (607) 387-8844
- Lakeview Golf Club – 9 holes; 430 Lake Rd, Dryden; (607) 844-9173

6.1.4.8 Bowling Lanes

Cornell has a 16-lane bowling center located in Helen Newman Hall. Lanes are generally open in the evenings Mon–Sat but may close depending on other events. Group rental rates are \$12–14 per lane. See <http://bigred2.athletics.cornell.edu/bowling/> or call x5-4200 for more information. For a downtown bowling experience, visit the Bowl-O-Drome (401 3rd St). For fees and hours, call (607) 256-BOWL or visit <http://www.bowlodromeithaca.com/>.

6.1.4.9 Table Games

Pool, tennis, and air hockey tables are located in the community centers on campus. The Noyes Community Center on West Campus has a pool table, table tennis, and air hockey, and the Robert Purcell Community Center on North Campus has a billiard room with six pool tables. In Robert Purcell, there is a fee of \$1.25 per 15 minutes of table use. Both centers are open late during the school year. Various local bars, of course, also have pool tables for your entertainment.

6.1.4.10 Indoor Climbing Walls

Though the rocky hills and gorges of Ithaca make the area seem like a great place to climb, the rocks are too crumbly and unstable for safe climbing. Though climbing gorges is illegal, you can get your fix locally by checking out the two climbing walls on Cornell's campus, both of which are run by Cornell Outdoor Education (COE).

The Lindseth Climbing Wall in Bartels Hall is the largest indoor natural rock climbing wall in North America: 160 feet in width and 30 feet in height. The bottom 10 feet of the wall is for bouldering and can be used without a rope and harness. Ascending above that requires equipment and a trusty belayer who has either passed the COE's belay test or is under the supervision of the wall attendant. Belay tests can be taken whenever the Lindseth wall is open. The wall is open in the evening during the week and in the afternoon during the weekend. For students, access to the wall is currently \$6 per day or \$60 per semester. With a fitness membership a yearly pass is only \$35. Harnesses, helmets, rope, carabiners, and belay kits are all available at the wall, and climbing shoes can be rented for a small fee. Prior to using the wall, a 10-minute orientation video must be viewed and a waiver signed.

The bouldering wall in the Noyes Community Center, which opened in the spring of 2007, is 25 feet long and 10–12 feet high. No ropes or harnesses are needed on the wall, and shoes can be rented for free at Noyes. Access to this wall is covered under a pass to the Lindseth wall. Day passes for students can be purchased for \$5, and a waiver must be signed prior to use. The wall is open whenever Noyes is — 7 am–1 pm during the school year. See the COE's website (<<http://www.coe.cornell.edu/>>) or call x5-6183 for more information about both of the walls. The COE also offers group and individual climbing classes.

6.1.5 Physical Education Courses

Cornell offers a wide variety of physical education courses, including sailing, ice skating, golf, water skiing, fencing, martial arts, dance, scuba, and massage. Most of the courses charge fees. Registration for courses typically takes place online the first week of the semester. Visit or call the Physical Education office in Teagle (x5-4286) or see <<http://www.pe.cornell.edu/physed/>> for more information.

ALMA MATER

“The origin of the ‘Alma Mater’ was picturesque. Archibald C. Weeks ’72 and his roommate Wilmot M. Smith ’74, took pleasure in singing together a lugubrious ballad of the period, ‘Annie Lisle,’ recounting the gradual decline and death of the tuberculous heroine. (‘Wave, willows; murmur, waters; Golden sunbeams, smile; Earthly music cannot waken Lovely Annie Lisle.’) They handily lifted the melody for Cornell’s Alma Mater.

The Alma Mater is sung with reverence at all Cornell hockey, basketball, and football games and is frequently played on the chimes. This one may actually qualify as a three-Kleenex tissue number.

Far above Cayuga’s waters,
With it’s waves of blue,
Stands our noble alma mater,
Glorious to view.

Refrain:

Lift the chorus, speed it onward,
Loud her praises tell,
Hail to thee, our alma mater!
Hail, all hail, Cornell!

Additional verses:

Far above the busy humming
Of the bustling town,
Reared against the arch of heaven,
Looks she proudly down.

Sentry-like o’er lake and valley
Towers her regal form
Watch and ward forever keeping
Braving time and storm
So through clouds of doubt and
darkness
Gleams her beacon light
Fault and error clear revealing
Blazing forth the right

To the glory of her founder
Rise her stately walls
May her sons pay equal tribute
Whene’er duty calls
When the moments swiftly fleeting
Ages roll between
Many yet unborn shall hail her
Alma Mater, Queen!

In the music of the waters
As they glide along
In the murmur of the breezes
With their whispered song
In the tuneful chorus blending
With each pealing bell
One refrain seems oft repeated
Hail, all hail, Cornell

Here, by flood and foaming torrent
Gorge and rocky dell
Pledge we faith and homage ever
To our loved Cornell.
May time ne’er efface the memory
Of her natal day
And her name and fame be honored
Far and wide away!

6.2 Outdoor Recreation

Ithaca is an ideal place for many forms of outdoor fun. Two on-campus organizations offer community and education for outdoor interests in gen-

eral. The Cornell Outing Club (COC) serves as a clearinghouse for outdoor activities in the area. For a small yearly fee of \$20, members may borrow club gear for backpacking, climbing, biking, hiking, camping, boating, skiing, and caving for official club trips (which any member can organize). The club run numerous trips, most of which are announced at their weekly meetings and posted to outdoor-1@cornell.edu, the club's mailing list. Also, check out the website at <http://cornelloutingclub.org/> or go to one of their meetings on Tuesday nights at 7:30 pm at Japes Lodge.

Cornell Outdoor Education (COE) offers classes in various styles of outdoor recreation, rents equipment for various outdoor activities, and operates Cornell's two climbing walls (see section 6.1.4.10). Some of their multi-day classes are taught in such places as the American Southwest, Alaska, and Costa Rica. Visit the website, <http://www.coe.cornell.edu/>, for more information. To rent or buy outdoor equipment, visit the COE office in Bartels Hall.

6.2.1 Parks and Forests

Ithaca is blessed with an abundance of natural beauty, and many of the more spectacular attractions have been turned into parks. They can get crowded on major holidays, especially in the summer. Try to go to the parks during less popular times if you want to enjoy the scenery without large crowds.

6.2.1.1 City Parks

The City of Ithaca maintains 22 parks of varying size. Some are small plots with a few trees, while others also have recreational facilities. See the website of the City of Ithaca for more information on each park <http://www.ci.ithaca.ny.us/parks/>. Below is a list of the largest parks.

Six Mile Creek Natural Area

(800) 284-8422, parking near Giles St at Water St, Ithaca

The Six Mile Creek runs north to the center of Ithaca. The natural area includes the Mulholland Wildflower Preserve (access through a parking lot off of Giles at Water) and several trails running along the creek. Trails can be accessed at the wildflower preserve, on Giles St between Bridge St and Route 79, and at the Columbia St footbridge. See also section 6.2.2.

Stewart Park

(607) 273-8364, Route 34 & Route 13, Ithaca

On the shores of Cayuga Lake, Stewart Park provides a lovely view of the lake and the surrounding hills. It is a perfect place to watch the sunset or skip rocks. There are playing fields and the usual amenities for a traditional day in the park.

Cass Park

(607) 273-9211, 701 Taughannock Blvd., Ithaca

Cass Park is located near the downtown area and features tennis courts, a fitness trail, and very nice picnic facilities. Like Stewart Park, it is very close to Cornell and offers a quick getaway for a couple of hours near Cayuga Lake.

6.2.1.2 State Parks

The New York State Office of Parks, Recreation, and Historic Preservation operates over 25 parks in the Finger Lakes region with a wide range of recreational facilities, such as campgrounds and marinas. Many parks close for the winter due to unsafe hiking conditions and open again in May. In the summer, there is a parking fee of about \$6 on weekends at all the state parks. Walk or bike to the park if you wish to avoid this fee. Alternately, you can buy an Empire Passport for \$59, which gives you unlimited day access to most of the New York State parks. Visit the New York State Parks website <<http://nysparks.state.ny.us/>> for more information about parks, accommodations, and facilities. Below is a list of parks close to Ithaca.

Allan H. Treman Marine Park

(607) 272-1460, Route 89, Ithaca

This large marina just north of Cass Park offers 370 seasonal, 30 transient, and 30 dry boat slips. In addition, a picnic area and play field are offered. This popular recreation lake is a haven for sailors, boaters, wind surfers, and anglers. Fishermen enjoy catching Atlantic salmon, rainbow trout, brown trout, and lake trout.

Buttermilk Falls State Park

(607) 273-5761, Route 13 S, Ithaca

Buttermilk Creek descends more than 500 feet in a series of cascades and rapids. At the base of Buttermilk Falls, a natural pool open to the public has the feel of an old swimming hole. Upstream, a scenic trail circles Lake Treman. Other park amenities include picnic areas, hiking trails, fishing, playground areas, and cross-country skiing. The park is open year-round though the trails are closed during the winter. Avoid paying the entrance

fee by parking at the King's Buffet parking lot a short walking distance to the entrance of the falls.

Robert H. Treman State Park

(607) 273-3440, Route 327 (off Route 13 S), Ithaca

Robert H. Treman State Park features a number of fabulous waterfalls including the 115-foot Lucifer Falls. The gorges of this park are sided by towering rock cliffs. A trail system winds past a several falls to give the visitor an up close experience with the falls. There is even an opportunity to swim at the basin pool. Several other park amenities are offered including camping, picnicking, fishing, and hunting. The park is open year round.

Taughannock Falls State Park

(607) 387-6739, Taughannock Park Road (Route 89), Trumansburg

The main attraction here is the 215 ft cascade itself – the tallest east of the Mississippi (yes, even taller than Niagara). This magnificent sight can be viewed from an overlook accessible by car, or one can take a relatively easy hike up the basin at the foot of the falls. The park across Route 89 from the falls also offers a supervised lakeside swimming area, boat launch, and several large fields with barbecues. Be sure to check out the park's summer concert series for live outdoor entertainment.

Watkins Glen State Park

(607) 535-4511, Village of Watkins Glen

Located in the village of Watkins Glen at the southern end of Seneca Lake, this magnificent gorge boasts 18 waterfalls, and cliffs up to 300 feet above the stream. Take a hike up the gorge or enjoy the sound and light show that is put on mainly in the summer. Buses to the top of the park are also available for those unable to make the hike. After hiking take a stroll in town and do some shopping! Getting there is easy from Ithaca; just take Route 79 West to 414 South into Watkins Glen.

6.2.1.3 State Forests

The New York State Department of Environmental Conservation (<http://www.dec.ny.gov>) maintains nine natural areas open for public use in Tompkins County. These forests differ from state parks in that the forests tend to be more rugged and have less facilities. They are for the most part open year round and fee free. The forests listed below are great places for hiking, mountain biking, cross-country skiing, snow-shoeing, and camping.

Shindagin Hollow State Forest

(607) 753-3095, Braley Hill Rd, Caroline

This forest is a popular mountain biking location for its extensive single track trails.

Hammond Hill State Forest

(607) 753-3095, Hammond Hill Rd, Dryden

Multi-use trails on 3,618 acres of forests provide a great place for hiking, mountain biking, and cross-country skiing. There is also a snowmobile trail for a high-paced winter activity.

Connecticut Hill Wildlife Management Area

(607) 753-3095, Connecticut Hill Rd, Newfield

As a wildlife management area, Connecticut Hill is a great place for bird-watching and hunting (during season). Encompassing 11,045 acres, it has ample trails for recreational activities, though swimming and motorized activities, which are not conducive to wildlife management, are prohibited.

Danby State Forest (607) 753-3095, Route 96B, Ithaca

The Danby State Forest is a large, quiet area rich in wildlife and is used mostly for hiking and hunting.

6.2.2 Trails along Ithaca's Gorges

The ubiquitous bumper sticker says, "*Ithaca is Gorges*," and it is true! Most of the area's gorges have trails along the bottom, on the rim, or both. Several gorges in the area have been developed into state parks, including Buttermilk, Robert Treman, Taughannock, and Watkin's Glen (see Section 6.2.1.2). Below are descriptions of some of the gorge trails along with a few other trails.

Cascadilla Creek, known as the "greenway connecting town and gown," has a mix of trails along most of its course from Game Farm Road to the Farmer's Market on the Cayuga Inlet. The prettiest section of the trail runs from the Performing Arts Center in Collegetown down to Linn Street. This gorge walk with many stairs is about 1.3 miles.

The Cayuga Trails Club maintains a trail along Fall Creek from the Stewart Avenue bridge upstream all the way to Route 13. One can also explore Fall Creek downstream from Stewart Avenue to Cayuga Lake at Stewart Park, but part of the route involves trespassing behind the old Ithaca Gun Factory buildings and thus cannot be officially condoned.

Along Six Mile Creek, there is a path along the creek from the Columbia Street footbridge upstream to Van Natta's Dam under the Giles Street bridge. The Mulholland Wildflower Preserve (with parking off of Giles at Water) runs upstream on the east side of the creek past the 30-foot dam, up to the 60-foot dam and Ithaca Reservoir, which is the source of the city's water supply. Another trail begins on Giles St (between Bridge St and Route 79) and runs along the creek and all the way to a more southerly point of Route 79.

A little-known gorge is cut by Lick Brook in the Sweedler Preserve, just south of Buttermilk Falls State Park. Along the north side runs the Finger Lakes Trail, a 552-mile trail that winds throughout this region of the state. For more information on the Finger Lakes Trail, see <<http://www.fingerlakestrail.org>>

For those with a tamer sense of adventure, Wee Stinky Creek (yes, that's its official name) runs from the basement of the Ives Hall, past the campus store and Willard Straight Hall, towards its ignominious end in a drainpipe by the Stewart Avenue bridge over Cascadilla Creek. It demonstrates the same erosion through the block jointed Devonian shales as the larger gorges, but on a more intimate scale.

All of these gorges (except Wee Stinky) have high cliffs so please be cautious; there are a few deaths nearly every year. The soft shale is crumbling back continually so don't try climbing the cliffs. When along the top of the gorges, stay safely back from the edges.

Cornell Plantations, which manages 2,900 acres of diverse natural area, offers a network of trails through campus. Don't forget to check out the botanical garden and arboretum. For more information see <<http://www.plantations.cornell.edu>>

For bird watchers, the Sapsucker Woods Sanctuary of the Cornell Lab of Ornithology, (<<http://www.birds.cornell.edu/>>), has 4.2 miles of trails traversing a variety of habitats. Inside the Lab, the Lyman K. Stuart Observatory features huge glass walls overlooking a specially designed bird-feeding garden and ten-acre pond.

If you are interested in obtaining more information on area parks and trails, pick up a copy of the "Guide to Hiking Trails of the Finger Lakes Region", 10th edition (2006), published by the Cayuga Trails Club. This is an excellent little book, sold in a plastic bag with a set of maps for about \$10, and is available at the Cornell Store and other local bookstores.

6.2.3 Biking

With its trails and highways, the Finger Lakes region is a great place for cycling. If you want to meet other cyclists or find more information on cycling routes, two local clubs can help you. The Cornell Cycling Club <<http://cornellcycling.org/>> consists of members from the Cornell community, and the Finger Lakes Cycling Club <<http://www.flcycling.org/>> covers the region.

Mountain Biking

Many of the trails on Connecticut Hill and Hammond Hill can be used for mountain biking. In addition, Shindagin State Forest (drive out Route 79 east, turn right on Brooktondale Road, and follow that until it essentially dead ends in the State Forest) has excellent single- and double-track trails of varying difficulty which also double as hiking paths. Bikes can be rented at the Bike Rack and at the Outdoor Store on the Commons.

Road Biking

Most of the roads in the Ithaca area are reasonable for cycling, though unfortunately many have little or no shoulder. Hills are plentiful and steep, so be sure your low gears are in good working order. As one gets farther afield from Ithaca, the back roads are often dirt. Bicycling around Lake Cayuga is the classic long distance trip. It is 90 miles with some hills, particularly around the southern end. There are practically no stores on the route, so carry plenty of water, food, a spare tube, and a few tools. Either clockwise or counter-clockwise, it's a great ride, but be aware that it is a lot harder on a mountain bike with knobby tires. For those who want to make the trip in two days (rather than in one), there are some nice B&Bs (bed and breakfasts) in the town of Seneca Falls at the top of Cayuga Lake.

6.2.4 Climbing

Though the vertical stacked walls of the gorges seem perfect for climbing, the rock is in fact too weak and unstable for safe ascents. Around here, climbing is illegal. The best place to practice climbing in the Ithaca areas is actually Cornell, at its two indoor climbing walls (see section 6.1.4.10).

This is not to say that there are no great climbing spots in New York state. The Shawangunks in the Hudson River Valley, known as the “Gunks,” is a

popular climbing spot and is about a three hour drive from Ithaca. Cornell Outdoor Education usually runs a class here during the school year. The Cornell Outing Club also leads trips to the Gunks and ice climbing trips in the winter, mostly to Tinkers Falls, an hour's drive from Cornell.

6.2.5 Hiking

If you can't find a place to hike in Ithaca, then you haven't looked very hard. See section 6.2.1 on parks and forests and 6.2.2 section on trails for do-it-yourself options. If you'd prefer a more organized hike, the Cornell Outing Club periodically runs trips to different places, in addition to other types of outdoor activities. Backpackers may wish to check out the Finger Lakes Trail, which runs for several hundred miles through upstate New York and passes through Ithaca at Robert Treman and Buttermilk Falls state parks. Farther afield, there are ample backpacking trails in the Adirondack Mountains of northeast New York state. Another option is to join the Cayuga Trails Club (<<http://www.cayugatrailsclub.org/>>), which organizes several hikes a month.

6.2.6 Horseback Riding

The Cornell Equestrian Center (272-0150) offers a horseback riding lessons for physical education credit during each semester and in the summer (see section 6.1.5). Lessons are open to the Cornell and Ithaca communities. Lesson horses can be leased, and boarding (box stalls) is available to the Cornell community. For those interested in competition there are Cornell's Equestrian and Polo teams. (See <<http://cornellbigred.cstv.com/>> for more information.)

6.2.7 Running

The Ithaca area offers a range of surfaces and scenery for runners, not to mention numerous hills! At Cornell, the Plantations provide plenty of roads and trails to explore, including a mile trail encircling Beebe Lake. The Cayuga Heights area northwest of campus provides relatively flat and scenic residential roads with little traffic. The contiguous grass fields of Ithaca's Stewart and Cass/Treman Parks are perfect for workouts, as are the grass fields at Cornell—Jessup Field, the running track's center, and Appel Commons.

Some years ago, Ithaca converted several old railroad tracks into gravel and asphalt trails that are now heavily used by joggers. The East Hill Recre-

ation Way is in two sections: the first section runs east along Cascadilla Creek from Maple Ave to Game Farm Rd, with entrances off Maple, north of the Maple Hill Apartments; across the Print Shop's lawn at Pine Tree Rd and Route 366; and on Game Farm Rd where it crosses Cascadilla Creek. The other section runs south along the Maplewood Park Apartments to Honness Lane. The South Hill Recreation Way includes two sections of converted railroad track and runs southeast from two entrances on Hudson St all the way to Coddington Rd at Burns Rd. There is also an entrance at Juniper Dr.

The state forests also provide ample trail space for long, scenic runs (see section 6.2.1.3). The Finger Lakes Running Club organizes a trail race circuit during the summer at various local trails with distances ranging from 5 km to 50 mi and both indoor and outdoor track meets. See <<http://www.fingerlakesrunners.com>> for more information.

6.2.8 Sailing

It's hard to miss the giant body of water just west of Cornell: Cayuga Lake is an ideal location to either learn the basics of sailing or tune the skills you already have. If you've never sailed before, take a physical education course in small or large boat sailing (see section 6.1.5). Courses are held at Cornell's East Shore Marina (1000 East Shore Dr). Once you are confident enough to sail, you can rent boats from the marina during the warm weather months by becoming a member of Cornell Community Sailing, which is open to the public. Memberships are around \$250 for two months with discounts for extra months. Boats available for rental range from 14-foot dinghies to 26-foot keelboats. Call (607) 277-9307 for more information.

6.2.9 Skiing

Skiing helps a long winter go by much faster.

Cross Country Skiing

The closest places for cross-country skiing are the Cornell Plantations and Cornell's golf course (and adjacent fields) on Warren Road. Midwinter, when the south end of Lake Cayuga and the Inlet are safely frozen, Stewart Park, Cass Park, and the golf course all become one, providing much territory to explore. Just a short drive away are Connecticut Hill Wildlife Management Area, Danby State Forest, and Hammond Hill State Forest (see 6.2.1.3). A bit further is a short groomed trail at Greek Peak. For a

longer list of great skiing spots beyond here, check with the Cornell Outing Club or Cornell Outdoor Education.

Downhill Skiing

While there are other ski resorts in the area, Greek Peak is large and only a 20-minute drive away. With 900 feet of vertical elevation and 29 trails, Greek Peak is excellent for everyone from first-time through advanced-intermediate skiers. A full-day lift ticket runs \$54 (\$8 off for students), and a night pass is \$25 (\$4 off for students). Equipment rentals are \$29. The best deal is to purchase a season pass before mid-October for only \$149. Greek Peak is located at 2000 Route 392 (take routes 366 and 13 to Dryden, then go straight east through Dryden onto 392; take this to Virgil, where it turns right and runs along the foot of Greek Peak). For more information see their web site <<http://www.greekpeak.net/>> or call them at (800) 955-2SKI.

If you grew up in the Alps, you won't find much in upstate New York; go to Tuckerman's Ravine on Mount Washington, New Hampshire, which has the most adventurous run on the East Coast. Other ski areas in New Hampshire, Vermont, and Canada are within a half day's drive of Ithaca.

6.2.10 Outdoor Swimming

Unfortunately the south end of Lake Cayuga is considered too polluted for swimming, due to its naturally stagnant water, two sewage treatment plants, and town and agricultural runoff from Fall, Cascadilla, and Six Mile creeks, and the Inlet. Thus swimming is limited to pools along the creeks themselves. Perhaps the best local spot is in Fall Creek under the suspension bridge. Walk down the trail on the south side of the bridge to get there. At normal summer water levels, the creek provides long-distance swimming (swim upstream forever without getting anywhere!), flat rocks for sunbathing, and waterfalls for splashing. Another popular spot is at the foot of Ithaca Falls, with access from the Lake Street bridge. For the more adventurous, Six Mile creek's popular clothing-optional beach above the 30-foot dam provides cliff diving (be very sure there aren't submerged logs or other hazards below!) as well as swimming and interesting scenery. Access is via the Mulholland Wildflower Preserve, or from Penny Lane off Route 79. Note: While these are all popular swimming spots, it is prohibited by law to swim in any of the gorges. Every year, there are fatalities associated with gorge swimming, in part because water conditions can be difficult to

assess. There are also no lifeguards on duty. Swim at your own risk. In general, it is not a wise decision to swim in swollen gorges right after a storm as currents can be very strong.

Many local parks also provide swimming of the supervised kiddie-splashing variety, including Buttermilk, Robert Treman, and Taughannock. For information on swimming in a pool, see section 6.1.4.2.

6.3 Fun Resources and Hobbies

6.3.1 The Big Red Barn

The Big Red Barn is Cornell's Graduate and Professional Center. It provides graduate and professional students with a gathering place and is an informal center for a variety of social, cultural and intellectual exchanges. Cornell Dining serves continental breakfast and lunch, and in the afternoon, the Graduate and Professional Student Center runs a snack and beverage service. Additionally, the Big Red Barn Grad Center offers several ongoing activities for students including a weekly graduate student social — T.G.I.F. (Tell Grads It's Friday!), Games Night, Winter Warmer Series, International Coffee Hour, as well as dances, parties and other events.

The Big Red Barn is a historic refurbished carriage house. It has an open main area, a small mezzanine, and a sunlit "greenhouse" with seating. Facilities include a working fireplace, a grand piano, a performance quality stereo system, a CUINFO terminal, newspapers and magazines, and a barbecue pit and picnic tables outside in good weather. The Big Red Barn can also be used by student organizations and departments for receptions, dinners, social events, etc. Its management will offer guidance with program and event planning. Total seating capacity is 150, and the facility is handicapped accessible. Call x4-4723 or visit <<http://brb.gradschool.cornell.edu/>> for more information.

6.3.2 Willard Straight Hall

Willard Straight Hall is the Cornell Student Union and contains non-academic and student organization offices, some of which are listed in Table 6.2.

6.3.3 Festivals

The Ithaca area is host to a number of yearly festivals, mostly during the summer months. The Ithaca Festival takes place downtown the weekend fol-

Information Desk, Main Lobby: x5-3450
 Cornell Ticket Office, Main Lobby: x5-3430
 Browsing Library, Main Lobby: x5-5185
 Ceramics Studio Rm 215: x5-5170
 Multicultural Greek Letter Council, Rm 518-H:
 x4-2912
 Class Council, Rm 518-C: x5-9923
 Cornell Cinema, Rm 104: x5-3522
 Cornell Concert Commission (CCC), Rm 518-D: x5-4169
 Cornell Productions, Rm 213: x5-2501
 CU Program Board (CUPB), Rm 518-D: x5-7132
 Empathy, Assistance, and Referral Service (EARS):
 x5-3277
 Interfraternity Council (IFC), Rm 518-H: x4-2912
 Panhellenic Association (PA), Rm 518-H: x4-2912
 Welcome Weekend Steering Committee, Rm 518-G: x5-9672
 Student Assembly, Rm 518-F: x5-9977
 WSH Student Union Board: x5-4311

Table 6.2: Student Offices

lowing graduation, as residents heave a collective sigh of relief at the departure of the college students for the season (see <<http://www.ithacafestival.org/>>). The Ithaca Festival is a four-day long affair that features music, dancing, crafts, numerous food booths, a parade, and group activities and concludes with fireworks in Stewart Park (see section 6.2.1). In July, the Grassroots Festival in Trumansburg features music and dance on several stages, lasting straight for four days (Thurs - Sunday) [see <<http://www.grassrootsfest.org/>>]. In late August/early September, the Great New York State Fair comes to Syracuse (see <<http://www.nysfair.org/>>). It is the oldest state fair in the county with more than a million visitors offering agricultural exhibits, competitions, entertainment, and the International Horse Show. In the fall, Ithaca's annual Apple Harvest Festival takes place on the Commons, featuring bountiful produce, apples galore, baked apples goods, cider, a craft fair, singers, dancers, and musicians. In the cold of winter, Ithaca's Chilifest, held at the Commons, showcases chili made by local restaurants and groups. (See <<http://www.downtownithaca.com/>>.)

6.3.4 Wineries

The Finger Lakes region is the pre-eminent wine growing area in New York State, which as a whole is second only to California in production of fine American table wines. Most of the wineries in the area have tasting rooms open to visitors, and a tour of several such establishments can be an enjoyable way to spend a weekend afternoon. Don't forget to decide in advance who will be driving! A typical wine tour will visit four or five wineries located along one of the lakes. Some local vineyards also offer tastings and sales at the Ithaca Farmer's Market. Held every July, the Finger Lakes Wine Festival (<http://www.flwinefest.com/>) has an attendance of over 70 area wineries so that you can try many wines all at once. It is held at the Watkins Glen International Race Track, and camping during the two-day festival is available. For more information on wineries in the state of New York, visit <http://www.newyorkwines.org/>. If you would like to stay in Ithaca, check out Six Mile Creek Vineyard located on Rt. 79 (<http://www.sixmilecreek.com/>).

6.3.5 Fruit Picking

For a slightly different outdoor experience, consider going fruit picking. Littletree Orchards (345 Shaffer Road, Newfield, 564-9246) features myriad fruits and vegetables, such as cherries, peaches, apples, cucumbers, and peppers — as well as bountiful wildflowers — during the summer and early fall. The produce is sold by volume, so you can pick enough to last you through the winter, or just enough for a nice meal or a pie. Littletree also sells its produce at the Orchards and at the Farmer's Market, but the prices are a little more expensive than the self-pick and you'll miss half the fun — the joy of eating while you pick! Feel free to bring a picnic or just stroll through for a walk, since Littletree is equipped with picnic areas and trails among their fruit trees and other plants. Other local pick-your-own fruit places include Brookside Berries for strawberries (along Rt. 366 just outside Freeville, 423-7848, <http://brooksideberryfarm.com/>), and Farmer's Choice Blueberries (281 Lake Street, Dryden, 844-9629, <http://www.farmerschoice.org/>).

6.3.6 Astronomy

The Fuertes Observatory (x5-3557) located on North Campus is open to the public on Friday nights year round when the sky is clear. It stays open until midnight. Group tours can be arranged on other nights. The Observatory's use is primarily regulated by the Cornell Astronomical Society.

6.3.7 Ballroom Dancing

Dancing in Ithaca is something that you won't find in short supply. There are many outlets for ballroom and Latin dancing. If you are a beginner who is interested in learning ballroom or Latin dancing the physical education department at Cornell offers classes at convenient times (see section 6.1.5). Unfortunately, partners are usually recommended if not required. Also, the Community School of Music and Arts (272-1474, <<http://www.csmaitthaca.org/>>) and the City Health Club (273-8300), both in downtown Ithaca, offer classes. For more advanced dancers, there are a number of local groups that sponsor dance events on specific nights of the week. The Ithaca Swing Dance Network, <<http://www.dance-ithaca.org>>, holds a weekly record hop on Wednesday nights at the City Health Club. The Tompkins County Country Dancers, <<http://www.tedcrane.com/TCCD/Main.htm>>, offer a weekly contra and square dance on Fridays at the Bethel Grove Community Center, and additional Monday night dances on the Commons during the summer. The Cornell Ballroom Dance Club, <<http://cornellballroom.org/>> sponsors a ball about once every two months and also offers classes. Ithaca also has a very active Argentine Tango group, the Ithaca Tangueros (<<http://www.ithacatangos.com/>>). For Latin dance lovers, The Common Ground, <<http://www.ithacacommonground.com/>>, offers Salsa, merengue and Latin house music on Tuesdays. Check the Ithaca Times for more information on times for social dancing, classes, and workshops.

6.3.8 A Capella Groups and Choral Ensembles

Cornell has many different a capella groups — all women's, all men's, and mixed. Although by no means an exhaustive list, a few of the groups include

- The Chordials (<<http://www.rso.cornell.edu/chordial/>>)
- Cayuga's Waiters (<<http://www.cayugaswaiters.com/>>)
- Last Call (<<http://www.menoflastcall.com/>>)
- The Glee Club (<<http://gleeclub.cornell.edu/>>)
- Cornell University Chorus (<<http://www.chorus.cornell.edu/>>)
- Cornell University Chorale (<<http://www.arts.cornell.edu/music/Ensembles/>>)

Audition times vary, though many are toward the beginning of the year. Even if you do not want to join one, check the websites for performances. There are several free or cheap performances by all of the groups. See

<http://www.arts.cornell.edu/music/perfens.htm> for more information about the various choral ensembles on campus.

6.3.9 Instrumental Ensembles

Cornell has several instrumental ensembles of different genres and size. Below is a list of ensembles on campus. Check with websites for information about auditions and meeting times. For information about practice space (and pianos), visit 101 Lincoln Hall or call x5-4097.

- Jazz Ensembles (<http://www.arts.cornell.edu/jazz/>)
- Percussion Ensembles (<http://percussion.music.cornell.edu/>)
- Gamelan Ensemble (<http://percussion.music.cornell.edu/>)
- Middle Eastern & Mediterranean Music Ensemble (<http://www.arts.cornell.edu>)
- Symphony Orchestra (<http://www.arts.cornell.edu/orchestra/>)
- Chamber Orchestra (<http://www.arts.cornell.edu/orchestra/ccohome.htm>)
- CU Winds (<http://www.cuwinds.com/>)

6.3.10 Ithaca Concert Band

The Ithaca Concert Band, founded in 1976, performs about a dozen free concerts per year in local auditoriums, on the Commons, and in area parks. The Band is comprised of musicians from student to professor, professional to retiree, and is open to all. New members of all levels are always welcome. Rehearsals are Tuesdays at 7:30 PM in the Congregational Church on Highland Rd in Cayuga Heights. There is a membership fee of approximately \$25. For more information see <http://www.ithacaconcertband.org/>.

6.3.11 Gardening

The Cornell Garden Plot Committee makes over 200 20x25 foot garden plots available to the public for a fee of \$18 per season. The plots are located on Freese Road, near the apiary and bee labs. An announcement about the availability of garden plots is generally made in mid-March. If you want a plot, you should send in a request as soon as you see the announcement as assignments are made on a first-come, first-served basis. For more information, call (607) 844-4535 or visit <http://audiophile.tam.cornell.edu/bev/garden/>.

The Ithaca Community Gardens also rent 15x15 foot plots near the Farmer's Market on Route 13. Registration and a lottery for plots typically takes place in the middle of April. There is a \$25 membership fee and a 4-hour work commitment. Visit <<http://www.lightlink.com/itgarden/>> for more information. Throughout the year, Cornell Plantations offers classes and workshops taught by experts in horticulture, natural history, and landscape design. See <<http://www.plantations.cornell.edu/education/classes.cfm>> for fees and descriptions.

6.3.12 Photography

For those who love to develop film and print photos, there are two darkrooms available on campus. The College of Art, Architecture, and Planning runs a darkroom in Tjaden Hall (Rm 120) with both black & white and color darkrooms. There is also a shooting studio, and lighting equipment may be borrowed. Facilities can be used on a one-time basis or with a semester pass. Contact x5-5362 for more information on hours and fees. Risley Hall, a residential hall on North Campus, has a darkroom in its basement. To use the darkrooms, you must pay a semester membership fee, which is less than that of Tjaden. Call x5-9520 for more information, and also see section 6.3.15 for more information on Risley Shops. The darkroom in Willard Straight Hall closed in the fall of 2005. It may possibly be replaced by a digital media center. In the meantime, you can use programs like Photoshop, which are available in the Engineering Library (Carpenter Hall).

6.3.13 Pottery

There are two pottery studios on the Cornell campus. The Willard Straight Pottery/Ceramics Studio is located in the basement of Willard Straight Hall. Student membership is \$65 per semester, and semester classes are offered to students for \$85. Visit <<http://www.activities.cornell.edu/ceramics/>> or call Andy Palmer, the ceramics coordinator, at x5-5170 for mor information. Another pottery studio is located in Risley Hall. See section 6.3.15 for more information.

6.3.14 Woodwork

Risley Hall on North Campus contains a woodworking shop. For information on accessing the Risley Hall shops, see section 6.3.15. The College of Agricultural and Life Sciences offers a course each Fall on woodwork. Part

of the course focuses on building construction, and the course culminates in a construction project. The course (BEE 132) is offered by the Biological and Environmental Engineering Department. TST BOCES in Ithaca (257-1551) also offers a woodworking course a couple of times each year as part of their adult education series.

6.3.15 Other Arts and Crafts

Risley Hall has a variety of shops including a darkroom, a pottery studio, a sewing room, music practice rooms, an art studio, a theatre, a printing press, and a stained glass studio. Use of these shops is restricted to Risley Hall residents and those who pay a usage fee for the semester. The charge is \$45/semester to use all shops and \$15/semester to use a single shop. There are several big craft stores in town. There is a Jo-Ann Fabrics & Crafts in Triphammer Mall, a Michaels at the Tops Plaza downtown, and an AC Moore in the Pyramid mall. The Cornell Campus Store also has a large variety of art supplies. If you are looking to learn a new art or craft, the Adult Continuing Education Program at the BOCES (257-1551) has a number of reasonably priced courses. You can also try the Community School of Music and Arts (272-1474) downtown.

6.4 List of Student Organizations

On the following pages, you will find a lengthy, but by no means comprehensive, listing of the activities, clubs, publications, etc. available at Cornell. If you want it, chances are that we've got it! (And if we don't, you can start your own.) To search through available clubs, see <<http://sao.cornell.edu/>>.

LIST OF STUDENT ORGANIZATIONS

Communication:

- Amateur Radio Club
- Debate Association
- Forensic Society
- Madison and Ivory (advertising club)
- Minority Communications and Entertainment Leaders
- Public Relations Student Society of America
- Women in Communication

Cultural/International

- African Students Association, Cornell (CASA)
- Africana Student Association
- Arab Club
- Australia/New Zealand Student Assoc.
- Bhakti: Society for Hindu Cultural Awareness
- Canadians at Cornell
- Caribbean Students Association
- Chinese Student Association
- Colombian Students Association
- Czech and Slovak International Club
- Dutch Club
- Ethiopian Student Association
- Filipino Association
- Global Nomads Society
- Hellenic Students Association
- Hong Kong Student Association
- Hui Hawaii O Na Cornell
- India Association
- International Association of Camel Breeders
- International Students Programming Board (ISPB)
- Israel Awareness and Education Committee
- Italian American Organization, Cornell (CIAO)
- Japan-United States Association
- Konbit Ayisyen: Haitian Students Association
- Korean Students Association
- Leap August Society
- Luso Brazilian Association
- Malaysian Educational and Cultural Association
- Mexican Student Association
- Model United Nations
- Muslim Educational and Cultural Association
- Native American Students
- Nepal Association
- Out in the World: International Lesbians, Gays, and Bisexuals
- Pakistan Student Association
- Persian Culture Club
- Persian Student Association
- Puerto Rican Student Association

- Quisqueya (Dominican Student Association)
- Russian Society
- Scandinavian Club
- Singapore Students Association
- Society for India
- Southeast Asia Organization
- Taiwanese American Society
- Taiwanese Students Association
- Thai Association
- Uruguayan Student Association
- Vietnamese Association
- Yagyu Shinkage Ryu Heihou

Music/Theatre/Dance

- After Eight
- Asian American Playhouse
- Ballet Folklorico Mexicano
- Baraka Kwa Wimbo Gospel Ensemble
- Big Red Color Guard
- Big Red Marching Band
- Big Red Pep Band
- Black Theater Production
- Brand X Musical Theater
- Cayuga's Waiters
- Chamber Music Ensembles
- Chamber Orchestra
- Chamber Winds
- Chorale
- Chordials
- Chorus
- Glass Notes
- Cornell Concert Commission(CCC)
- Contemporary Chamber Players
- Denton Drama Troupe
- Eco-Players
- EXIT ONLY
- Festival of Black Gospel
- Folk Song Club
- Gateway Theatre
- Glee Club
- Grace Notes a Capella
- Hangovers
- How Excellent Gospel Choir
- Impact Dance Troupe
- Independent Filmmakers
- Ithaca Tangueros
- Jazz Ensembles
- Kujichagulia Women's Stepp Club
- Last Call
- Nitsots (Performing Israeli Dance Troupe)
- Nothing but Treble
- On Tap
- Pamoja-Ni Gospel Choir
- Philomela Music Society
- Risley Theatre
- Sage Chapel Choir
- Sabor Latino Dance Ensemble
- Savoyards
- Shadows Dance Troupe
- Sitara
- Skits-O-Phrenic
- Society for Promotion of Indian Classical Music and Culture among Youth

- Student Choreographers
- Teatrotaller
- Symphonic Band
- Symphony Orchestra
- Touctones
- Tyetones
- Uhuru Kuumba Dance Ensemble
- Upstage Left Theater Company
- Whistling Shrimp Comedy Improv Troupe
- Wind Ensemble
- Wind Symphony

Plants and Animals

- Block and Bridle Club
- Collegiate 4-H Herpetological Society
- Hookbill Association
- Hortus Forum
- Jugatae
- Student Garden Club
- Student Livestock Show Committee
- Students for the Ethical Treatment of Animals
- Wildlife Society
- Zoo and Wildlife Society

Political and Social Action

- American Society
- Amnesty International
- Asian American Coalition
- Association for Students of Color
- Black and Latino Awareness Committee
- Black Students United
- Bosnia Coordinating Committee
- Campus Insights
- Coalition against Prejudice
- Coalition for Life
- College Republicans
- Committee on United States-Latin American Relations (CUSLAR)
- Conservative Committee
- Cuban American Student Association
- Cornell Democrats
- Earthrise
- Feminist Action League
- First Amendment Coalition
- Cornell Greens
- Indigenous Human Rights Group
- Ivy Leaguers for Freedom
- La Asociacion Latina
- La Organizacion de Latinas Universitarias (LOLU)
- Lesbian, Gay, Bisexual, Transgender Coalition
- Model Congress
- Movimiento Estudiantil Chicano de Aztlan
- National Association for the Advancement of Colored People (NAACP)
- Cornell Organization for Labor Action (COLA)
- Peru Human Rights Project
- Simba Wachanga

LIST OF STUDENT ORGANIZATIONS cont.

Political and Social Action cont.

- South African Azania Student Movement
- South Asia Association for Political and Academic Awareness
- Students Stop Sweatshops
- United Progressives
- Urafiiki
- Wana Wake Wa Wari
- Watermargin
- Women's Resource Center

Public Service -ASHA Cornell

- Best Buddies International
- Black Biomedical and Technical Assoc.
- Chinese Kids Club
- Circle K International Club
- Coalition for the Homeless
- Community Partnership Fund Board
- Community Unity
- Cornell Tradition
- Cornell University Emergency Medical Service (CUEMS)
- EARS (Empathy, Assistance, and Referral Service)
- Esperanza (Latino Youth Mentoring Program)
- Habitat for Humanity
- Into the Streets
- No-Num-De-Kah
- Prison Project
- Student Health Alliance
- Student Wishmakers
- Victory Club
- Volunteers for Youth

Publications

- Animalife*
- Center Peace*
- Cornell Chronicle*
- Cornellian, Inc.*
- Cornell Daily Sun*
- ETHOS Yearbook*
- Global Millennium*
- Innkeeper*
- ILR Agenda*
- Ithaca Review*
- Kultura*
- La Lucha*
- La Voz*
- Cornell Lunatic*
- On the Wall Magazine*
- One Page Poetry*
- Cornell Perspective*
- Cornell Political Forum*
- Praxis: A Cornell Journal of Arts and Letters*
- Quad*
- Rainy Day Magazine*
- Cornell Review*
- Risley Revue*
- Cornell Science*
- Umaja Sasa*
- URSUS: The Forum for Environmental Issues*
- Volunteer Connection*
- Women's Handbook*

Recreational/Sports

- Aikido Club
- Badminton Club
- Ballroom Dance Club
- Belly Dancing Club
- Bowling Club
- Buds (Men's Ultimate Frisbee)
- Cheerleaders, Varsity
- Cycling Club
- Fencing Club
- Field Hockey Club
- Flying Club
- Go Club
- Gymnastics Club
- Ice Hockey Club
- International Folk Dancers
- Israeli Folkdancing
- Jitterbug and Swing Dance Club
- Judo Club
- Juggling Club
- Karatedo
- Dashinkan/Doshinkin Clubs
- Kendo Club
- Kenpo Club
- Mundial Football Club
- Outing Club
- Quantum Ju Jitsu Club
- Ithaca Women's Rugby Football Club
- Johnson School Rugby Football Club
- Sailing Club
- Scottish Country Dancers
- Seido Karate Club
- Shake Ultimate Frisbee
- Shaolin Kung Fu Association
- Shito-Ryu Karate Club
- Shotokan Karate
- Ski and Snowboard Club
- Ski Racing Club
- Sport Tae Kwon Do
- Table Tennis Club
- Unified Rowing Club
- United Soccer Club
- Water Polo Club
- Wild Roses (Women's Ultimate Frisbee)
- World Tae Kwon Do Association

Religious

- African American Worship
- Association for the Study of Buddhism
- Baha'i Club
- Campus Crusade for Christ
- CARP (Collegiate Association for the Research of the Principle)
- Catholic Community
- Chabad House
- Chi Alpha (Assemblies of God)
- Chinese Bible Study
- Christian Fellowship Center
- Christian Science Organization
- Episcopalians

- Evangelical Alliance (Campus Crusade, InterVarsity Christian Fellowship, Navigators, and Pentecostal)
- Friends(Quakers)
- God's Way Holy Ghost Connection
- Hillel Foundation
- Hong Kong Christian Fellowship
- Keshar at Cornell
- Korean Bible Study
- Latter-Day Saints Student Association of the Church of Jesus Christ of Latter Day Saints
- Lutheran Student Fellowship
- Muslims
- Protestant Cooperative Ministries (Presbyterian, United Methodist, United Church of Christ, American Baptist)
- Seventh-Day Adventists
- Southern Baptists
- Unitarian Universalists
- Young Israel
- Zen Buddhists

Other

- ALERT (Alcohol and Drug Lifeskills Education)
- American Meteorological Society
- American Association of Agricultural, Food, and Biological Systems
- American Institute of Chemical Engineers
- American Society of Civil Engineers
- American Society of Mechanical Engineers
- Archaeology Club
- Biological Society
- Bisexuals Reinventing Definitions of Gender and Sexuality (BRIDGES)
- Deaf Interest Club
- Engineering Physics Society
- Japanese Animation Club
- Jewish Student Appeal
- Lesbian, Bisexual, and Questioning Women (LBQ)
- Mathematical Club
- Museum Club
- National Society of Black Engineers
- Odyssey of the Mind
- Quiddibet: Medieval Forum
- Sexpertise
- Society for National Resource Conservation
- Society of Women Engineers
- Strategic Simulations Society
- Structural Engineering Club
- WVBR-FM 93

Chapter 7

Dining and Entertainment

Ithaca and Tompkins County hosts various restaurants featuring many ethnicities as well as a wide range of entertainment from theatres to discotheques. Our hope is that this section will help in familiarizing you with the entertainment offerings in Ithaca and will often be referenced throughout your duration at Cornell.

7.1 Restaurants

What follows is a list of many of the restaurants in the area, divided by location and then alphabetically within each location area.

Note that restaurants do come and go, so you may see some restaurants on this list close and new ones that aren't listed open during your time here.

Each restaurant is also assigned to one or more food type categories. We've tried to give you an idea of the price of a dinner entree at each restaurant. Below is the key:

\$	“too tired to cook”	< \$7
\$\$	“out with friends”	\$7 – \$12
\$\$\$	“fancy Friday night”	\$12 – \$18
\$\$\$\$	“parents in town”	> \$18

Some restaurants might have stars to indicate food quality. 1-* OK, 5-* Amazing.

We've also included quotes of what "grads say" about some of these restaurants. If you've got an opinion, or we've missed your favorite place to eat, e-mail us at egsa@cornell.edu and let us know!

7.1.1 Collegetown

Aladdin's Natural Eatery

Middle Eastern, \$\$ ***

100 Dryden Rd., 273-5000

One of Collegetown's most popular cafes and restaurants, with a wide assortment of salads, sandwiches, soups, and hot dishes. Many vegetarian dishes. Look for glass case near entrance with a multitude of delectable desert treats. Spacious environment. Outside patio service during warmer weather. At times, the staff can be unpleasant!

Asian Noodle House

Southeast Asian, \$ *

204 Dryden Rd., 272-9106

Grads say: “No crowd, high quality food, the only place for reasonable Japanese style noodles”

Taverna Banfi

American, \$\$\$ ***

Statler Hotel (C5), Cornell, 254-2565

Located in the Statler Hotel just a few steps from the engineering quad. Nice dining, convenient location, and a great view — what more could you want! A great place to go with faculty — especially if you can get them to fund it. Be sure to check out the lunch buffet which features an assortment of fresh salads, vegetables, fruits, breads, and soups. Grads say: “Banfi’s has quite a reasonably priced lunch menu (lots for around \$8-9) and it has a nicer and more relaxed atmosphere than the other overcrowded places on campus or in Collegetown to have lunch.”

Collegetown Bagels (aka CTB)

American Cafe, \$ **

415 College Ave., 273-0982

Very convenient being a few steps from the footbridge connecting Collegetown and the Engineering Quad. Variety of bagels made fresh daily, a multitude of sandwiches, soups, baked items, and good coffee. Live music many nights. Serves beer. Outside seating during the warmer months. Great spot for people watching.

Koko

Japanese/Korean, \$\$ **

321 College Ave., 277-8899

Offers a Korean and Japanese menu. Delicious lunch box served at a reasonable price. Good food and service.

Dasan J Korean Restaurant

Korean, \$-\$\$ **

104 Dryden Rd., 256-3333

Good food.

Dino’s Collegetown

American, \$-\$\$

313 College Ave., 273-5819

Full menu and nightly drink specials.

Four Seasons

Korean, \$\$\$ ****

404 Eddy St., 277-1117

Best Korean food in town. Their chige is amazing! Try the Dik Sot Bim Bim Bop as well as the Champong. Discounted lunch menu on weekdays. Bring a friend and try something new.

The Greek House Restaurant

Greek, \$-\$\$ *

119-121 Dryden Rd., 272-7207

Serves Greek salads, souvlakis, gyros, traditional diner fare, and breakfast anytime. Quick service. For more of Greek family atmosphere see the Souvlaki House below.

Hai Hong Restaurant

Chinese, \$\$ ***

208 Dryden Rd., 272-1668

The bean curd Szechwan is quite tasty. They also offer lunch buffet on weekdays and dim sum for lunch on the weekend.

Hong Kong Restaurant

Chinese, \$ *

120 Dryden Rd., 277-7595

Great for a quick and extremely cheap hot lunch. Choose from pre-prepared selections or special order menu. Large portions. Look for the free self-serve soup. Grads say: "Really cheap!" "It's cheap food. I wouldn't go so far as to say it is good food." "Can't beat their prices." Owned by the same people as Apollo Chinese Restaurant.

Little Thai House

Thai, \$ *

202 Dryden Rd., 273-1977

Need a ton of food for cheap in collegetown? The Little Thai House offers your favorite Thai dishes like pad thai and curries, as well as spring and summer rolls. Order their combos where you can get two or even three dishes piled high with plenty of rice. Selection of vegetarian dishes also available.

Mama Teresa Pizza

Italian/Pizza, \$ *

139 Dryden Rd., 272-6262

Pretty expensive for pizza. Those who have tried it say it's good. Garlic knots rated better than pizza by some.

Miyake Japanese Restaurant

Japanese, \$ ***

416 Eddy St., 277-6767

Good sushi and some other stuff. Same owners as College Cafe.

Apollo Chinese Restaurant

Chinese, \$ *

407 College Ave., 272-1188

Owned by the same people as Hong Kong Restaurant. Food might not be better, but utensils newer.

Pita Pit

American, \$ **

143 Dryden Rd, 277-8748

A great place to grab a quick, filling, low cost meal. They stuff their pitas with a variety of fillings for both vegetarians and meat lovers.

Plum Tree

Japanese, \$\$\$ **

113 Dryden Rd, 256-8081

Rulloff's

American with a Mexican flare, \$\$ ****

411 College Ave., 272-6067

Rulloff's is a popular place for lunch, dinner and Sunday brunch. Serving a variety of sandwiches, pastas, and entrees. Note only chips and not French fries are served with your sandwich or burger. Very slow.

Sangam Indian Cuisine

Indian, \$\$ **

424 Eddy St., 273-1006

The closest Indian Restaurant to the Cornell campus. Come to Sangam's for a quick lunch or relax and try every sumptuous item at the lunch buffet. A full menu is also available for dinner. Grads say: "Their lunch buffet is a yummy, filling, affordable deal."

Souvlaki House

Greek, \$-\$\$ ***

315 Eddy St., 273-1650

The Souvlaki House offers the best restaurant experience for the money. Try their Greek specialties such as gyros and souvlaki, along with their great pizza, calzones, pasta, and other Italian classics. Grads say: "Get the carbonara there; it's very good."

Stella's

Coffeehouse/Bar, \$\$ **

403 College Ave., 277-1490

One side is a coffeehouse, and the other is a wine bar and jazz lounge. Both serve food. The coffeehouse serves sandwiches and salads. A complete menu can be found at the wine bar.

Subway

Fast Food, \$ **

105 Dryden Rd., 256-2222

The sandwiches are good, and reasonably priced.

Vietnam Restaurant

Vietnamese, \$-\$\$ ***

208 Dryden Rd., 273-5030

Specializing in authentic fine Vietnamese Cuisine, homemade soups and salads. The duck served at room temperature is excellent. Grads say: "Pretty good!" "A wide assortment of Vietnamese food at reasonable prices"

7.1.2 Ithaca Commons Area

The restaurants in this section are all located within one or two blocks of the Commons. Note that all of the restaurants in the Center Ithaca mall are arranged in a food-court layout and share seating.

Asia Cuisine

Korean/Chinese \$\$\$ **

126 N. Aurora St., 256-8818

Capital Corner

Chinese, \$\$ **

118 W. State St., 272-7350

Continental Cantonese in a relaxed atmosphere.

Cafe Dewitt

Cafe/Vegetarian, \$

215 N. Cayuga St. in DeWitt Mall, 273-3473

Primarily vegetarian food in a comfortable, but no-frills environment.

Collegetown Bagels

American Cafe, \$ **

203 N. Aurora St. in downtown, 273-2848

Similar to CTB in Collegetown, but without the music and beer. A popular spot to catch lunch while running errands downtown, or to read the paper on the weekends.

Diamond's Bar and Restaurant

Indian, \$\$

106 W. Green St., 272-4508

Great food. They offer a lunch buffet and can accommodate large parties. It's a good idea to make reservations for dinner. Grads say: "Much better than Sangam for Indian food."

D.P. Dough

Pizza, \$ **

114 W. Green St. by the Commons, 277-7772

Calzones, calzones, calzones — mainly a delivery operation, but you can order at the store also.

Hal's Diner

Diner, \$ **

115 North Aurora St., 273-7765

Ithaca Diner

Diner, \$ *

116 W. State St. (across fro, the state theater), 272-6009

Daily breakfast and lunch specials in an informal atmosphere.

Jade Garden

Chinese, \$-\$\$ *

113 North Aurora Street, 272-8880

Located just off the Commons, Jade Garden offers quality Chinese delivery, as well as low-priced lunch and dinner buffets. Jade Garden is your best bet when it comes to Chinese take out.

Juna's Cafe

American Cafe, \$ ***

146 State St. on the Commons, 256-4292

Good coffee, sandwiches, desserts, and milkshakes. When it's warm the front of the cafe will be open to the commons and the musicians, whom often play on the second floor, can be heard on the commons. Same owners as the old Harvest Deli.

Just a Taste

Tapas Bar, \$\$\$ ***

116 North Aurora Street, 277-9463

Treat yourself to a whole new dining experience at Just a Taste. If you haven't been to a tapas bar before, the menu, updated daily, offers gourmet

appetizers that compliment your drink, or you can make it a meal by ordering multiple dishes. It also features a great wine selection, including flights of wine where you can try several kinds of wine at once. Grads say: “Excellent food. Menu changes frequently, and always features a wide variety of exotic and tasty dishes. Come with a group of friends: that way, you can share and try out a little bit of everything.”

King David

Middle Eastern, \$ ****

Center Ithaca on the Commons, 272-6000

Enjoy a wide range of freshly prepared Middle Eastern food. Hummus, falafel, gyros and greek salad are available. Open seven days a week for lunch and dinner.

Kilpatrick’s Publick House

Irish, \$ **

Ground floor of Seneca Place on the Commons, 277-8900

Lost Dog Cafe

American/Bar/Coffeehouse, \$\$-\$\$\$

106 South Cayuga St., 277-9143

Lost Dog Cafe has perhaps the most fun menu in town. From chicken with cranberries to the New Orleans-style Muffaletta, Lost Dog can satisfy any appetite. Be sure to try their sweet potato fries, and take a look at their extensive list of coffees and teas. Lost Dog also offers music on weekends in the lounge upstairs.

Madeline’s

American/Asian Fusion, \$\$\$ **

215 E. State St. on the Commons, 277-2253

A top-notch-for-Ithaca example of American and Asian fusion cooking, Madeline’s boasts an excellent selection of seafood along with pasta dishes. The setting is a bizarre mix of art deco and Harlem renaissance. An extensive, but pricey, wine list and an interesting selection of cocktails. The desserts, while long on appearance, can be a bit short on taste. Also a nice place to go just for dessert and a cup of coffee. They often feature live music on weekend nights. Service mixed.

Mahogany Grill

American, \$\$ ****

112 N. Aurora St., 272-1438 Very good value, good reasonable date place.

Moosewood

Vegetarian, \$\$

DeWitt Mall, Seneca St, near the Commons, 273-9610

Ithaca's famous cooperative vegetarian restaurant, open for lunch and dinner. The menu changes nightly and features a wide range of natural and gourmet foods, often prepared with local produce. Sunday nights feature different ethnic selections. Outside seating is available in the summertime. The Moosewood café which offers coffee and drinks and often live music. Check out the many Moosewood cookbooks and make your own Moosewood food at home. Grads say: "Don't go here – all of the food is premade that morning and reheated and it seems like something you can make yourself if you have any cooking skills. It's just the name that everyone is excited about but it's overrated and overpriced." "One of my favorites – the menu changes every week, but it is all good."

Napoli Pizzeria

Pizza, \$ **

401 E. State St., 272-3232

Their specialty is pizza slathered in olive oil. Best wings in town.

Pizza Aroma

Pizza, \$ **

128 S. Cayuga St. by the Commons, 273-6165

Excellent gourmet pizzas are on sale here, with a variety of unusual toppings.

Ragmann's

American, \$

108 N. Aurora St. near the Commons, 273-5236

Casual sit-down sandwich place. One of the best places in Ithaca to get a "real sandwich." Reasonable prices and convenient location.

Sammy's Pizza

Italian, \$\$ *

215 East State Street, 272-2666

With free delivery, Sammys makes the best greasy pizza pie in town. Sammys proudly displays a photo of Mayor Giuliani eating Sammys pizza at their Commons storefront.

Sangam Indian Cuisine

Indian, \$

Center Ithaca on the Commons, 277-6716

This location serves a subset of the menu of the main restaurant in Colletown that is extra quick and convenient.

Simeon's on the Commons

American, \$\$-\$\$\$ **

224 E. State St., 272-2212

Simeons is a great place to go for lunch or for a nice dinner. For lunch try one of the many interesting sandwich combinations or one of the tasty salads (try the Thai chicken salad - yum), and on nice days they have tables outside. Simeons also offers a variety of unexpected specials and a great wine list. The on-site bar is incredible in looks and selection, great for a classy but casual drink with a friend.

The State Street Diner

American Diner, \$ **

428 W. State St., 272-6189

A friendly and dynamic atmosphere open 24 hours. Breakfast and lunch are served all day. Their home fries are highly recommended, as is their bottomless cup of coffee. It's a bit greasy, but it is a diner, after all! A Cornell experience not to be missed.

Taste of Thai

Thai, \$\$ ****

216 The Commons, 256-5487

Located on the Commons, Taste of Thai offers an elegant dining experience at reasonable prices. Expect your usual Thai favorites like pad thai and panang curry, as well as specialty dishes like pad kee mao (a spicy noodle dish) and tom kha gai (thai coconut soup). Long lines, get reservations.

Viva Taqueria

Mexican, \$-\$\$ **

101 N. Aurora St. near the Commons, 277-1752

Located just across from the Commons, Viva is a California-style taqueria. Grads say: "They have the best super chicken burritos ever, and good nachos. It's a good \$7 quick dinner that you eat real fast and tastes really good." "Always get the take-out, because the restaurant is the exact same food on a plate for a few dollars more."

7.1.3 Other Downtown**Boatyard Grill**

Seafood, \$\$\$ ***

525 Taughannock Blvd, 256-BOAT (2628)

No reservations, but call-ahead seating is available after 3pm.

Chili's

American/Tex Mex, \$\$ ***

608 South Meadow Street, 272-5004

Opened in winter 2004, Chilis really is “Like No Place Else.” From its famous awesome blossom and baby back ribs to fajitas and enormous burgers, Chilis is sure to please any appetite. Dont forget to try their margaritas or their 2 for 1 draft beer specials all day every day.

Collegetown Bagels Express

American Cafe, \$

209 South Meadow St. on Rt. 13

A new spin on an old favorite. This is yet another branch of the very popular Collegetown Bagels (or CTB), but less accessible to those without cars. Probably best used a stop coming back into Ithaca after vacation when you need that CTB fix quick.

Dijon

French \$\$\$\$ *****

311 Third Street, 256-0503

A recent addition to the Ithaca restaurant scene, but co-owned by a Cornell Hotel School grad and his wife. They bring upscale French cuisine to Ithaca, and all reports have been amazing.

Dunkin Donuts

American Snack Food & Coffee \$ **

205 S. Meadow St, on Rt. 13 North, 272-3619

Good Donuts and fresh hot coffee.

Ithaca Bakery

American Cafe, \$ **

400 N. Meadow St., 273-7110

Connected with the CTB chain, they sell the same bagels, sandwiches, soups, and coffee found in the other locations, but with a wide assortment of cold and hot dishes (purchased by weight) and specialty items. It's also a great place to pick up a delicious desert for a special event. The day-old bread here is a great deal. All that, and they deliver too!

Papa John's

Pizza, \$ **

425 Franklin St., 277-7272

Chain-style pizza at good prices.

Maxie's Supper Club

Cajun/Seafood, \$\$-\$\$\$ ***

635 West State Street, 272-4136

Maxies is Ithacas Southern food oasis, offering a raw oyster bar, classic Cajun dishes, and great BBQ. Be sure to try their Cajun popcorn as well as their live music and brunch on Sundays. Grads say: “A’ for effort, although the gumbo doesnt cut it. Still, a fun place, good for fish.” “It’s good, it’s fun, it’s a little pricey. It’s a good place to eat dinner and have a few drinks.”

Pangea

American, \$\$\$ **

120 Third St, 273-8515

Seasonal cuisine, courtyard dining, wood-oven roasted specialties, grilled land and seafood, and an eclectic wine list. Spectacular! A hidden treasure. Grads say: “An excellent restaurant. It’s small, quaint, and out-of-the-way; not a lot of people go there, not a lot of people know about it, but the food is really good. Probably the best food in Ithaca.”

Shortstop Deli

Deli, \$ **

204 W. Seneca St., 273-1030

Open 24 hours. Grads say, “Excellent sandwiches! The best in Ithaca!”

Taste of Thai Express

Thai, \$\$ **

526 West State Street, 272-THAI(8424)

Taste of Thai Express offers free delivery of all your favorite Thai dishes. Be sure to check the Clipper Magazine for coupons.

Willow ****

American \$\$\$

202 East Falls Street, 272-0656

Grads say, ”Good steak.”

Lincoln Street Diner

American Diner \$

309 E. Lincoln St., 216-1616

ZaZa’s Cucina

Italian \$\$\$ ****

622 Cascadilla St., 273-9292

The outside of this restaurant is a dull brick building inside it is anything but dull. Between the mural, the starry sky above the bar and the modern lighting this place is a delight to the eyes. Luckily the food matches the second impression. The menu is not the typical tomato sauce and pasta

available in most Italian restaurants although they do offer some of the more traditional dishes. It is hard to resist ordering an item from each section of the menu here. The Grilled Kansas City Strip Steak served Florentine style is incredible. For a different pasta dish try the Rigatoni with Roasted Bell peppers and grilled eggplant. They also have some great appetizers and seafood dishes. Ask to be seated in the carpeted perimeter of the restaurant if possible this makes for a swankier and quieter dining experience.

7.1.4 Ithaca Mall Area

Applebee's Neighborhood Grill and Bar

American, \$\$ ***

Near the Pyramid Mall, 257-6200

Standard and predictable American dishes. Full service bar. Décor includes paraphernalia from Cornell University, Ithaca College, and other local schools.

Billy Bob Jack's Barbecue Shack

American, \$\$

Oakcrest and N. Triphammer Rds., 257-1122

Founded by three brothers, Steak lovers will enjoy their "Old 49-er" challenge.

Friendly's

American, \$ **

Pyramid Mall, 257-2361

Cayuga Mall, 257-5797

Table service, but in a fast-food style. Check out the selection of ice cream treats.

Easy Wok

Chinese, \$

Pyramid Mall Food Court, 257-8889

Quick and cheap. Convenient if you just happen to be at the mall.

Peking Restaurant

Chinese, \$\$

Cayuga Mall, 257-4818

Chinese and Vietnamese restaurant with an all-you-can-eat buffet.

Pizza Hut

Pizza, \$

2301 N. Triphammer Rd. in Cayuga Mall, 257-2778

The Rose

American, \$\$

Triphammer Mall, 257-5542

Subway

Fast Food, \$

15 Catherwood Rd. by Pyramid Mall, 257-1234

Wok Village Restaurant

Chinese, \$\$ ***

23 Cinema Dr., Bishop's Small Mall, behind Triphammer Mall, 257-8881

Best delivery for chinese.

7.1.5 Route 13 South/Elmira Road**Friendly's**

American, \$\$

323 Elmira Road on Route 13, 272-0984

Table service, but in a fast-food style. Check out the selection of ice cream treats.

King Buffet

Chinese, \$\$

734 South Meadow Street, 256-3388

Located next to Tops, King Buffet offers just about everything, from pizza and wings to sesame chicken and sushi.

Ling Ling Restaurant

Chinese, \$\$

222 Elmira Rd., 272-0718

Lucatelli's Ristorante

Italian, \$\$-\$\$\$ **

205 Elmira Road, 273-0777

Lucatellis may be the best Italian restaurant in town, with its excellent service and superior food. They make their own pasta fresh daily, have an extensive wine list, and have quality steaks and prime rib.

Main Moon Chinese Buffet

Chinese, \$\$

401 Elmira Road, 277-3399

Across from Home Depot, Main Moon offers quality Chinese food at a

reasonable price. The buffet includes hundreds of items, from General Tsao's chicken to wonton soup and Chinese dumplings.

Manos Diner

American Diner, \$-\$\$

357 Elmira Road, 273-1173

Manos Diner epitomizes the typical American diner: its menu boasts everything from breakfast items served all day to burgers and steak. The wait staff is professional, and the kitchen is extremely fast.

McDonald's

Fast Food, \$

372 Elmira Road on Route 13, 273-6030

Pudgies Pizza

Pizza, \$

215 Elmira Rd., 272-7600

Subway

Fast Food, \$

401 Elmira Rd., 273-7770

Taco Bell

Fast Food, \$

222 Elmira Rd., 275-0193

Thai Cuisine

Thai, \$\$\$ ***

501 South Meadow St. across from Wegman's, 273-2031

Voted New York's best Thai restaurant (even over the ones in New York City), Thai Cuisine is a must when in Ithaca. Grads say: "They are delicious." "They have great desserts." "A fantastic restaurant." "The best." "Come hungry and try a whole fried fish!"

7.1.6 Other Locations

The Antlers

American, \$\$\$

1159 Dryden Rd., 273-9725

Mostly a steak-and-potatoes place. Very competitive prices. Some say that it's the best steak place in the Ithaca area! Grads say: "Try the lobster bisque."

Collegetown Bagels

American Cafe, \$

East Hill Plaza, 273-1036

Similar to CTB in Collegetown and downtown, but with less indoor seating.

Corner's Deli

Middle Eastern, \$

Community Corners off Hanshaw Rd., 257-4019

This Community Corners institution is a family-owned delicatessen specializing in Middle Eastern specialties in addition to a wide array of fresh American-deli-style foods. The overstuffed sandwiches and pitas barely leave room for the exceptional baklava and other desserts. Great falafel and gyros, and fresh roast beef whose aroma permeates the neighborhood. In the morning, stop by for a pastry or rice pudding and a cup of flavored coffee.

Franco's

Italian, \$\$-\$\$\$ ***

Route 96B

If you like Italian food, you'll love Francos. With a beautiful view of Cornell from South Hill, Francos is a great place to take a date, or your parents, or for just a quality meal. Their menu includes homemade pasta sauces, steaks, and your traditional Italian cuisine. Be sure to try their amazing Alfredo sauce and their daily specials, including all you can eat pasta on Mondays.

Garcia's

Mexican, \$\$

879 Tompkins St. Ext., Cortland, NY 13045, 753-1151

Grads say: "Very good mexican food; worth the 20 min drive."

Glenwood Pines

American, \$\$

1213 Taughannock Blvd (toward Taughannock Falls State Park), 273-3709

Grads say: "I love the Pines. It's worth the drive." "Good atmosphere – it's kind of quaint and it's local and there's not all of these crazy Cornell undergrads there." "Good hamburgers served with Thousand Island dressing on top."

Heights Cafe and Grill

American, \$\$\$ ***

903 Hanshaw Rd. at Community Corners, 257-4144

Elegant dining in an upscale environment. The Heights features elaborate

appetizers, a wide range of main courses, a good wine list, and fantastic desserts. Make reservations in advance, since they can easily fill up, especially on weekends. Grads say: “Their menu is so awesome, and their desserts are huge! Oh! And the coffee platter! With the little chocolate chips and the cinnamon sticks and the little things of whipped cream — so good. Definitely my favorite restaurant.” “They have really good cuisine, good sized portions, really nice service, and a good wine list. The prices have gone up, but if you can get somebody else to pay for it, it’s a good deal.” “Excellent in every respect.” ”Lunch is a great time to go to the Heights as well - the food is still excellent, but it’s also affordable (or at least more so!)”

John Thomas Steakhouse

American, \$\$\$\$ **

1152 Danby Rd. near Ithaca College, 273-3464

Though expensive this place is worth a visit as they really know how to cook a good steak. Their house steak sauce is deliciously unusual. They serve everything besides the steak family style, so order your veggies and starch for the table. The fried onions are thin and crunchy and a great accompaniment to the steak. They also have a good wine selection. Grads recommend the porterhouse.

Kyushu Hibachi & Sushi Bar

Japanese, \$\$ ***

2300 North Triphammer Road, near Pyramid Mall, 257-6788

Kyushu offers many dining choices. You can eat at the sushi bar where you can watch the chefs prepare their morsels. If you prefer Japanese food of the cooked persuasion you can eat at the wooden tables or sit at one of the hibachi tables where a chef will prepare your meal in front of you. The hibachi tables are very lively and usually crowded; it is faster to sit at a regular table if you are just walking in. The Hibachi Filet Mignon practically melts in your mouth and the ginger salad dressing is incredible. If you go to Kyushu, go hungry because they give you a lot of food. They also offer take-out.

Ling Ling Garden

Chinese, \$\$

East Hill Plaza, 273-1668

Take-out Chinese restaurant. Grads say: “Not so great.”

Olivia Restaurant Lounge

Italian, \$\$

381 Pine Tree Rd, 272-1020

Same owner as Stellas.

Rogan's Corner

Pizza, \$

825 Danby Rd., 273-6006

Most widely purchased take-out pizza by those in the know.

The Rogue's Harbor Inn

American, \$\$\$

2079 E. Shore Dr., Lansing, 533-3535

Simply Red Village Bistro

American Regional, \$\$\$

53 East Main Street, Trumansburg, NY 14886, 387-5313

Grads say: "Small intimate place often with live music Great food, often theme nights, will work with your dietary needs." www.simplyredbistro.com

Taughannock Farms Inn

American, \$\$\$

2030 Gorge Rd. at Taughannock Falls State Park, 387-7711

Fine dining — one price includes appetizer, main meal, dessert, and beverage. Worth the trip for the food and the view of the lake. Window seats go quickly, so get there early. Reservations recommended.

The Tower Club

American, \$\$\$-\$\$\$\$

14th Floor, East Tower, Ithaca College, off Route 96B, 274-3393

The highest dining available in Ithaca (elevation-wise, anyway!) Known for great food and a fantastic view, the Tower Club is open for lunch, dinner, and Sunday brunch. Reservations recommended.

Wings over Ithaca

Wings/Ribs, \$-\$\$ **

355 Pine Tree Road, 256-9464

Voted the best wings and ribs in town, Wings over Ithaca is your best bet for delivery. Although the wings are a little pricey, Wings menu of twenty-plus sauces is sure to please. Located in East Hill Plaza, Wings also offers dine-in service, including a lunch buffet during the week.

7.2 Dining on Campus

Cornell's dining halls are popular for graduate students to eat lunch or to grab an evening meal before a late night of homework or research. There

are many dining halls located on campus with decent food at reasonable prices.

First, Cornell Dining has two kinds of facilities, “a la Carte” and “meal plan.” An “a la Carte” facility is like a normal restaurant — you pay for the food you select. At a “meal plan” facility, however, you pay a single price for all you care to eat. “Meal plan” facilities are usually an expensive way to eat — unless you are really hungry.

Some a la Carte facilities near the engineering quad are Sage Dining in Sage Hall (C5), The Cafe At Anabel Taylor located in Anabel Taylor Hall (B6), and The Ivy Room in Willard Straight Hall (B5).

Below is a list of the major dining halls and other places to eat on campus (some of the smaller locations are omitted). The letters at the end of each entry indicate for which meals that dining facility is open — B for breakfast, L for lunch, D for dinner, LD for late dinner (usually 8:30–10 PM), and Br for Sunday brunch. Most dining halls are closed between about 2 PM and 5 PM. For more information, including menus and exact hours for each dining hall, check out <<http://campuslife.cornell.edu/dining/dining.asp>>. Finally, note that not all of the locations listed here are affiliated with Cornell Dining, though all are on the Cornell campus.

Meal plan dining halls:

Jansen’s Dining: located in Bethe house, open for B, L, D, Br

Okenshields: located in Willard Straight Hall (B5), open for L, D

Robert Purcell Dining: located in Robert Purcell Community Center (E1) on North Campus, open for D, Br

Risley Dining: located in Risley Hall (one of the undergraduate dormitories, C3) on North Campus, open for L, D

A la carte eating establishments:

The Big Red Barn: located in the Big Red Barn (D4), primarily graduate student diners, open for L and closed on weekends.

The Cafe At Anabel Taylor: located in Anabel Taylor Hall (B6), open for B, L, and is closed on weekends.

Cornell Dairy Bar: located in Stocking Hall (F5) way out on Tower Road, serves good ice cream at reasonable prices. Also has a little bit

of more solid food. Right downstairs from the Dairy Store, which has longer hours and sells Cornell ice cream in larger quantities, as well as other Cornell dairy products and some bread products

Green Dragon Cafe: located in the basement of Sibley Dome (C3) — baked goods, sandwiches, soup. Neat atmosphere. Open B, L, D.

Hughes Dining: located in Hughes Hall (B6), which is part of the Law School, open for B, L and is closed on weekends

The Ivy Room: located in Willard Straight Hall (B5), open for L, D, Br, LD

Kosher Dining Hall (B6): located on West Campus, on South Ave between College Ave and Stewart Ave. Open for lunch and dinner 7 days a week during the semester. They have their own meal plans, which are separate from the standard Cornell meal plans.

Martha's: located in Martha Van Rensselaer Hall (D4), open for B, L and is closed on weekends

The Temple of Zeus: located in Goldwin Smith Hall (C4), primarily soups and sandwiches, open for B, L, and D on M–W, B and L on RF, closed weekends.

<<http://www.arts.cornell.edu/zeus/>>

Trillium: located in Kennedy Hall (D5), open for B, L and is closed on weekends

Vegetarian options are available at all Cornell Dining facilities. If you have any questions about which items are vegetarian, the staff are generally helpful. In some facilities, the vegetarian options are clearly marked; in others, however, you will have to ask. Vegan options are available at the Ivy Room and The Temple of Zeus; they may be available at other locations, as well.

While the dining facilities on campus are fairly convenient, the meal plans offered by Cornell Dining for graduate students seem inappropriate. Cornell Dining is currently offering a single dinner plan for graduate students. The plan is called “Meals By Design.” This plan is basically a \$250 per semester declining balance account. Every time you eat at a Cornell Dining facility, the cost of the meal is subtracted from your account. If you purchase this plan, then you will not have to pay the 8% sales tax when you make a food purchase from a campus dining facility. Unfortunately, in

addition to the \$500 that you will put into the account for the year, you are also charged a non-refundable \$50 administrative fee. In other words, you pay a 10% administrative fee to Cornell in order to avoid paying an 8% sales tax to New York State! If you are searching for the “swipe and go” convenience of a meal plan, then you can always pay for your on-campus meals with a major credit card or even with CornellCard (see the next paragraph). There are other meal plans available, but they are all expensive; the target audience seems to be undergraduate students whose parents, already overwhelmed by the cost of tuition, won’t notice how much they are being charged for a meal plan. If you have questions about meal plans, you can read the web page at <<http://dining.cornell.edu/dining.asp>>, call Cornell Dining at 255-8582, or stop by their office in 233 Day Hall (C5).

For paying for meals, a slightly better option than a meal plan is the Cornellcard. CornellCard is a Cornell-internal charge account similar in operation to most major credit card accounts. In addition to dining, the CornellCard is valid at the Campus Store and several ticket outlets. A non-refundable Cornellcard participation fee of \$10.00 is charged each academic year. Students exceeding the \$650 credit ceiling on their Cornellcard account will have their credit privileges suspended until the account is paid in full. Payment for all charges appearing on the Cornellcard statement must be received by the billing date to avoid a finance charge of 1.25% per month on any unpaid balance. For more information or to sign up, drop by the Bursar’s office in Day Hall (C5).

7.3 Nightlife

The following section describes Ithaca’s bars, lounges, and nightclubs. For special events check the middle page of the Ithaca Times or see the Thursday “Ticket” section of the Ithaca Journal which lists upcoming weekend events.

Benchwarmers

137 East State St., 277-7539 (Downtown Commons)

For the sports fans this is your place. Multiple televisions and a full bar for your sports enjoyment. Check it out on Monday nights when they have a 20 cent wings special.

Cayuga Lake Cruises

702 West Buffalo Street, 256-0898

Sail the M/V Manhattan for panoramic views of Cayuga Lake. Private,

lunch, dinner and cocktail cruises available which sail daily. The menu features the Bistro Q restaurant.

Castaways

413-415 Taughannock Blvd., 272-1370 (Downtown)

Every week a different band or DJ is featured. Large open space for dancing and a full bar. Many Cornell ethnic clubs sponsor events that are held at Castaways. Keep a lookout for signs and advertisements. The attendance of these events are excellent. Grads say: "Castaways has a great 80's night on Thursdays. More intimate than the version at the Haunt and much better music." Catch their Latin and Brazilian nights.

Chanticleer

101 West State St., 272-9678 (Downtown Commons)

Chanticleer caters more to local townspeople, however, on occasion small bands are entertained on the second floor. Grads say: "Chanticleer actually has quite a good mix of graduate students and local townspeople - I think it's a great unpretentious crowd."

Chapter House

400 Stewart Ave., 277-9782 (Lower Collegetown)

"The Chappie", not too far from the Stewart Avenue bridge, entertains many graduate students any weekend night and is also quite popular Thursday nights. There are a wide selection of beers on tap and house-made root beer and ginger ale for the non-drinkers. It also offers free popcorn and a selection of games including darts, pool, and foosball. They often have live music on Thursdays and Saturdays, and if they do there is a cover charge.

Collegetown Bagels

415 College Ave., 273-0982

Collegetown Bagels, which tends to be less overrun by undergrads, features live music on weekends. Also CTB serves a few beers on tap.

Common Ground

1230 Danby Rd., 273-1505

Located on Route 96B past Ithaca College, the Common Ground is Ithaca's predominantly gay and lesbian bar but has a significant straight following because of its dance music and welcoming environment. The dance club/bar features a wide range of music on different night, from swing to techo to Latin (Tuesdays). In addition, the Common Ground often features live music, small theatre productions, drag shows, a Men's Night on Thursdays and a Women's Concert Series early in the evening on Fridays.

Crooked Board

21 Creamery Road, Slaterville Springs, NY 14815, 539-7748

The best kept secret in town (or just 10 minutes out of town)! This quaint bar is for locals and us lucky graduate students who know about their drink specials. Stop by between 7 and 10 on Mondays and 8 and 11 on Wednesdays for all you can eat wings and all you can drink beer.

Double Nickel Saloon

624 W. State St., 273-9682

Dunbars

409 Eddy St., 216-0904

Thursdays cheap beer and mixed drinks.

The Haunt

702 Willow Ave., 275-3447

During the week the Haunt features a variety of live shows of local and well known bands. The weekly big event is the “The ORIGINAL 80’s Dance Party” every Saturday evening (cover charge only \$3). It’s a good place for grad students who like the nightlife but try to avoid the Collegetown scene. For those who prefer an alternative night life, try The Haunt on Sundays for a Goth/Industrial theme. Grads say: “It’s a great place to meet locals as well as IC students.” “As a TA I love this place, undergrads usually don’t go down the hill.”

Johnny O’s

408 College Ave, 272-0999

Level B

410 Eddy St., 272-3888

Bring ID.

Micawber’s Tavern

118 N. Aurora St., 273-9243 (Downtown Commons)

Famous for its Happy 15 Minutes, Micawber’s is a small but friendly place to relax and enjoy a beer. Sign up and they will keep track of all the different types of beer that you taste during your visits. If you complete the challenge of tasting all the beers posted on the wall next to the bar your picture will be displayed and you will receive a prize!

Moonshadows Tavern

114 The Ithaca Commons, 273-8741

Moonshadows, an alternative to Collegetown nightlife, is a great place to

meet IC students. Come to Moonshadows to relax, listen to music, and play a few board games. Full bar.

Moosewood Café and Restaurant

Dewitt Mall, Seneca St., 273-9610 (Near Commons)

Best known for its vegetarian food and line of cookbooks, Moosewood sometimes features live acoustic and folk music. Full bar. Grads say: “Good vegan/vegetarian affair - bargain nights on Tuesdays. With a different menu every night it’s sometimes hit or miss, but pretty good overall. The portion sizes are a bit small for those with large appetites.”

The Nines

311 College Ave., 272-1888

The Nines is one of the few establishments in Collegetown that is not dominated by undergrads. Live music every night. Blue Jam every Monday. Full bar.

Pixel

107 Dryden Rd, 277-7529 Happy Hour 4-7 p.m. Arcade and bar.

Rongovian Embassy to the USA

1 West Main St., Trumansburg, 387-3334

Not so far afield, “The Rongo” often has high-quality musical acts including string jam and jazz bands which may be worth the 20-minute drive. Grads say: “. . . does good mexican food.”

Royal Palm

209 Dryden Rd., 272-9636 (Collegetown)

Royal Palms usually attracts many Professional Graduate Students. Seemingly a crowded place because of the rows of wooden booths, however, if you can make it to the back there is open elevated space that can be used as a dance floor. Choose your own music at the jukebox. There is also a full bar, but your drinks are served to you in small plastic cups. Grads say, “. . . gets very crowded from midnight until closing. Before then it’s a quiet and cheap place to get (bad) beer.”

Rulloff’s Restaurant

411 College Ave., 272-6067 (Collegetown)

Rulloff’s is a popular restaurant by day for all members of the Cornell community, but after 10pm it is 21 and older. The night crowd is a mix of graduate students and senior undergrads. There are three levels each with a separate bar for your convenience. Check out Monday night Karaoke.

Simeon’s on the Commons

224 East State St., 272-2212

Simeon's is a late night bar and café with a sophisticated bar menu.

Stella's Martini Bar

403 College Ave., 277-1490

Stella's is the closest thing in Ithaca to a metropolitan lounge. The service is attentive, friendly, and attractive. Choose from a large variety of delicious cocktails.

7.4 Movie Theaters

Ithaca offers four movie theatres that show movies ranging from your basic action-packed Steven Seagall Hollywood production to the low budget but critically acclaimed independent film.

Hoyts 10 in Ithaca Mall usually shows newly released popular movies, while Cornell Cinema, Fall Creek Theatre, and Cinemapolis usually show independent films and foreign films, as well as some recently released popular movies. Cornell Cinema, which has theatres in Willard Straight Hall (B5) and in Uris Hall (C5), publishes a monthly poster, widely available on campus, advertising their films. If you like movies, consider getting a Cornell Cinema Discount Card (for grads it's 10 films for \$35). It'll save you a few bucks and what graduate student wouldn't want to save a few bucks? A good web site to check for local and national cinema schedules is <<http://showtimes.hollywood.com>>. After you have seen all the movies in Ithaca, you can try the Hoyts 19 at the Carousel Mall in Syracuse.

Cornell Cinema Willard Straight Hall and Uris Hall

Ticket Office: Willard Straight Hall

<<http://cinema2.slife.cornell.edu/>>

Cinemapolis The lower level of Center Ithaca, 277-6115

<<http://www.cinemapolis.com>>

Fall Creek Theatre 1201 N. Tioga St., 272-1256

<<http://www.cinemapolis.com>>

Hoyts 10 Pyramid Mall, 257-2700

7.5 Performing Arts and Theatre

The performing arts are well represented at Cornell and in Ithaca, with frequent theater, dance, and music performances – both on-campus and

off.

7.5.1 On-campus

Cornell Ticket Office, Willard Straight Hall (B5)

The Cornell Ticket Office serves as a clearinghouse for tickets to a variety of events on-campus and sponsored by campus groups. In addition, the people who work in the box office are often well-informed about upcoming events, at least if they are being held on campus. They can be reached M-F, 10-5 at 255-3430.

Center for Theatre Arts

The Center for Theater Arts (B7) is home of the Cornell Theater Arts department and other associated programs and offices such as the ticket office, classrooms, dance studios, photo labs and the costume and scene shop. The Center has four theaters: a 450-seat proscenium theater, a 200-seat and a 100-seat “flexible” theater, and a 115-seat dance performance theater. The Department of Theater Arts offers nearly 100 courses to students from all disciplines and presents about five main stage performances plus several dance productions and student directed productions each year. For information about performances, the ticket office can be reached at 254-ARTS.

The department of Theatre, Film and Dance puts on about six major productions each year at the Center for Theatre Arts. In addition, the Center for Theatre Arts also hosts the Cornell Dance Series and numerous guest appearances. Season subscriptions, group rates, and some student discounts are available. The box office can be reached at 254-2787, M-F 12:30-5:30 PM and one hour before all performances. The Department of Theatre Arts department can be reached at 254-2700, M-F 8:00-4:30.

Cornell University Department of Music

The Department of Music at Cornell sponsors many concerts and performances throughout the year. There are more than 100 concerts, most of which are free, which range from early music on period instruments, to jazz and MIDI — and range in size from student or professional solo recitals to large groups, such as the Cornell Orchestra or Glee Club. For more information, call 255-4760 or visit the ticket office in the newly-renovated Lincoln Hall (C4).

Other Cornell Groups

Other on-campus theater/performance groups include:

Risley Theatre, Risley Residential College

The Cornell Savoyards

Cornell Drama Club

The Whistling Shrimp

Asian American Drama Group

Cornell Productions

Denton Drama Troupe of Cornell

Impact Dance Troupe

Independent Filmmakers at Cornell

Skits-o-phrenics

Uhuru Kuumba Dance Ensemble

Most of these groups announce performances on posters around campus, so keep your eyes open!

7.5.2 Off-campus

The list below includes local performing arts and theatre companies, but there are many other regional options further afield in Cortland, Geneva, and Syracuse, just to name a few. In addition, there are a host of high quality shows on and off Broadway in New York City, and there is a similarly thriving theater scene in Toronto. The bottom line is that the adventurous theatre/arts lover has many choices in Ithaca and beyond.

Ithaca College Theatre — 201 Dillingham Center, Ithaca College Box Office, 274-3224. The Ithaca College Theatre produces multiple shows throughout the year, so keep an eye on the listings. The main two performance spaces are the 535-seat Hoerner Theatre, and the 230-seat Clark Theatre, both of which are on the Ithaca College campus.

Kitchen Theatre — 103 West Seneca St., Tickets: 273-4497, Information: 272-0403. The Kitchen Theatre Company (KTC) is a fairly new, very intimate theatre located just west of the Commons in the historic Clinton House. The theatre runs six shows a season, in addition to many special events during the year, such as the Kitchen Sink series, highlighting the most up-to-the minute trends in acting, directing, and playwrighting.

Hangar Theatre — Cass Park, Route 89, Tickets: 273-4497 or 800-724-0999, Business Office: 273-8588. The Hangar Theatre is a professional

regional theatre. It presents five big shows from June to August in addition to a children's series called KIDSTUFF. During the year, the theatre offers educational programs for all ages. There is plenty of parking behind the theatre. If you plan to attend several shows, consider purchasing season tickets to ensure good seats. The Hangar also has matinee shows and student tickets, both at discounted rates.

Ithaca College School of Music — 274-3171. Similar to Cornell, the Ithaca College School of Music also presents numerous student, faculty, and guest artist concerts — many of which are free. The main performances are in the Ford Hall Auditorium at Ithaca College. Free parking is available on the campus. For more information, call 274-3171.

Ithaca Ballet — 105 Sheldon Rd., 277-1967. Located in the Ballet Center of Ithaca, the Ithaca Ballet is the only repertoire ballet company in upstate New York, and is also nationally known. Its main performances are held at the Stage Theatre on West State Street.

Cayuga Chamber Orchestra — 116 North Cayuga St., 273-8981. With 35 professional members, the CCO is the official city of Ithaca orchestra. It features five main concerts, several chamber concerts, a holiday special, and a youth concert each year, often with guest soloists. The concerts are in various locations throughout Ithaca, so watch for listings.

Cayuga Vocal Ensemble — PO Box 95, Ithaca, 273-3586. The Cayuga Vocal Ensemble is a professional vocal ensemble located in Ithaca. It is at least 16 people in size and performs vocal music from all different time periods. Concerts happen throughout the year, so check the paper or call for details.

Ithaca Opera Association — 109 East Seneca St., 272-0168.

Founded in 1949, this opera company presents two major operas each year, in addition to a winter tour, and many school and community concerts throughout the season. It also maintains an Opera Outreach program that gives tours of the stage and holds workshops.

Community School of Music and Arts — South Aurora at Prospect St., 272-1474. This combination school and gallery offers lessons in music, art, dance, and theater for all ages, and also features art exhibits, concerts, and recitals. Its performances are held at 328

East State Street. For further information on performance dates and times, contact the school.

7.6 Museums

Herbert F. Johnson Museum of Art Cornell Campus (B3-4)

Phone: 255-6464

Hours: Tuesday–Sunday 10–5

Webpage: <<http://www.museum.cornell.edu>>

The Johnson Museum of Art, located on the Cornell campus, has six levels housing various types of art in the permanent collection and changing visiting exhibits, with a sculpture garden located 36 feet above ground in a “hole” in the building that allows afternoon sunlight to enter the Arts quad. Panoramic views of the area can be seen from the upper levels, including the meeting room on the top floor. Admission to the museum is free. Special arrangements for tours are handled through the Education Department; foreign language tours are available.

Sciencenter 601 First Street

Phone: 272-0600

Webpage: <<http://www.sciencenter.org/>>

Although primarily aimed at children, the Sciencenter’s features 100 exhibits including a walk-in camera, an out-door science park, a two story ball, and a waterflume which are really fun for everyone. Also featured at the Sciencenter is the **Carl Sagan Planet Walk**, a 3/4 mile scale model of the solar system named after the astronomer who once was a professor at Cornell. Ten stations represent the sun and nine planets. Some of the stations can be found in Ithaca Commons downtown.

DeWitt Historical Society-Tompkins County Museum 401 East State Street

Phone: 272-7715

Run by the Dewitt Historical Society, the Tompkins County Museum provides a wealth of information on the history of Tompkins County and Ithaca.

State of the Art Gallery 120 W. State St.

Phone:277-1626

Webpage: <<http://www.ithaca.ny.us/Orgs/SOA/>>

Not-for-profit fine art gallery exhibiting regional artists. New exhibits every month.

7.7 Farther Afield

What to do when you just need to leave Ithaca? Try one of these...

Corning Glass Museum

Located in Corning, a 40-minute drive away. This is the home of Corningware and Pyrex Visions. The glass museum has exhibits of artifacts from thousands of years ago, and chronicles the history of glass making. This museum features interactive displays, glassblowing all day every day and a workshop where you can make glass. Many say that it was an interesting experience and worth the trip. Getting there: From Ithaca, take Rte 13 South to Rte 17 West. Take the Corning exit (Exit 46), and there will be signs to the glass museum.

Seneca Falls

Don't let the name fool you: there are no falls at Seneca Falls — at least not any more. This town houses the National Women's Hall of Fame and the Women's Rights National Historical Park. Getting there: From Ithaca, take Rte 89 North, to 414 West. This takes you right through the town of Seneca Falls.

Niagara Falls

You've got to visit this world famous falls at least once in your lifetime. After all, it's a mere 3-hour drive from Cornell. On the US side, go to Goat Island, which is currently a National Park. Walk around and take in the natural beauty of the place. To get a spectacular view of the falls, go over to the Canadian side. This is a commercialized, tourist area, and is full of entertainment. Go on the Maid of the Mist boat ride, or take a walk down behind the falls. From the Skylon Tower you can get a breathtaking view of the area. Always have your passport and a Visa (if required) with you when going to Canada (see Chapter 5 of this handbook).

Getting there: From Ithaca, take Rte 96 North to 14 North (short) to I-90 West. When getting into the Buffalo area, take Rte 290 (off Exit 50) to Rte 190. This takes you into the town of Niagara Falls, NY. To get to the Canadian side, follow signs to Rainbow Bridge.

The Adirondacks

Adirondack Park stretches across 6 million acres of land, with 42 mountains exceeding 4,000 feet in elevation, 1,200 miles of rivers and over 2,000 lakes and ponds. Scenic views abound, as do recreational possibilities for every season: camping, canoeing, fishing, hiking, horseback riding, downhill and cross-country skiing and snowshoeing. And don't forget ice skating on Lake Placid.

Comprehensive information about the park can be obtained by contacting: Department of Environmental Conservation P.O.Box 296, SR 86 Ray Brook, NY 12977 Phone: (518) 897-1200

New York City

A bustling and energetic; it takes about 5 hours to get there by bus, less if you drive. A visit to NYC is a must!

Popular tourist spots include Central Park, Chinatown, Ellis Island, Empire State Building, Fifth Avenue, Lincoln Center for the Performing Arts, Metropolitan Museum of Art, New York Stock Exchange, Rockefeller Center, SoHo District, Statue of Liberty, and UN Headquarters.

If you go for more than a day you should consider seeing a Broadway show. Discount tickets (as much as 50 % off) can be purchased the day of at 3pm for evening shows at the TKTS booth located in the center isle of 47th Street between Broadway and 7th Avenue.

Getting there: From Ithaca, take Rte 79 East to Rte 81 South (at Whitney Point), to Rte 380 (in Scranton), to Rte 80. This takes you across the George Washington Bridge into the Bronx. You may continue east to connect with roads leading to Long Island, or swing south on Henry Hudson Parkway or Harlem River Drive to Franklin D. Roosevelt Drive (East River Drive) and downtown Manhattan.

Boston

Boston is a beautiful city with lovely architecture and lots of confusing streets. If you are going to drive around the city, get a map and a good navigator! Some say traffic here is worse than NYC. While there, you can visit Harvard, MIT, and Boston University — those universities you rejected in favor of Cornell.

Other places to see in Boston include Bunker Hill Monument, Copley Place, Faneuil Hall, Museum of Fine Arts, Old North Church, Old State House, Quincy Market, and the USS Constitution.

Getting there: From Ithaca, take Rte 79 East to Rte 206 East (at Whitney Point), to Rte 88 East (just after Bainbridge), to I-90 (off Exit 25A). I-90 continues into Massachusetts and becomes the MassPike (Massachusetts Turnpike). This leads to the Boston area. (Total time is about 6 hours if you take a bathroom/food break.)

Toronto

Located on the northwestern shore of Lake Ontario, Toronto is Canada's largest city and an exciting place to visit. For the sports fan, it hosts a wide array of major league sports with the Blue Jays, Maple Leafs, Raptors, and Argonauts. For getting around Toronto, be sure to use the convenient public transit system, including the U-shaped subway line.

Places to check out include Eaton Centre, Yonge Street (the main thoroughfare and suspected to be the longest street in the world) and the CN Tower (the world's tallest building). Don't be afraid to walk on the glass floor.

Getting there: From Ithaca, take Rte 96 North to the NYS Thruway (Interstate 90). Take the Thruway West to Buffalo. Approaching Buffalo, take Interstate 290 West towards Niagara Falls for 10 miles, then take Interstate 190 North towards Niagara Falls. When you enter Ontario, continue west on Hwy 405 for 6 miles, then take Queen Elizabeth Way for 63 miles. Finally, stay straight onto the Gardiner Expressway.

Always have your passport and a visa (if required) when going to Canada (see Chapter 5 of this handbook). For U.S. Citizens, a passport is not required, however you must have some other proof of citizenship (e.g. a birth certificate). A Social Security Card is **not** proof of citizenship.

Chapter 8

Cornell Trivia

8.1 History of Cornell

Cornell University was founded in 1865 by Ezra Cornell and Andrew Dickson White according to Cornell's motto, "I would found an institution where any person can find instruction in any study". The central elements of the campus were built on Cornell's farm, and a total endowment of half a million dollars was established to begin the school. Integral to the establishment of Cornell was the Merrill Act that granted public lands to educational institutions. This Act and the endowment donated by Cornell made Cornell University an unusual institution because of the mix of public and private funds. Also unorthodox for the time was the White's notion that the university should be non-sectarian. After unanimous election as the university's first president, finding the faculty was the next duty for White. He combed the world looking for a wide variety of individuals to teach the wide variety of subjects that made up the proposed curriculum. The university opened its doors to an inaugural class of 412 students on October 11, 1868. In 1873, Cornell graduated its first female student and, in 1897, its first African American student. The Graduate School was developed in 1909 to organize the advanced studies that have been a part of the campus since its inception.

Cornell has had a distinguished history since its creation. The first doctorates awarded in the United States in electrical engineering and industrial engineering were granted by Cornell. It consistently appears in the top 20 of U.S. News and World Report's ranking of National Universities, placing 12th in 2007. Many Nobel laureates have been affiliated with Cornell (see Table 8.2 on page 246 for a list).

If you are interested in learning more about the school's creation or its history, a good place to start is the University Archives (see page 240). There are also a number of books that have been written about Cornell. Perhaps the most comprehensive, *The History of Cornell*, sold in the Campus Store, gives a detailed account of Cornell over the past century and a half. You can also find books on special topics including women at Cornell and the 1969 takeover of Willard Straight Hall.

8.2 History of Ithaca

The shores of Cayuga Lake were inhabited by about 1,100 Cayuga Indians of the Iroquois nations prior to the arrival of the first white settlers c. 1778. The names of many of these settlers, such as Jacob Yapple, who built the first grain mill on Cascadilla Creek, and surveyor Simeon DeWitt, who

held much of the land that now forms the city of Ithaca, are preserved in landmark names today. Other local communities, including Forest Home, Dryden, Caroline, and Danby, began developing about the same time.

By 1821, Ithaca had grown to 1,000 residents, but it was destined to remain small when the Erie Canal opened in 1825 and concentrated development north of the Finger Lakes. Ezra Cornell arrived in Ithaca in 1828, but left the town to make his fortune building telegraph lines with Western Union before returning in 1857. The village of Ithaca continued to grow, though again it was bypassed by the major railroad routes that ran across northern New York and northern Pennsylvania.

Cornell University opened in 1868, followed by the Ithaca Conservatory of Music (now Ithaca College) in 1892. Cornell students originally lived with families in Ithaca, and many of the large houses in lower Collegetown were built in this period.

Ithaca Commons opened in 1974 and met competition from Pyramid Mall, which was expanded in 1989. In recent years another extension took place as more stores like Best-Buy, Borders, Dick's and Target opened at the mall. During the same time period South Ithaca also saw significant development along Route 13, where Barnes and Nobles opened along with Home Depot and other 'Big Box' stores. The arrival of Walmart (2005) and Starbucks (2007) has created controversy among local residents; many express fears that large chains will drive local establishments out of business.

Now a small city of around 30,000 residents, Ithaca provides an attractive home for Cornell and Ithaca College, along with several manufacturing companies and myriad small businesses, shops, and restaurants.

For more information, visit the Tompkins County Museum on State Street just East of downtown (273-8284, <<http://www.thehistorycenter.net>>).

8.3 Dragon Day

History of Dragon Day (from the University Archives):

The Cornell Era, a periodical that went out of publication in the late 1940's, had once noted that the "idea of the Architect [at Cornell] is bounded by St. Patrick's Day..." This reference is to the annual event that has become known as Dragon Day on the Cornell campus, and its strong ties to St. Patrick's Day.

Dragon Day has its roots in the antics of Cornellian Willard Dickerman Straight '01. While on the Cornell campus, Mr. Straight attended the School of Architecture, and from his early days as a freshman, developed a reputation as a prankster, leader, and developer of class unity. It was

said at the time that the Architecture class of 1901 was perhaps the most spirited that the University had ever seen, mainly because of the actions of Willard Straight.

The idea of Dragon Day was conceived from a tradition that followed Mr. Straight's belief that there should be a distinctive College of Architecture Day. At the time, he chose St. Patrick's Day, and the first College of Architecture Day was celebrated with the hanging of orange and green banners (orange to appease the campus' Protestant population), sham-rocks, and other thematic decorations on Lincoln Hall (which at the time housed the College of Architecture). Later, the additional theme of celebrating St. Patrick's success in driving the serpents out of Ireland also became attached to the holiday.

History has not made clear the time that the first Dragon Day (in contemporary tradition) was held, though it is safe to assume that it occurred sometime between 1897 and 1901 (the years that Willard Straight was on campus). How the first parade evolved into a rite of initiation for the freshman Architecture class — ending with the burning of the dragon on the Arts Quad — has also not been revealed. In an excerpt from a letter to Willard Straight's widow in 1920, the first parade is described: "One year, a 12 ft St. Patrick was painted and hung on the side of the building [Lincoln hall] with a great 20 ft long serpent chasing after him. In the afternoon, these were taken down, and carried in solemn procession around the campus." The letter goes on to mention that the College of Architecture Day events were at one point abolished by President Schurman (Cornell's third president) — thus helping to establish the tedious relationship that Dragon Day has come to have with the University administration.

Jumping ahead through the twentieth century, Dragon Day as it is celebrated today (with an actual constructed dragon, and the associated ceremonies) evolved some time in the 1950's when the snakes previously used "grew up." The 1950's architects were also particularly ambitious, sometimes constructing both a male and female dragon. Though history also isn't clear when the actual phrase "Dragon Day" was coined, speculation suggests that it might have also been in the 1950's. Prior to this time, the holiday was still celebrated as primarily College of Architecture Day, and the theme was less focused around the dragon.

Dragon Day has also been used as a means of political expression. For example, in 1933-34, to celebrate the repeal of Prohibition, students constructed a large paper-mache beer stein for College of Architecture Day. In the 1950's, at the height of Senator McCarthy's "red scare", the holiday was once canceled in protest. In 1968, the dragon was painted entirely

black by several students involved in the project to protest the Vietnam War — making that year's parade one of the most controversial amongst the student body. Most recently, in 1994, the theme of Dragon Day was "The Fall of Rome" in protest of the possible cancellation of the Cornell in Rome Architecture Program.

Several other noteworthy celebrations have happened in Dragon Day history. In 1966, as part of the Dragon Day festivities, students released a green pig into the Ivy Room — which resulted in a food fight of immense proportions and numerous complaints to the Department of Public Safety. The associated Dragon Day pranks again became problematic for the University in 1974, when Oded Halahmy almost pulled his outdoor sculptures from the University grounds after they had been painted with green paint and moved from their mountings. (Halahmy was the artist who designed "Song of the Vowels" — the sculpture which stands between Uris and Olin Libraries, and several other pieces of art surrounding the Johnson Museum grounds.) Other notable dragons appeared in 1964 and 1976, when students built dragons on top of cars and drove them through the parade route. In 1987, the Engineers constructed a large Viking ship to combat the dragon.

The celebration of Dragon Day has not always been viewed positively by the University administration. President Schurman once abolished the holiday because campus Catholics were offended by the theme. The date of its resurrection has not been made clear. The most recent example of University action came in 1990, when the Department of Architecture severed all ties to the holiday, citing the associated campus pranks and sometimes violence which came with the holiday. Prior to this time, the architecture facilities were fully (or more accurately, overtly) open to the students for materials and resources in constructing the dragon. Students could at one point even take a two week course to learn the basics of the machine shop, and then use Dragon Day as a hands-on application of the course.

The rivalry between the College of Architecture and the College of Engineering students before and during Dragon Day celebrations seems to have simply developed through history — perhaps as a means of expressing opposition to the Architects having a full day for themselves. No clear date established the rivalry, although it appears to have become fairly intense immediately before the Department of Architecture severed ties with the holiday. Public Safety had previously reported numerous incidents of violence — Engineers, as a method of attempting to destroy the dragon, would freeze fruit to throw at the dragon and fill empty soda bottles with dry ice, which would cause them to explode like miniature bombs.

Since 1993, the Department of Architecture has allowed ties to slowly re-form between itself and the holiday. Dragon Day 1993 represented the first time that the students were allowed to use department resources and the facilities in Rand Hall “legally” for the construction of the dragon. Building the dragon was briefly pushed “underground” in the prior years. The painting and decoration of Rand Hall in 1993 and 1994 has also come about because of this reforming tie. Although the rivalry still exists between the Engineers and the Architects, it appears to be less violent than in prior years. On recent Dragon Days, creatures (usually a phoenix, but a cobra in 2001) were constructed on the engineering quad to fend off the approaching dragon and divert it to the Arts Quad. In 2002 the phoenix actually flew with the help of a large crane, but no creature yet has risen from its own ashes. In addition, an engineering student organization, the Phoenix Society, was formed to construct the creature and to work with architecture students to keep the day safe.

The freshman architecture class is unified throughout the celebration of Dragon Day, and often their class spirit is judged by the dragon that they are able to construct. Every year, a T-shirt is designed by the class, and sold to the Cornell community to help raise money for the Dragon Day project — including a dance/party held by and for the freshman Architecture class later in the semester.

While there are still many aspects to Dragon Day that history has not accounted for, perhaps they are better left shrouded in uncertainty. Architecture students pass along stories of Dragon Days past as folklore and legend, and the holiday might be somewhat devoid of its mystery and surprise if all the bare facts were revealed. As for Architecture Day’s founder, Willard Straight went on to fight in World War 1 and died in 1918. He left provisions in his will for the creation of a building to make, “a more humane environment on campus for students.” The building, Willard Straight Hall, was dedicated to him by his wife and the University upon its completion in 1925.

8.4 Hockey Time

As you probably know, sports can be a very important part of college life. Some schools live and breath football, basketball, or baseball. Cornell is all about *hockey*.

Cornell’s Hockey team was born more than 100 years ago, and the female hockey team was one of the first to be created at the beginning of last century. The teams have brought to these beautiful hills the pride of several

NCAA and ECAC championships. This is quite evident upon entering Lynah Rink, where one's eyes are immediately captured by the long rows of title banners hanging from the ceiling. The glory of the Cornell hockey team peaked in one supreme moment in the 1969-1970 season when Cornell completed the tournament with a 29-0-0 record. Since 1964, the Cornell team has fed the NHL rows with ~50 great players, six of whom were chosen during the 2002 draft by the teams of Atlanta (McRae, McRae, & Baby), Phoenix (LeNeveu), San Jose (Murray), and Toronto (Knoepfli). Sasha Pokulok was chosen as a first round pick in 2005 by the Washington Capitals (top college pick of the year). David McKee was picked up by Anaheim in 2006, and Ryan O'Byrne '07 signed with the Montreal Canadiens shortly before the '06-'07 school year began.

Results have been mixed in recent years. In the 2001/2002 season Cornell won the regular season ECAC title, only to lose the final in overtime to arch-enemy Harvard. Despite this loss, Cornell received an invitation to the NCAA tournament. After beating Quinnipiac, however, the team lost to New Hampshire in the quarterfinals. In the 2002/2003 season the Cornell Hockey team was ranked as the number 1 team of the country by "U.S. College Hockey Online" as well as "USA Today" for the first time in history. It claimed the ECAC title with ease and went on to its first Frozen Four appearance since 1980, routing MSU-Mankato 5-2, then beating Boston College 2-1 in double overtime. Unfortunately New Hampshire played the spoiler once again, as it dashed hopes for a National Title with a 3-2 victory over Cornell in the semi-final. The 2003/2004 year saw the loss of several seniors and a relatively disappointing season with Cornell ranking 2nd in the ECAC and losing to Clarkson in the quarter finals. In 2004/2005 Cornell showed significant improvement, winning both Ivy League and ECACHL titles, and reaching the quarter-finals, beating Ohio State on the way but losing to Minnesota in overtime on their home ice. Although in 2005/2006 Cornell only finished 3rd in the ECAC regular season, it was well ranked nationally throughout the season and made it to the NCAA tournament. Cornell beat Colorado College but then fell to eventual national champion Wisconsin (again, on the opponent's home ice) in the quarter-finals 1-0 in the 3rd overtime, making this the longest scoreless game in NCAA tournament history. Goalie McKee made 59 stops in this game and was immediately whisked away to the NHL. The 2006/2007 season was among the least impressive seasons in recent years, ending with a 3-2 loss against Quinnipiac in the ECAC Hockey League Quarterfinals, and a 14-13-4 record overall.

Nonetheless, men's ice hockey remains, by far, the greatest sports pas-

sion of the student body, with an exciting culture to go along with it. Cornell hockey fans are generally recognized as some of the most vocal fans in the NCAA. Each game is an elaborate ritual. Fans in the student sections stand for all three periods of play, sitting only during breaks. They sing along to songs played by the band according to a widely known but unofficial script. A number of additional well-known chants are belted out by the masses where appropriate (or inappropriate, as the case may be). The opposing team's goalie (AKA 'sieve') is the object of particular scorn, with students going so far as to chant out his cell phone number in attempts to get in his head. Cornell fans have customized chants for most opposing teams, with Colgate getting, "¡pointing to Colgate goal! Toothpaste! ¡pointing to Cornell goal! University! ¡repeat!" and Princeton's being, "Princeton's in New Jersey!"). Harvard is Cornell's arch-rival and gets special attention - fish are traditionally thrown onto the ice before a Harvard game. Colgate's proximity and top performance in the past several years has also earned the ire of Cornell fans, making them our #2 rival.

Because of the popularity of mens's ice hockey at Cornell, the demand for tickets vastly exceeds the supply. Every year the athletic department works out new, often complex mechanisms for selling season tickets, but because the number of takers generally exceeds the number of tickets (~1,500 tickets for students) by a factor of 2, this invariably degenerates into chaos, pain and recrimination. In previous years, the location of the line would be kept secret until an awaited public announcement, at which point students would rush by the thousands to the appointed site. After camping out, often for several days, tickets would be awarded on a first-come, first-serve basis. In 2006, the athletics department introduced a new plan involving online preregistration for line numbers, limited waiting in the Bartel's Hall Ramin Room, and statistically greater opportunity for senior undergraduates. In recent years there has been a separate graduate student allocation of a few hundred season tickets. Demand for these tickets is much lower than for the undergrad tickets (you can show up several hours after the line starts and still get some) so if you don't care about where you sit, getting these tickets will not be hard. The best section to get is B, followed by A and D. Season tickets generally cost ~\$120 per seat, which covers ~18 games. If you don't want to waste your precious time to get season tickets, you can either buy tickets from somebody who has season tickets but cannot attend the game or show up at Lynah Rink and buy tickets five minutes after the game started. You will be standing all the way in the back, but with all the home games likely sold out before the start of the season, it could be your best option.

8.5 Lacrosse Time?

While Cornell Hockey dominates the winter months, special mention should be made of Cornell's Varsity Men's Lacross team. As of the publication of this year's handbook, the team had finished the Ivy Leage Conference season with a perfect 6-0 Ivy record and 12-0 overall. Be on lookout for a great team in 2008!

8.6 Places and Prides

There are many names and phrases that you might hear as you learn your way around Cornell. We define some of the most common and interesting ones here. Codes in parentheses correspond to grid cells on the Cornell campus map. Much of this information, and lots more information on other aspects of Cornell, is available at the Cornell University SuperInfobase Web Page <<http://www.cornell.edu/search/?tab=facts>>.

“Bailey Hall” (D4)

Bailey Hall is the University's largest auditorium, seating 1324 after renovations completed in the Fall of 2006. It houses the Bailey Hall Classical Concert Series, Cornell Orchestra concerts, very large courses, visiting speaker lectures, and performance groups.

“Beebe Lake” (EF3–4)

The lake was created in an old meadow by the dam next to Noyes Lodge. It serves as a reservoir for the electricity generating station downstream and as a source of water for cooling buildings. Canoeing is permitting in the lake, but swimming and ice skating are not allowed. However, regulations do not deter many students from jumping off the stone bridge at the upper end of the lake to go for a swim ('gorge-jumping'). The lake is surrounded by a 1.1 mile long footpath dotted with picnic tables in perfect spots for a relaxing lunch.

“The Big Red Barn” (D4)

The Big Red Barn is Cornell's Graduate and Professional Student Center. It serves as a gathering place and hosts a range of events. Cornell Dining also serves breakfast and lunch at the Big Red Barn. See Section 6.3.1 for more information.

“Big Red” and “Big Red Bear”

The costumed Big Red Bear “mascot” makes appearances at many Cornell athletic events, and can be seen on many of the university’s t-shirts, key-chains, and the occasional graduate student handbook. According to the Cornell website, the bear originated in 1916 when football team members collected \$25 to buy a black bear cub from Maine named Touchdown. In 1939, a student in a bear costume replaced the live animal, and for Homecoming 1988, the furry creature gained a female friend. Despite its ubiquitous presence, the Big Red Bear is not an official mascot - Cornell doesn’t have one!

“Blue Light”

Cornell provides a variety of security services under the “Blue Light” label including phones, escorts, and buses. (See Section 3.5 for more information on safety.)

“Cornell Chimes”

<<http://www.chimes.cornell.edu/>>
chimes@cornell.edu
(607)255-5350

The Cornell Chimes are located in McGraw Tower (BC5) and are played by the Cornell University Chimesmasters in three concerts daily. The Chimesmasters are a group of students, faculty, and staff selected in an annual competition to participate in the oldest of Cornell’s musical traditions. The door to McGraw Tower opens to visitors ten to fifteen minutes before each concert. Visitors can climb the tower’s 161 steps to watch the Chimesmasters perform and to enjoy a view of the campus and surrounding areas. Originally only nine bells first played in 1868, the set has been expanded to 21 bells. Automatic controls have been added, but concerts are still played by manipulating a wooden console by hand and foot. All the bells were tuned together for the first time and the tower was refurbished during 1998 and 1999. Despite common misconceptions, there is no secret elevator, quarter-hourly chimes are not played by hand, and chimesmasters generally do not receive PE credit for their art.

“Cornellcard”

Cornellcard is a Cornell-internal charge account that can be used at a number of locations around campus, including dining facilities, the campus

store, and ticket outlets. Since use of the Cornellcard requires the payment of a regular fee and can only be used on campus, you're probably better off using a regular credit card (unless, of course, you are fortunate enough to have parents that still pay your bursar bill).

“Dairy Bar & Dairy Store” (FG5)

<<http://www.dairystore.cornell.edu>>
(607) 255-1298

Both located in Stocking Hall, the Dairy Bar is an on-campus ice cream parlor that sells Cornell ice cream, coffee, doughnuts, bagels, and other snacks. The Dairy Bar is also location of the annual Lighting of the Cows in the fall. The Dairy Store sells Cornell-made milk, pudding, ice-cream, yogurt, juices, maple syrup, cheese, T-shirts, sweatshirts, and some general groceries. And yes, the ice-cream is definitely worth the hike east! Let me put it this way: it's said that Cornell wanted to sell the ice cream in supermarkets off campus. The FDA approved the product, with the stipulation that it not be marketed as 'ice cream'. The fat content was too high, hence it would be called 'frozen whipped butter'. See Section 7.2 for more information about food on campus.

“Duffield Hall” (C6)

<<http://www.duffield.cornell.edu/>>

In 2004, the College of Engineering finished regrading and landscaping of the engineering quad and construction a new building, Duffield Hall, which houses Cornell's state-of-the-art nanofabrication facilities. Connecting the former exteriors of Phillips Hall and Upson hall, a large atrium includes Mattin's Cafe, space and tables for eating and working, as well as several alcoves for group study. The atrium doubles as a social hub for the undergraduate engineering population.

“Engineering Co-op”

The Engineering Co-op program allows the upper half of the sophomore engineering class to experience life as a full-time, entry level engineer during the fall semester of and summer following their junior year. Top recruiters come from far and wide, looking for students to do true engineering work - not just file papers. Participants take major courses during the co-op summer program after their sophomore year, enabling them to graduate on

Table 8.1: Finger Lakes Statistics

Name	Length (mi)	Depth (ft)	Elevation (ft)
Canadice	3	95	1096
Canandaigua	15.5	276	688
Cayuga	38.2	435	384
Conesus	8	66	818
Hemlock	7	91	905
Honeoye	4.5	30	804
Keuka	19.6	183	715
Otisco	5.4	60	780
Owasco	11	177	710
Seneca	38	618	445
Skaneateles	15	350	867

time. Students do not receive credit for the work other than a short note on their transcript, but they do get paid. . . .

“Finger Lakes”

There are eleven lakes in Upstate New York that comprise the Finger Lakes. The lakes are so called because their layout resembles a hand print when viewed from above. Native American legend says that the lakes were formed when The Creator paused in his work and laid a hand on this part of the state to rest. Cornell overlooks the south end of Cayuga Lake. Table 8.1 shows some statistics about the Finger Lakes.

“Helen Newman Hall” (E3)

Helen Newman Hall contains a swimming pool, dance studio, sixteen bowling lanes, a large open gym floor, and a women’s sauna room. Physical education courses in aerobics, badminton, bowling, dance, fencing, physical conditioning, swimming, tennis, and volleyball are held there. See Section 6.1 for more information about athletic facilities at Cornell.

“Ithaca College” or “IC”

<<http://www.ithaca.edu/>>
(607) 274-3011

Ithaca College (IC) is a private college located on the South Hill of Ithaca. You are able to see the two towers at the heart of its campus from Libe

Slope (see 238; many claim the best view of Cornell is from IC's Tower Club. It is divided into the schools of Health Sciences and Human Performance, Business, Communications, Music, and Humanities and Sciences, with a smaller graduate program and Division of Interdisciplinary and International Studies. In general, undergraduates are permitted to take Ithaca College courses not offered by Cornell at no additional charge. Additionally, IC has its own college radio station, WICB, broadcasting at 91.7 FM and on the web at <<http://www.wicb.org>>. Tune in for commercial free Modern Rock, with specialty shows and some Rap, Latin, Blues, Folk, and Techno.

“Ithaca Festival”

<<http://www.ithacafestival.org/>>
(607) 273-3646

The Ithaca Festival is an annual fair held the first weekend of June, usually right after the undergraduates have all left town (coincidence?). Featuring local musicians, artists, dance troupes, playwrights, writers, and poets, the Festival's intent is to celebrate the community and the artist in each of us. The Festival takes place at the Commons, DeWitt Park, and Stewart Park. If you are in town, it is not to be missed, especially the opening parade and closing Circus EccentriThaca.

“Ithaca Hours”

<<http://www.lightlink.com/hours/ithacahours>>

Ithaca Hours is Ithaca's local currency and can only be spent on local services and in local shops and restaurants, altogether at over 1500 locations (see the “*HOURLY* Town” newspaper for a complete listing). The purpose of Ithaca Hours is to strengthen the local economy and community by encouraging use of local services. Each hour is worth \$10 (about one hour of labor).

“Ivy League”

The idea of an Ivy League was derived from James Lynah's call for the “formation of a League, to reassert amateur principle, to adjure the current athletic sordidness and cynicism, to save, in short, athletic idealism” (Morris Bishop, *The History of Cornell*). The origin of the name “Ivy League”

for this collection of schools is debated; one explanation is that in 1930 the four schools (Harvard, Yale, Princeton, and Cornell) that competed against each other and were called the Intercollegiate Teams were unofficially dubbed “the Ivies” after the Roman numeral IV by a sportscaster. Others theorize it is after the common plant life on the buildings at each of these schools. In 1952, the name “Ivy Group” was made official.

The eight schools comprising the Ivy League are: Brown (Providence, RI), Cornell (Ithaca, NY), Columbia (New York, NY), Dartmouth (Hanover, NH), Harvard (Cambridge, MA), Princeton (Princeton, NJ), University of Pennsylvania (Philadelphia, PA), and Yale (New Haven, CT). Cornell and the other Ivy League schools have entered into an agreement to not offer any academic merit or athletic scholarships, only financial need-based ones. That is the main reason why the Football and Basketball squads of the Ivies are not competitive on a national level.

“Lake Source Cooling Project”

<http://www.utilities.cornell.edu/utl_lscabout.html>

Cornell took the initiative to find alternative means of cooling the campus in the summer while limiting environmental impact (by reducing reliance on electricity produced from fossil fuels and virtually eliminating freon and other chemicals). The Cornell Campus is now cooled by a system which provides chilled water by using a heat exchanger and the cool deep waters of Cayuga Lake. Cayuga waters are returned to the lake just slightly warmer than before, and water in the campus cooling loop is returned to Cornell cooler than before. The system uses only 20% of the electricity required by the chillers it replaces, and the lake is being closely monitored for any signs of environmental impact (none are expected). Even so, the project was highly controversial among the local residents of Ithaca and many remain skeptical about its safety for the environment to this day.

“Libe Slope” (B4)

The hill that leads from West Campus to the Libraries and the Quadrangle of the College of Arts and Sciences is referred to as Libe Slope. It is the site of “Slope Day” on the final day of classes in the spring semester.

“Slope Day”

On the last day of the spring semester, the students of Cornell have a tradition of celebrating the end of the year by throwing an all day party on

the Library Slope near the Uris Tower. Though primarily undergraduates attend, graduate students enjoy the festivities as well. In recent years the party had slowly converted into a drinking orgy. In 2003 the university responded by changing the nature of Slope Day, despite massive protests from the undergrads. No longer would students be allowed to bring their own alcohol. The slope was fenced and alcohol could only be purchased inside. In return, the university hired bands to perform on the slope. Recent artists include O.A.R., Snoop Dogg, Ben Folds, and T.I.

“Statutory vs. Endowed Colleges”

There are two categories of colleges at Cornell. The statutory colleges receive direct funding from New York State and were created by Acts of the state legislature. The endowed colleges are privately funded and do not receive any direct funding from New York State. The College of Engineering is an endowed college, as is the College of Arts and Sciences and the College of Architecture, Art, and Planning, among others. The statutory colleges include the College of Agriculture and Life Sciences, the School of Industrial and Labor Relations, and the College of Veterinary Medicine.

“Suspension Bridge” (B3)

The present bridge, spanning Fall Creek just north of the Johnson Museum of Art, was built in 1960 and was designed by Professors S.C. Hollister and William McGuire. It is 138 ft., 3.5 in. above the water. The original bridge was built during the 1880’s, 500 feet upstream from the present site, behind Risley Hall and was slung low over the water. It was replaced in 1913 by a suspension bridge at the site and height of the present one; this second bridge was declared unsafe and closed August 1960. The legend says that if someone refuses a kiss while crossing the bridge, this one may collapse.

“Willard Straight Hall” (B5)

Sometimes called “The Straight”, Willard Straight Hall is the Cornell Student Union and contains non-academic and student organization offices. It was constructed in 1925 according to the wishes of Dorothy Straight in memorial of her husband, the same Willard Straight that started Dragon Day. In 1969, racial tension peaked at Cornell after controversial disciplinary action was taken against African American protesters. In response, a group of black students took over Willard Straight Hall armed with rifles. No one was hurt, but the event remains one of the most infamous events in

Cornell history. James A. Perkins, who presided over Cornell from 1963 to 1969, resigned amid the controversy surrounding the Willard takeover. See Section 6.3.2 for more information on facilities in Willard Straight.

8.7 Did You Know Cornell Had A . . .

Cornell is a large and diverse university with many interesting resources many members of the community aren't even aware of. For example, did you know Cornell had a(n) . . .

Alma Mater

Cornell's anthem for fraternity and communion between alumni is one of the most memorable and beautiful among schools across the country. Its origin is picturesque: Archibald C. Weeks '72 and his roommate, Wilmot M. Smith '74, took great pleasure in singing together a lugubrious ballad of the period: "Annie Lisle", recounting the gradual decline and death of a tuberculous heroine:

Wave, willows murmur waters; Golden Sunbeams, smile;

Earthly music cannot awake lovely Annie Lisle

They handily lifted the melody for Cornell's Alma Mater, which is sung with reverence at all hockey, basketball, and football games. And as you don't want to miss all the emotion of being part of this chorus, the complete Alma Mater appears at the end of section 6.1.

Archives

(<<http://rmc.library.cornell.edu/>>)

Located in the Division of Rare and Manuscript Collections of Kroch Library, the University Archives has a large collection of records and memorabilia related to Cornell, including genealogical matter, information on alumni from the early years of the institution, student organization records, and some of the doctoral works and papers of Cornell alumni and faculty.

Arecibo Observatory

<<http://www.naic.edu/>>

The Arecibo Observatory in Puerto Rico is operated by Cornell. One of the most famous observatories in the world, and home of the world's most sensitive radio telescope, the facility is used by scientists from around the world.

Arnot Forest

<<http://www.dnr.cornell.edu/Arnot/>>

The Arnot Teaching and Research Forest is run by the Natural Resources Department. Arnot has 10 ponds and is 1,619 hectares in size. Fires, overnight camping, unauthorized plant and animal collecting, off-road vehicles, and snowmobiles are not allowed. Hunting is allowed by permit only. Overnight or multi-day cabins and main lodge facilities may be rented for Cornell related events.

A variety of programs are held throughout the year at the forest, including field research and maple syrup production. Summer courses taught at Arnot Forest are listed through Cornell Summer Sessions Office.

Ask Ezra

<<http://ezra.cornell.edu/>> ‘*Dear Uncle Ezra* was the first on-line helpline in the world. One of the first queries, in the fall of 1986, was from a dining worker who was diagnosed with AIDS. As a very responsive communication service in a world increasingly filled with layers of bureaucracy before one can find a live, warm human being, Ezra has been able to help students, staff, alumni, prospective students, parents – readers all around the world – calm their fears, consider courses of action, determine resources, feel heard and feel empowered.’ ‘Uncle Ezra endeavors to select and answer questions that will benefit the senders and that will educate, edify and/or entertain the entire Cornell community’. If you have a question to which the answer appears elusive, be sure to ask Ezra!

Cornell Daily Sun

<<http://www.cornellsun.com>>

(607) 273-3606

“Founded in 1880, The Cornell Daily Sun, one of the nation’s oldest daily college newspapers and one of the strongest organizations on campus, is and always has been completely independent from Cornell University. The newspaper serves the Cornell campus and its surrounding community in Ithaca, New York. The Sun is entirely student-run, publishing Monday through Friday during the academic year, with special Graduation and Freshman issues during the summer.” It’s a great source for news and information about what is going on at Cornell, in Ithaca and around the world.

Cornell Electron Storage Ring (D4)

Wilson Synchrotron Lab

<<http://www.lns.cornell.edu/public/lab-info/wilson.html>>

(607) 255-4882 The Cornell Electron Storage Ring (CESR) is one of ~ten major laboratories worldwide doing research in elementary particle and accelerator physics. The lab's electron-positron storage ring was designed and built by its members and has produced most of the current information about the b quark. The ring itself lies 12 meters below a parking lot and an athletic field and has a circumference of 768 meters. The lab trains graduate students in accelerator physics and has supported the development of superconducting radio frequency accelerating cavities. The lab's theoretical physics group leads the development of supercomputers for use in theoretical science research and investigates problems in astrophysics and the structure and dynamics of matter. Tours are available by calling the number above.

Cornell High Energy Synchrotron Source (F6)

<<http://www.chess.cornell.edu>>

The Cornell High Energy Synchrotron Source (CHESS) provides state-of-the-art synchrotron x-ray facilities to the national scientific community. It supports both Cornell-centered and collaborative research and development. The CHESS focuses on developing experimental facilities that utilize the high intensity, high-energy x-ray photon flux produced by the Cornell Electron Storage Ring.

Cornell Orchards (HJ6)

<<http://www.hort.cornell.edu/department/facilities/orchards/>> (607) 255-4542

Located on route 366 near the Veterinary Medical Center, the Cornell Orchards is run by the Department of Fruit and Vegetable Sciences. Apples and apple cider are available in the orchard sales room from September to May. Pears, grapes, and raspberries are sold in the fall. Other incidental fruit is often available although there is no set list. Hours vary depending on the season; call for current information.

Cornell Plantations (F4, GH3-4, J3)

<<http://www.plantations.cornell.edu/>>

(607) 255-2400

The Cornell Plantations is a living plant museum covering 3000 acres of University land. There are three major areas: the Arboretum, the Botanical Garden, and the Natural Areas. The Plantations are managed and preserved for conservation and to be used for outdoor teaching labs, workshops, and recreation. They are free and open to the public for self-guided visits; maps and information are available in the Plantations Gift Shop.

Guided tours of Plantations are **free** to Cornell students, faculty, staff, and alumni and can be arranged on weekdays, year-round. For weekend tours, free Saturday “drop-in” tours are available in the summer.

A variety of non-credit courses and lectures are offered through the Plantations that are open to the Cornell and greater Ithaca community. Topics covered include cultural and natural history of plants, ecological horticulture, design, and others. You can call or write to Cornell Plantations to be added to their free education mailing list.

The Plantations has a variety of individual gardens with peak seasons at different times during the year:

- Mundy Wildflower Garden: early April through May
- Bowers Rhododendron Collection: May through June
- American Peony Society Garden: May through October
- Robison York State Herb Garden: June through September
- Pounder Heritage Garden: mid-July through September
- International Crop and Weed Garden: June through early October
- Young Cutting Garden: July through September
- Ground Cover Collection: May through late September

Cornell University Press

<<http://www.cornellpress.cornell.edu/>>

Cornell University Press was the first university press in the United States, established in 1869. The Press’s Board of Editors, which must approve all books for publication, consists of members of the Cornell faculty. Cornell University Press, and its Comstock Publishing Associates division, publish general and specialized nonfiction in all fields of interest as well as selected works of serious fiction. Current output is 150-170 titles a year.

Fashion Shows

Every spring, students from the Department of Textiles and Apparel, through the Cornell Design League, produce a fashion show in order to exhibit student work outside of the classroom. These shows are open to the public, and often members of the Cornell community are solicited to act as models.

Fuertes Observatory

<<http://www.astro.cornell.edu/CAS/cas.html>>
(607) 255-3557

Fuertes Observatory, located on North Campus near Appel Commons, is no longer used for professional research. Instead, a few introductory astronomy classes hold lab sessions there. The Cornell Astronomical Society (CAS) hosts public viewing on clear Fridays nights, from 8 pm to midnight.

Graduate and Professional Student Assembly (GPSA)

<<http://assembly.cornell.edu/GPSA/>> ‘The GPSA brings together Cornell’s 6,000 graduate and professional (M.B.A., J.D., D.V.M.) students to address non-academic issues of common concern. Drawing upon the strengths of our diverse constituencies, we work with the university administration to improve the quality of life at the University. There are two governing bodies: the 19-member voting Assembly, and the Council of Representatives, an advisory body comprised of a representative from each degree-granting graduate and professional field.’ The GPSA is a great way to ‘get involved’ on campus.

GPSA Finance Commission

< <http://assembly.cornell.edu/GPSAFC/> > ‘The Graduate and Professional Student Assembly Finance Commission (GPSAFC) is the funding arm of the Graduate and Professional Student Assembly (GPSA). The GPSAFC is responsible for funding over 200 registered graduate and professional student organizations on the Cornell campus.’ If you can’t find an existing club that matches your interest, start one!

Herbert F. Johnson Museum of Art (B3-4)

<<http://www.museum.cornell.edu/>>

The Johnson Museum of Art has free admission to their several permanent and visiting exhibits. The museum, which opened in 1973, was

designed by world-renowned architect I.M. Pei. Other museum buildings designed by I.M. Pei include the East Building of the National Gallery of Art in Washington DC, the West Wing of the Museum of Fine Arts in Boston, MA, the Rock and Roll Hall of Fame in Cleveland, OH, and the Pyramids at the Louvre in Paris, France. The Johnson Museum was a gift of Herbert F. Johnson '22, president and chairperson of Johnson Wax Company. The Johnson has become one of the best-known art museums in upstate New York. Information about the current exhibits is available on their webpage. More information about museums in Ithaca is available in Section 7.6.

Lindseth Climbing Wall (E5–6)

<<http://www.coe.cornell.edu/goto.jsp?page=wall>>

Located in the Field House, the Lindseth Climbing Wall is the largest natural rock, indoor climbing wall in North America. The climbing wall is named after Jon Lindseth '56, now an emeritus trustee and an avid climber. See Section 6.2.4 for more information.

Nobel Prize Winners

The professors and graduates of Cornell listed in Table 8.2 have been awarded Nobel Prizes in the specified fields.

Nuclear Reactor

The Ward Center for Nuclear Sciences (C6) operated a TRIGA nuclear research reactor. The reactor could be operated at steady state power levels of up to 500 kW, but it could also be operated so as to deliver its power in pulses which lasted several hundredths of a second and reach a peak of 2000 MW. Since 500 kW is about 6000 times smaller than a typical large nuclear power reactor, the TRIGA reactor could be operated in an open pool of water instead of a sealed pressure vessel - the fuel temperature could not reach a level to induce boiling of the water. In the Spring of 2001, the Cornell administration announced that the nuclear reactor at Cornell would be shutdown and decommissioned. The nuclear fuel was removed in the Fall of 2003. Current information suggests that the building will be demolished to make room for William H. Gates Hall.

Physical Education Requirement

< <http://www.pe.cornell.edu/phyped/> >

Table 8.2: Cornell's Nobel Prize Winners

Name	Field	Year
Robert F. Engle III, '66 '69	Economics	2003
Robert F. Furchgott	Physiology and Medicine	1998
David M. Lee	Physics	1996
Douglas Osheroff '73	Physics	1996
Robert C. Richardson	Physics	1996
Robert W. Fogel '48	Economics	1993
Toni Morrison '55	Literature	1993
Wole Soyinka	Literature	1986
Barbara McClintock '27	Medicine	1983
Henry Taube	Chemistry	1983
Kenneth G. Wilson	Physics	1982
Roald Hoffman	Chemistry	1981
Sheldon Glashow '54	Physics	1979
Steven Weinberg '54	Physics	1979
Paul J. Flory	Chemistry	1974
Hannes Alfvén	Physics	1970
Robert W. Holley	Medicine	1968
Hans A. Bethe	Physics	1967
Haldan Hartline,	Physiology and Medicine	1967
Richard P. Feynman	Physics	1965
George W. Beadle '31	Physiology	1958
Vincent du Vigneaud	Chemistry	1955
Fritz Lipmann	Physiology and Medicine	1953
John R. Mott 1888	Peace	1946
Hermann J. Muller	Physiology and Medicine	1946
James B. Sumner	Chemistry	1946
Herbert S. Gasser	Physiology and Medicine	1946
Isador Isaac Rabi '19	Physics	1944
Pearl S. Buck '25	Literature	1938
Peter J. W. Debye	Chemistry	1936

When Ezra Cornell and Andrew Dickson White founded the University, they believed that a sound body was as important as a sound mind. Therefore, from its earliest days, Cornell has required all undergraduates to prove their physical abilities. With few exceptions, all undergraduates are required to pass a swimming test and take at least two physical education courses in order to graduate. Graduate Students are exempt from this requirement, but are still eligible to take classes, such as swimming, golf, dancing, etc. . . .

Chapter 9

Essays

In this chapter we present a few essays, most of which are written by engineering graduate students at Cornell. The essays written by students are a collaborative effort and reflect many different perspectives. They contain information beyond that addressed in the previous chapters. The EGSA is very interested in your opinions and would love to include even more essays in the next version of this handbook. Please contact us at egsa@cornell.edu with your contributions.

9.1 Understanding Cornell

There are a number of Cornell policies, rules, and administrative structures that you'll encounter as a graduate student and unfortunately, there will be times when it seems that things are set up to be difficult for engineering graduate students. It's sometimes easier to understand why Cornell operates the way it does if you have some background about the university.

As a graduate student, one of the important distinctions to understand is the role of the Graduate School as compared to the Engineering College. Cornell has two types of non-undergraduate students: graduate students and professional students. Professional students are enrolled in the Law School, the Johnson School of Management, the College of Veterinary Medicine, or in the New York City-based Medical School; they will receive a J.D., M.B.A., D.V.M., or M.D. respectively. Graduate students are pursuing a Ph.D. or a Masters degree (M.S., M.Eng., M.A., etc.) Graduate students that are pursuing a Ph.D. or an M.S./M.A. are accepted into and enrolled in the Graduate School. M.Eng. students are enrolled in the M.Eng. degree program run by the Professional Programs Office in the College of Engineering. Where you are enrolled affects how you register and sign up for classes — Ph.D. and M.S. students should do this through the Graduate School, not through the College of Engineering.

Within the College of Engineering there are a number of schools, departments, centers, and interdisciplinary programs, each of which employs faculty who can advise graduate degrees, though not all of these units offer all types of graduate degrees and some graduate degrees are not specific to a particular unit. There are 13 M.Eng. “major fields” within the M.Eng. degree program. A major field is headed by an M.Eng. program director. There are 15 graduate fields that Ph.D. and M.S. students can be associated with. Graduate and major fields (we'll just call them fields) are not the same as departments. Fields are made up of a collection of faculty who can chair committees for graduate students within that field. Some departments also have associated fields where all of the faculty in

that department are also in the field, and some fields do not have any corresponding department and the faculty within the field are from a range of departments around the University.

Your graduate or major field sets more specific requirements than the University or the Graduate School do. The general requirements for receiving a Masters or Ph.D., such as the format for the thesis, the number of semesters you have to be enrolled to receive each degree, or the number of people on your committee, are set by the University and/or the Graduate School. These requirements are the same across all fields within that degree program. However, your field will also have specialized requirements. For example, it may require you to take qualifying exams, to have a member of your committee be from a particular department, or to complete an M.S. thesis before becoming a Ph.D. candidate. Your field will determine how many classes you need to take, what types, and what grades you need to get. In general, your field's requirements will be more specific than the University or Graduate School's requirements. We have tried to describe most of the general requirements in Chapter 1 of this handbook. Your field should inform you of their specific requirements. If they don't, you should talk to your Director of Graduate Studies or M.Eng. Program Director. It's always a good idea to get a written copy of the requirements and to check in with your advisor once a year to verify that you're on track and meeting the relevant requirements for your stage in the program. Fields change their requirements more often than the University or Graduate School, often with less publicity and sometimes without grandfathering in the changes.

Another point to keep in mind is that undergraduates are the largest group of students at Cornell. In the fall of 1999, there were over 13,000 undergraduates enrolled at Cornell, and just under 4,000 graduate students. This means that when you go to an administrative office that deals with all students, they are going to be the most familiar with how to handle undergrads. Furthermore, while many undergraduates can be on full or partial financial aid, there are also a number of undergraduates whose tuition, room, and board are being paid by their parents, and whose parents are still taking an active role in their education.

How might this affect you? When you enroll at Cornell, you are asked for a local address, a summer address, and a permanent address. As a graduate student, you will probably have all three be the same. In fact, if you give as a permanent or "home" address your parents' address, your bursar bill and grades will get sent there instead of to you. This is because many undergraduates have their parents pay their bursar bill and their parents expect to see their grades. Be particularly careful of this if you are

an international student or else your bursar bills will get shipped out of the country and you might have trouble paying them on time.

Another example is the dining plans that are offered. As is pointed out in section 7.2 of this handbook, even the debit-style eating plan that most graduate students would use is a bad financial deal when you consider that the convenience of charging your meals to a meal plan card aren't any greater than charging them to your credit card. However, many undergrads have their bursar and/or dining debit cards paid by their parents while their credit cards would not be. Seen in this light, the dining plan may not be the cheapest plan, but it is a convenient way for parents to pay for food on campus and sure that's what it's used for.

As a graduate student, there are a variety of ways your expenses might be paid: you may be paying them yourself, you may have a TAship, a fellowship, an RAship, or an employer may be financing your graduate education. Depending on the situation you are in, the amount of your stipend, if any, and your tax situation will vary, and you may or may not have student activity fees, travel to conferences, or other expenses covered. Additionally, some fields may supplement outside funding sources or provide field-specific travel grants. These are questions that your funding agency and/or field should be able to answer for you. You should not assume that the registrar or bursar's offices have accurate information about your precise situation. For instance, the bursar assumes that RAs do not cover student activity fees, though some do.

It is inevitable that Cornell bureaucracy will trip you up some time during grad school. Having some perspective on the system might help you figure out how to handle it, and there are some general tips to keep in mind as well. If things are taking too long, or getting messed up, call the people handling your problem yourself rather than letting someone in your field act as the middleman. If you walk into an office in person, sometimes things get cleared up more quickly. And probably the best rule of thumb for getting through Cornell bureaucracy is to ask graduate students ahead of you in the program what they did.

9.2 How to Succeed in Graduate School

The EGSA held a panel discussion on October 27, 1999 that focused on how to succeed in graduate school. A panel consisting of graduate students in their last phase of Ph.D. or those who have graduated (with a Ph.D.) from Cornell in the recent past from a range of engineering departments answered questions about what it takes to get a Ph.D. at Cornell, from the

start of the process to writing up and doing a job search. Hopefully the following summary of the panel will give you some insights and help you avoid a few pitfalls.

What strategies do you have for coping with frustration?

Don't hide from your advisor, even when things aren't going well. It is important to talk to someone when you are frustrated, and your advisor is a logical choice. This can really help to get you back on the right track.

Have another outlet, such as running, to release your frustrations.

How did you pick an advisor and what advice do you have to give on picking an advisor? What should you look for in an advisor?

Take your time! TA for your first few semesters to have time to look around.

Talk to other grad students and see if they are disgruntled with their advisors; if they are, take this as a cue that there might be a problem with that advisor.

Spend a lot of time talking to faculty that you might want to work with. See if they would be open to working on what you want to work on.

Check if you can work with people outside of your department and consider that option as well.

Go with your instincts about an advisor and whether they are a good match or not.

How often did you have meetings with your advisor regarding progress? Did you arrange these meetings?

Some people schedule regular meetings with their advisors. I had regular group meetings each week and then individual meetings were scheduled at my initiative.

Make sure you are having meetings with your advisor. Twice a month is a good number to have.

Every two weeks is a good time schedule for individual meetings. There is enough time between meetings to accomplish something but they are close enough together to keep you on track.

Did you discuss funding issues with your advisor before choosing him/her as your chairperson?

Yes — I was assured of funding for the whole program when I selected my advisor. It's important to sort this out.

Yes — with my first advisor there was no funding for my project but I had a fellowship. With my second advisor there also wasn't money available, so we agreed that I would TA. It is good to straighten funding out early so that you know what is ahead of you when you begin.

How many different projects did you work on during your Ph.D. time? How did you get your thesis going?

I worked on two distinct projects — my thesis topic and what is now my current research. When I was about halfway done with the thesis I got stuck and worked on the other project. About 12 months before my thesis was finished I saw that the new project was actually key to the thesis problem. Working in this way was not a plan of action, but other research activities can have value.

I'm on my 8th research project now, having gotten stranded on the previous projects for various reasons. I wanted to cover a wide spectrum of topics in graduate school, and while it is frustrating to not have it all incorporated in my thesis, it is good overall to work on a few projects.

Two — the first for approximately a year and then I started my thesis the summer before my third year. I worked in spurts — on for 2 months, then off for a while.

How much sleep should we really be getting?

About 6 hours a night for the first year or two, and about 8 hours a night after that.

During your first year, you'll never study "enough" so make sure you sleep some. After that, maybe 6 hours a night.

Yup, 6 sounds right.

I have joined a group already; if I found out now that that project I will be working on is not good for my future (career opportunities), what can I do?

Talk to people on projects that you are interested in and introduce yourself to their advisor. Talk to the advisor and explain what you want in a project. Sell yourself and go looking for what you want, because it isn't going to come find you.

Talk to different professors, and if you let them know you want to keep it between the two of you, they will.

If you don't like the project, but you do like the advisor, you can sometimes renegotiate your project.

What do you wish you'd known coming into grad school? Do you have any advice for first year students specifically?

I wish I'd known how hard the first year is; brace yourself when you are starting.

I agree — you jump from your experiences in college where you succeeded so well and your expectations may be off. You can't take as many classes at once. You need to be an analyst in grad school, not just a number cruncher.

I wish I'd known what I wanted to do. I came to grad school because I was excited by my undergrad research but didn't know what I wanted to do afterwards. Start thinking now about your end goals so they can guide your grad school career. Go to company info sessions, conferences, etc.

In grad school everyone is good and the work is challenging. You can't take 4-5 courses and do research as a graduate student. I came to grad school to do research as a "buffer" before work since I felt too young to start a job and wish I had looked at other options earlier.

How much have your career choices been influenced by your advisor's advice?

My masters and undergrad advisor influenced my decision to go to grad school a great deal. My current advisor is also important. Your advisor affects your lifestyle and what your choices will be.

My advisor is laid back; I don't have a picture of where I should go so it is fortunate that things are this way since some advisors try to spit out clones of themselves. You should look at what an advisor's students have gone on to do and see if that is what you want.

I had thought I would do a postdoc and then teach, but my advisor has said, in my field, that academic jobs don't look good on resumes and I shouldn't apply for those jobs. Your advisor is your window to the outside world and a resource for you to use.

The decision to do a postdoc can depend on your thesis. My advisor suggested it since my thesis was largely theoretical and "old style". Doing a postdoc gives me a marketable, practical aspect as well.

Your advisor, if you have a good relationship, is someone you can talk to about thoughts about your career, including the ethical and social issues surrounding your choices.

How do you make a strong connection with your advisor?

It's a two-way street. You have to make meetings, but also get to know them as a person outside the academic setting. Advisors often invite students to dinner, have beer, etc. and these are good things to participate in since they allow for informal talk.

Your relationship with your advisor is important and has a lot of influence on your life. I sometimes resent that and try to separate out the professional side of the relationship and not mix in a personal relationship. I feel more comfortable having only a professional relationship with my advisor and having a separate life.

My first advisor was like a friend almost, and when I switched groups it was personally a problem. With my current advisor,

our relationship is professional; this is something that my advisor promotes as well. It's okay not to be comfortable socially with your advisor outside of Cornell.

What experiences or techniques have you found to better your teaching ability?

Taking part in the TA development program and being a TA fellow are good experiences. I enjoyed TAing because it gives you one-to-one interaction with students and practice talking in front of people. You can take ideas from other TAs and TA fellows.

Watch professors whose lectures you like, and practice.

Seek opportunities to teach and speak publicly. Volunteer to demonstrate experiments, etc. Expect criticism and bad days (it happens), but keep trying.

Steal other people's techniques shamelessly.

Do outreach. Teaching undergrads is easy once you realize how hard it is to teach high school students. Cornell has a strong outreach program. [Editor's note: see Section 3.6.3 for more information on Cornell's outreach program.]

Even as a grad student you can be a lecturer for a low level math class. If you are interested in teaching, look into this. It makes a huge difference in comfort with speaking, including in research situations, and in writing applications for teaching jobs.

Know your students well, what their work is like, and monitor them.

Keep things in perspective, including the material that you are teaching to the students. Help them keep life in perspective.

Do you ever get discouraged? How do you keep yourself motivated for n years? What happens if you just want to quit? Should I stay if I feel it is all for nothing?

I have felt frustrated at points all along the way, and still have questions about where to go with my career. It is your choice whether to stay in your field or not.

If you are having fundamental doubts about your field, listen to that and talk to people, especially your advisor, about these issues. Also talk to people outside of your department/your field/Cornell. Address the problem from many points of view.

I get discouraged; I go in cycles of asking “Why am I here?” It is often helpful to think about good things that are happening, such as the flexibility you have as a grad student, or about positive aspects of your social life. Think about why you are in grad school, your goals, and what the Ph.D. will let you achieve.

If grad school really isn’t for you, then leave. Don’t stay just to not have an unfinished Ph.D.

Just because you started, you don’t have to finish. Grad school might not be for you. It does take courage to quit, and is hard to do.

If you are offered a fellowship where you have to pay it back if you don’t finish and after your first year you aren’t certain, find another source of funding.

Which year did you begin research or working with your advisor? When did you really start working on the problem(s) that went into your thesis? Are you satisfied with the work that you have done for your Ph.D.? Were your expectations fulfilled?

I started research my first summer here, having arrived in the spring, which is rare. I’m fairly satisfied up to a point, though not with my pace through the program.

I started working with my advisor the summer after my first year and started my thesis work the summer after my second year; it took me five years to finish. I’m satisfied now, though I wasn’t during the process. Things came together when I was writing up.

I started my thesis research this past May [1999] and want to be finished summer 2000. I’m satisfied; I’m doing what I came into grad school wanting to do.

I did some research my first year, and started my thesis research three years ago. I’m not really satisfied with my work. I was

naive when I began and my expectations were too high for what could be accomplished. Research is not my favorite thing. I'm writing up what I have since it's time to finish. The compensation is that I've had a good time in grad school and met neat people.

I started my thesis work five years ago. I'm satisfied: neither ecstatic or disappointed. I maintained my initial vision for the project and it was well-written. One down-side is that I left enough for the end that there were critical questions that I only saw at the end. Writing is important even though it is hard since it makes you process your thoughts.

For more advice from Cornell grad students in their own words, check out the "Grads Speak" section of this handbook in Chapter 10.

9.3 Women in Science and Engineering

"Oh. Well, I bet you got your fellowship because you're a woman."

I heard those words from a fellow graduate student within two weeks of my arrival at Cornell. The question of funding came up, and this person, evidently feeling bitter because he had not received a NSF Graduate Fellowship himself, was compelled to offer this comment.

"You wouldn't notice any of these gender issues if you weren't looking for them."

This sage bit of advice was offered by a senior faculty member in my department. Personally, I found this rather offensive, as I had had a wonderful undergraduate experience in which the question never came up. It was only upon arriving in graduate school that I began to see certain things. I certainly wasn't looking for them!

I could offer more examples of pithy comments that I've heard over the years as a woman graduate student in Engineering, each of which did its part to tear at my sense of self, to make me feel like maybe I really didn't belong here, and to chip away at my confidence. But that's not the point of this essay. The point I would like to emphasize is that no matter what happens during the course of your graduate studies to tear down your self-esteem and your confidence, I'm telling you right now you need to resist. You may run into people who'll make comments like the above. You may

not; women's experiences in the College of Engineering vary widely. If you do, however, keep in mind that you are not alone, and keep telling yourself that you really do belong here and that you will succeed.

There are several resources available for women in science and engineering. The Society of Women Engineers (SWE) is primarily an undergraduate organization, but they are always looking for more graduate student involvement. The office of the Women in Engineering Program is located in 167 Olin Hall (C5-6). And, of course, you can always contact the EGSA or any of its representatives, many of whom are women grad students. Whatever you do, don't let yourself become isolated.

I'm still here and expect to complete my Ph.D. The fellow graduate student who made the comment I quoted at the beginning of this essay? He dropped out.

9.4 Teaching Assistantships

Most graduate students find themselves working as teaching assistants for a few semesters, and a few do practically every semester of their graduate careers. While many see it as a necessary burden to pay the bills, I think that's too bad, since it is often a rewarding experience. Eventually, nearly all of us will have the chance to consider teaching as a career, and the best way to make such a decision is to try it out. But more simply, I have had a lot of fun as a TA, and hope that others will too.

Teaching assistantships generally come as "full time" which is 15 to 20 hours of work per week and pays tuition and stipend, or "half time" which is 7.5 to 10 hours per week, and pays tuition, or stipend, or half of both. M.Eng. students are only permitted half-time TAs, and are usually paid a stipend but not tuition. As with everything, exceptional cases arise and other arrangements are possible. Be aware that working as a "grader" is very different and is to be avoided. Graders are paid by the hour, at a wage comparable to flipping burgers at Wendy's but without the free food. Do this only if the professor knows you're doing her (or him) a BIG favor.

As a teaching assistant, you are responsible for making the class run as smoothly as possible, by working up to an average of 15-20 (or 7.5-10) hours per week, including the two weeks before classes start — even though most professors won't ask to see you then. If the average time required of you runs over this, you are fully justified in asking the professor to change the situation. You may find it helpful to keep a log of hours worked. The duties of a TA vary widely depending on the class requirements, but generally involve a mix of running class and review sessions, supervising labs, giving

an occasional lecture, holding office hours, grading, doing lab preparation, and answering student questions by email or when they drop by your office. Many of these are discussed in separate sections below. It is entirely up to you and the professor to decide what combination of these is needed and appropriate. For large classes with more than one TA, it is sometimes easiest to alternate duties, taking turns on grading lab reports for example.

Grading

There are as many ways of grading a stack of papers as there are TAs, so experiment and decide what works best for you. My own method is as follows. I work out the entire assignment myself, carefully and completely, and then decide how many points to award for each concept required in each problem. Often I'll know particularly strong and weak students in the class, and I'll grade a few of their papers first to test my grading criteria, which I can then adjust as needed. The remainder of the grading should then be tedious but easy. I usually grade assignments in unsorted order to avoid consistent biases, such as being grumpy by the end of the alphabet. Finally, I'll regrade the first couple papers as a check to see if my criteria have drifted.

Assigning final letter grades is usually the job of the professor, but the TAs are often involved as well. One standard method is to compute a final numerical score for each student, from a weighted average of homework, test, and project grades. With luck, a histogram of the final scores will have notches between clumps of students. It is natural to assign tentative letter grades to each clump. The students near the boundaries of the clumps then need individual consideration, and this is the chance for some subjective input. If a student did unexpectedly badly on an exam, or was substantially assisted by his lab partner, this is the time to shift his grade up or down a little. This may mean that a student with a slightly lower numerical score than another may get a higher letter grade, and for this reason, I am generally not an advocate of posting final letter grades. While the decisions are justified and fair, it can only breed ill will among the students.

Also see the privacy section below for some concerns with grades, and Section 9.5 for some further reflection on these issues.

Class Sections and Review Sessions

While teaching assistants don't often teach new material, we often find ourselves at the head of a classroom answering questions about homework assignments or reviewing material for an exam. Getting stuck on a prob-

lem with everyone watching is an embarrassment, and being thoroughly prepared is one's only defense. I generally try to prepare a list of problems and solutions in advance, so when a student asks to review a concept, I have an example problem at hand that illustrates it.

But sometimes one does get into trouble at the blackboard. My only advice is not to bluff since the class can tell, and working against the students is a losing proposition; instead try to work with them, and ask the class to help identify the problem with you.

While there are perils to this job, sometimes when going over the same material for the third time, a student's eyes will light up when they suddenly understand, and you know you've just created something of value. That is a very rewarding part of being a TA.

Giving Lectures

The moment of glory as a TA is when the professor is out of town and the class is yours. The professor will probably give you notes, or at least a solid idea of what he or she expects you to teach. But no matter how much written material you're given, preparing a lecture takes a lot of time, easily four hours of preparation per hour of class time.

Office Hours

TAs are generally expected to schedule one or two office hours per week. Obviously they should be timed to be convenient for the students, but I've found it worth avoiding the evening before homework assignments are due. This is when frantic students come by simply because it's easier to ask than to think, and that isn't productive for anyone.

Often few students will stop in during the hour, and it's natural to grade papers during that time. I try not to do that though, since when a student does come by, there's an uncomfortable moment of shuffling papers to hide the grade book and visible scores. That's hardly a good way to set a comfortable tone and begin a conversation.

Student Privacy

Be aware that privacy rules prevent making any student's grade visible to others if the student can be identified. This obviously includes names, but it also includes the Cornell-assigned ID numbers, and arguably the handwriting too. Returning assignments by hand is preferable, but in large classes, that can be difficult. Often students pick a random number, identify

their homework only with that, and then pull their assignments out of the stack of graded papers themselves. Similarly, if you wish to post scores, some identifier must be used other than name or student ID.

Another interesting concern involves keeping grades on computers. When using networked machines, be sure to disable read permission for others on such files; Unix for example generally defaults to making a file readable by everyone. Also be careful when using computers belonging to your research group, since security from other group members (who may actually be in the class you're teaching) is often poorly controlled.

9.5 A Brief Philosophical Discussion of Grading

Grades serve two purposes: to judge and to motivate. Because judgment is a messy business and is unrelated to a university's mission of education, it has often been suggested that grades should be abolished. However, the power of grades to motivate is truly stunning, and this assures their place in academics.

As teaching assistants, grading becomes our business, often more than that of the professors we are working for. With the power of assigning grades comes responsibility. We must aim to maintain their value in motivation, which requires that they be perceived as fair. Grades are also a primary source of student stress, which we can try to alleviate by being forthright about grading policies and open to student questions. My own thoughts on how to achieve these goals follow, but opinions vary widely.

Perhaps the most common question is whether one grades "on a curve", where one's grade is assigned relative to those of his classmates, or on an absolute scale, where 90% is an A, 80% is a B, and so on. I don't know anyone who so strongly advocates an absolute scale that he or she wouldn't make the final exam easier if a class does badly on the prelim. Thus it really doesn't make sense to claim to use an absolute scale. For a large class, grading on a curve is not statistically unreasonable. A small class, though, will sometimes be unusually strong or weak, and the best we can do is to base our judgment on experience in previous years. The professor, or TAs who have this experience, should be the ones determining the grading scale. It is worth noting that for grading purposes, the average score is meaningless and tells only whether the assignment itself is of an appropriate difficulty for the class. It is the variation in the scores that distinguishes students from one another. Statistically speaking, students

come with a range of abilities, and each graded assignment is a measure of that ability, with the inevitable measurement error. A large number of different types of assignments provides a more accurate estimate, since the measurement errors should be uncorrelated. Moreover, statistics tells us that measurements with smaller variances should be weighted more heavily in the final estimate. This is one reason why an exam might be weighted more than a homework assignment that actually takes longer to do, and is a point that deserves consideration when picking weights for class projects.

Reducing the unnecessary stress that grading imposes on students is primarily an art, but a few thoughts on the subject may be helpful. Numerical scores on homework assignments, and even on exams, have fewer of the emotional implications that letter grades have, and often are easier to assign and manipulate objectively. It is often easiest to keep all scores numerical until the end of the semester, when a final translation to transcript grades must be made. A method for doing this was mentioned in Section 9.4.

After an exam, it is inevitable that a few students will stop by with complaints about the grading, sometimes justified and sometimes not. Simple arithmetic errors in the grading are easily corrected, but other objections are more difficult. It is tempting to shoo the student away with a comment that a couple points won't affect the final grade, which is probably true but not what the student wants to hear; this is a mistake. In rare cases, the student will have a valid point; perhaps his work was ambiguous and misunderstood when graded. More often, the complaint is poorly founded. A patient and candid discussion about how the questions were graded demonstrates fairness, can be a learning experience for the student, and usually won't change the score more than a point or two. Such a change in the score should not give the student any perceptible advantage over a student who did not complain; if it does, there is a much deeper flaw in the grading system.

9.6 Surviving an Ithaca Winter

I was raised in Tennessee. Whether or not that is part of the so-called "Deep South" is a matter of debate, but it's definitely well south of Ithaca. Winters in Tennessee are mild. That is to say, it is easy to tell Winter and Summer apart — unlike some areas in Southern Florida or Southern California — so it wasn't quite as much of a culture shock as it might have been. It even gets "cold" in the winter in Tennessee — sometimes staying below freezing for a few days at a time. I would even claim that I saw snow

a few times in Tennessee. Two inches could shut down a city for a day or two, and the biggest Tennessee snow I ever saw — about 8 inches — kept us locked up in our house for nearly a week.

Needless to say, my first Ithaca winter was different from anything I've ever experienced before. The locals and long time graduate students say that it was a mild one, a **very** mild one. The Northeast climate center, however, reports that January was the second coldest of the last twelve years (although February was warmer than normal). The snowfall total for the whole season was only 3 inches less than the normal 67 inches. So, I'd say my winter experience was pretty typical for an Ithaca winter. In any case, if you come from a warmer climate, you still have a lot to learn. Nothing I say here will take the place of experience, but maybe I can give you a pointer or two to ease your way.

My first piece of advice is to dress warmly. Having survived my first winter, I feel that my body has largely adjusted to the cold. I now think that shorts are appropriate attire for 55 degree weather. (That's about 13 degrees Celsius for those of you not accustomed to the Fahrenheit scale.) You, too, will adjust, but in the meantime wear lots of layers and buy lots of warm things.

First, you need a heavy winter coat. As soon as my mother found out that I had decided to go to graduate school "up North," she bought me the biggest, thickest winter coat that you have ever seen. Even when the rest of my clothing seemed inadequate (and it often did) my coat did wonders to keep me warm. It also provided padding in case of an occasional tumble on the ice, and I suspect that, if called upon, it might protect me from stray bullets.

Second, buy yourself a pair of snow boots. You may not need them terribly often, especially if you ride the bus or drive and park near the engineering quad, but when you have to traipse two miles uphill in the driving snow, you'll be glad that you own them. If you are at a loss for where to find boots, L.L. Bean (<<http://www.llbean.com>>) makes a sturdy and inexpensive, if a bit old-fashioned, pair.

While I'm on the subject of boots, let me tell you a bit about walking in the snow and ice. Most of the sidewalks on the Cornell campus are cleared quickly and well whenever it snows; the same is true for most high-traffic pedestrian areas in Ithaca. They are safe and convenient to walk on, and you don't even need snow boots most of the time. You need to be more cautious on sidewalks along city streets. In general, the residents along the street are responsible for clearing the sidewalk in front of their houses, and a few of them don't take this responsibility very seriously. After the snow

on a sidewalk has been packed by two or three days of people walking over it, it is almost as slippery as ice. Another thing that you should really watch out for is “black ice.” It should really be called “clear ice” because it is a thin layer of ice which sometimes results when water refreezes. It can be very difficult to spot and is extremely slippery. If you are having trouble finding a safe place to walk and you have snow boots, the snow is a good bet if it’s not too deep. It can take lots of effort to walk through the snow, but you usually won’t slip and slide as you would on ice.

Third, you really need a scarf. No matter what kind of coat you have, a scarf makes a world of difference. By preventing heat from escaping at the neck, a scarf keeps your jacket or coat toasty warm inside.

If you have a car, there are a variety of other things to consider. Many people in Ithaca own a set of four snow tires. They have these tires mounted on their cars each December, and then they take them off in April. I can’t really say much about snow tires, though, as I have never owned any. For the most part, my all season tires seemed to be fine in the winter, although I confess that I had a couple of terrifying moments sliding across an icy road. If you’re going to be driving in New York in the winter, review the things you were taught about skids when you were learning to drive. Pumping the brakes (unless you have antilock brakes) and turning your steering wheel in the direction that the back of the car is sliding are the two main things to keep in mind. Also, on icy days it is a very good idea to avoid some of Ithaca’s notoriously steep streets, for example Buffalo Street. Although the steep streets are usually the first to be cleared and salted, they can still be a little scary. On the same note, be careful when crossing these streets. Cars sliding down the hill **always** have the right of way.

There is one other thing you need to know about having a car in Ithaca during the winter. You need to know how to get your car out from under two feet of snow. If you have lived in a place where it rarely snowed more than two inches, then the main concern there was probably removing a layer of frost from the windshield of the car. For this purpose, you may own a small handheld plastic scraper. This is **not** the appropriate tool for removing snow from your car. Gloved hands also make very poor snow removal tools — you’ll end up with snow inside your gloves and will be rather uncomfortable. At the very least, you need a brush. These brushes are sold at Wegmans, KMart, and countless other places starting in about November. The brush itself is usually about a foot long plus a handle. In addition to the brush, it may also include a scraper of the type you are used to. Use this brush to remove the snow from your car. In addition, you may need a snow shovel. Even if you park in a parking lot which is cleared

of snow, there is a good chance that the snow will be piled behind your car. Remember, it is much easier to push the snow out of your way than to lift it. Finally, it's a good idea to start your car and turn the heat on high before trying to scrape off the ice. It makes the job much easier. Be sure that the exhaust pipe is well clear of snow and ice before you attempt this, however; carbon monoxide is scary stuff.

Despite a few misadventures, the winter in Ithaca wasn't so bad. On the whole, I enjoyed my weeks in a winter wonderland. You get used to the cold, and the snow is actually fun most of the time. For me, the worst part of the winter was its length. After being teased by a week with highs in the upper 50s in March, highs in the 40s remained the norm into early May. Eventually, however, Spring and Summer arrived.

My final piece of advice? If you arrive in August, then you should have several weeks before things really start to cool off. Make the most of them.

9.7 Students with Children

Being a successful graduate student takes a lot of time.

Being a good parent takes a lot of time.

Worse still, the amount of time that each activity demands is endless. Neither can be accomplished in 40 hours per week. There are always new journal articles to look at, more material to cover for that exam, another interesting lead to follow for your research. Wouldn't your child like to be enrolled in tumbling classes, or to be taken swimming weekly? What about planning a special day out? This brings up some questions:

Why would anyone try to be both a graduate student and a parent at the same time?

There are lots of reasons for being a grad student and a parent at the same time. Some didn't plan to be a parent, but are not willing to give up either their studies or their child. Others, myself included, already had children and didn't want to wait until the children grew up to venture into a graduate degree. Actually, some would say that the best time to start a family is during graduate school. Really. For example, taking time off to have kids while you're working (after graduation) can really derail your career. This situation is improving some places as employers (in this country, at least) are trying to become more "family-friendly", but it is still a real concern in many places, for

men as well as for women. Some would argue that in academia, the best time to have children is after you have tenure, but this could be a long time to wait, plus there's a drive against granting tenure in this country. Before tenure, there's often a tenure clock ticking which is more relentless than any biological clock.

Are there any benefits to having children while a grad student?

Absolutely! First, as mentioned above, you can start your family without derailing your career. In addition, the life of a graduate student can be very lonely and very stressful. Although children certainly add to one type of stress, the time crunch, there is nothing like the kind of unconditional love your child gives you to brighten up the day when your advisor forgets to show up for a long-planned meeting, your first publishable paper gets rejected, or you receive a lousy grade on an exam given by the professor you thought would write you the best recommendation letter. And during those inevitable days, weeks, or months when you seem to be making no progress on your research or project, instead of struggling with that worthless feeling, you can go home and feel important, appreciated, accomplished, and needed. It is then easier to believe that sooner or later you will become more productive at work, too.

How can I balance the time demands of school and family?

I certainly don't have all the answers here. A supportive spouse is certainly very important (support is essential, if you don't have a supportive spouse, **find support elsewhere**). Figure out what you spend time on, then choose some things you can live without (accept a messier house, pay for things that will give you a little more time, like babysitters/day care or preprepared foods — Wegman's has a nice selection, plus free child care while you shop). Take out a loan if you must. Find another family with children of similar ages to yours, and take turns watching the kids. In addition to having some time without your kids, it is often easier to get things accomplished when your child has a friend over to play with than when your child relies on you for entertainment. Give your child special treatment at other times which better suit your schedule. Grad students, and academics in general, have longer "vacations" than other employees and

can use this freedom to plan special one-on-one days with each child. Personally, I try to save Friday evenings as a special time I spend with my children, and school work just waits.

Also, time management skills are very important — so organize and prioritize your tasks. A friend tells me what works best for her is to decide with her husband what they need to accomplish the next day, and make sure that gets done. This requires them to focus on priorities, and also learn what is the reasonable maximum one can accomplish in a given day. If they don't manage during the day time to fulfill their self-imposed tasks, they can then stay up later. But usually they don't. They have also learned the importance of saying no, as in: no I can't be part of this meeting, sorry. And, they've recognized the importance of taking a few hours off to relax without either children or work.

I just had a baby and I'm female. I hear that breastfeeding is healthiest, but how can I find the time to do that?

Actually, it takes less time to breastfeed than to bottlefeed since a bottle needs to be prepared and warmed. But, of course, no one else can do this for you. There are lots of choices here, limited only by your imagination. You can take a semester or two off, or go lightly on work/classes for a semester or two. You can breastfeed morning and night, and let your baby have formula during the day (your body will adjust to almost anything). You can bring your baby with you to school (they're especially quiet while they're eating). You can visit your child's day care at feeding times. In my case, the director of my program found a private room where I could pump between classes. And in case you're wondering, it's OK to say "breastfeed" in public. In fact, in the state of New York, your right to breastfeed in public is explicitly protected by law. [Editor's note: see Section 3.6.6 for more information about lactation rooms on campus.]

I just had a baby and I'm male. I want to be actively involved in raising my child not only in the distant future after I graduate, but now. My wife is staying at home right now, but I know she needs some help, and a little time to relax, but how can I manage this while I'm a student?

Like so much of the graduate student experience, that depends in part on your advisor and director. These days, more and more

men want to be a daddy, not just a father. While a generation (or two) ago it was expected that busy new fathers would leave the child rearing to their wives, more and more people accept the fact that fathers are important as parents, too, and that it takes time to be a good father. FMLA (the Family and Medical Leave Act of 1993, which is **not** applicable to students) requires that both male and female employees be granted up to 12 weeks of unpaid leave to care for a child after birth or adoption. This is a reflection of the changing attitudes towards fathers and the importance of family in American society. Likewise, more and more faculty are supportive of students who want to take some time off or carry a smaller workload for a while. But like any other time you ask for “special” (nonstandard) accommodations, you’re most likely to work something out if you ask early, and come to the meeting prepared with a strategy of how everything you’re responsible for will get done.

Figure out who needs the most help when: if your wife is a morning person and gets tired at night, give her some time to get herself ready for bed early. Conversely, if she is not a morning person, and you do get a full night’s sleep, rise with your baby in the morning and let her sleep that extra blessed hour. It works wonders.

Can you give me any tips to reduce the stress of balancing work and family, or ease the changes brought by my newborn?

Give yourself the gifts of time and a clean house. Paying someone \$20 – \$50 a week or every other week to clean your house is one simple way to reduce friction over chores, and free up a few hours of time. If your parents ask what they can do to help, have them contribute to a housecleaning fund. Or, dig up a few hundred dollars from somewhere and treat yourself to a clean house. It will be worth it! And there will always be plenty of other chores to do: extra laundry, bottles, shopping, doctor’s visits; less and less time.

Can you give me any tips to reduce the stress for my friend who is trying to balance children and graduate school?

Cook some meals that can be used on those days when neither parent has the time or energy to prepare dinner. There’s a limit

to how many times they'll want a frozen pizza, and take-out gets expensive quickly.

How do I find suitable child care?

First, read the section in this handbook about child care in Ithaca (Section 4.8). Since you won't be able to work effectively if you're worried about your children, I suggest you talk to a lot of day care providers and/or centers, ask a lot of questions of each, and don't settle until you find a place you're comfortable with. There are some wonderfully caring, knowledgeable people in the field who will give your child all the love they need while stimulating your child's physical and mental capabilities. Be sure to sign up early, especially for infant care, as spaces fill up quickly and many places have a long waiting list. You can also find students (high school or college) who love children to watch your children in your home while you get some work done at home.

Who put the dog food in the broiler? (And why didn't we notice it until after we put food in the oven?)

We're pretty sure it was our two-year-old (who else could it have been?), and we certainly didn't make the second mistake again! If you are a student and a parent, or become one, you'll have your own funny stories to tell.

Good luck!

Chapter 10

Grads Speak

For an even more personal touch, EGSA asked engineering graduate students for a few comments to include in this handbook. Specifically, we asked them to tell us what one piece of advice they would offer to incoming students, to comment on things they wish they had known when they arrived, and to describe their experiences in research. To preserve anonymity, we removed all identifying information. We welcome your suggestions and contributions for next year's EGSA handbook.

10.1 One Piece of Advice

"You can never start research too early. Read periodicals and join associations as soon as possible to get yourself familiar with the academic world. The library has a reading area for this exact reason. When I started out, I went a whole year without effectively using one of the greatest resources Cornell has, the library system."

"The most important thing to do as a grad student is to make sure you choose the right advisor. One thing that is really important is to make sure that your advisor is interested in your future not just his/her future. A lot of bad things can go wrong that way."

"Pick your advisor very carefully. When you have someone in mind, check with his/her graduate students to see how happy they are. Find out what sort of working environment the professor maintains and what sort of work commitment he/she expects. You will likely be with this person for your entire graduate career — so you ought to like him/her. (It is certainly possible to switch advisors mid-way through, but that is a difficult thing to do - and costs time.)"

"Don't make your research the only focus of your life. You have to enjoy your time here, since once you start working, you may not have this kind of time, and you don't want to regret your graduate school time."

"Work throughout the whole week. Don't do it all the night before you meet with your advisor. Spread it out."

"Don't be afraid to get help when you think things are getting a little tough. I think that pretty much everybody goes through the troubles of getting used to everything. This is not to scare

anyone. Things aren't always as bad as they seem. Get some help early and you'll be a lot happier."

"Make friends outside your department and outside of engineering. Cornell is a place bustling with all kinds of people — many of whom could become great friends. If you don't look for them, you may never know."

"Look for opportunities and experiences beyond your office, your department, your college. There are so many wonderful activities in Cornell and Ithaca that it is worth taking advantage of them while you are here!"

"In addition to a main advisor, consider choosing a "mentor" who can guide you in your professional life and endeavors. This person need not have any connection to your research, but can act as a good sounding board if you have academic problems, and a resource both during your time here and afterwards."

"Many graduate students go through a period of being frustrated about a lack of progress, particularly during their second and third years. Your class work and Q exam are behind you, but you probably haven't settled on a research project yet. It is easy to feel during this time that you are spinning your wheels and not making any progress. This is perfectly normal for many students, though it can be particularly hard to realize this when talking to other students who have already hit on thesis topics. Try to remember that this time of looking around is valuable. This is your chance to explore your field, try out new things, and figure out what you are most interested in these days."

"When they tell you that grades don't matter in grad school, never believe them. They are either trying to be PC or all they mean is 'you don't get credit for good grades, but you get screwed for bad ones.' I had the bad experience of believing it and ending up in a mess."

"By far, the most important choice you can make (academically) in grad school is who will be your advisor. Remember, this is YOUR choice. Don't let anyone, and in particular, don't let faculty pressure you into a choice that you aren't comfortable with or feel is the absolute best choice for you."

"Find some other students who have been here a couple of years and talk to them. That can be very helpful."

“Get involved right away and learn about what kind of research each faculty member is doing . Do something that you’re really interested in right away.”

“Be sure to do things outside of school. Don’t get so wrapped up in the research or classes — be sure to get out and do something — hike, bike, whatever.”

“Although the two weeks preceding and following the start of classes can be hectic, take as much time as possible to go to introductory meetings for organizations, sports facilities, and student socials. Ithaca can feel isolating at first. Getting plugged into a group of people that have common interests with you can help alleviate this isolation as well as give you some perspective when course loads become heavy.”

“For students from abroad: get a driver’s license as soon as possible, even if it’s only a learner’s driving permit (for which you only have to spend an evening’s time, and some \$20 or so). It’ll drive you crazy if you don’t have one soon, because you’ll need a driver’s license for identification on more occasions than you could possibly imagine.”

“Find community **outside** your department. Ithaca is a surprisingly diverse community, and there’s a good chance the people you most want to meet are actually not in your field, and possibly not at Cornell at all.”

“For students from abroad: it is difficult to get a credit card, but you’ll need one. Ask other foreign students how to get one.”

“Do not become so narrowly focused that you lose track of everything except your research. Maintain a healthy ‘outside life.’”

“Shop around for advisors, try to work with them before choosing one for good. Experience of the advisor IS important. But also beware of ‘famous’ advisors who are good ‘sales people’ but do not do much research themselves any more.”

“Do not take Cornell’s graduate student housing if you can avoid it at all. Try Cornell’s off-campus housing web-page, ask current students of your department for help, come a little early if possible and look at apartments.”

“Research is not your whole life even though people try to tell you that — it’s just not.”

“Get a car.”

“Relax. If you find you don’t have anything to do, instead of stressing go out and enjoy yourself because the hard work will come later.”

“Take it easy and get a life.”

“Dress warm. Live at the top of the hill.”

“Get as much sleep as possible, whenever possible.”

“I found job resources horrible here. Very frustrating and not useful at all. I found them to not know very much, to make a broad generalization. I was interested in working abroad, but when I went to the Cornell and the Engineering job offices they responded to most of my questions by telling me to look it up myself in their library. They had out of date resources that were not helpful. So I found job hunting very difficult, although JobTrack wasn’t bad for engineering, especially now that it was bought out by Monster.com. I give that a thumbs up.”

“Sleep is very important. Eat breakfast. Drink coffee.”

“Definitely talk to people who have been here a while and ask them what classes they’ve taken. Take classes with good professors, even if the subject isn’t as interesting.”

“When I was taking classes, I was taking about three classes a semester and that was a full-time load. It depends on the classes, but you can expect to work about twelve hours a day between classes and trying to start doing some research.”

“In the beginning, I spent about eight hours a day in the office. I also did a lot of social stuff. But the first year, you have a lot of classes and a lot of homework, and you don’t always do it in your office. The amount of classwork isn’t that different from undergrad; it might even slow down a little. What gets harder is when you are doing your research and you are trying to push yourself. The question is how much time do you force yourself to work, because you don’t have any other deadlines. It depends on your advisor and how much he or she pushes you.”

“Don’t put your outside interests on hold. Don’t go to graduate school kamikazi style and tell yourself that you’re just going to work and do nothing else, because it will be too stressful. You must pursue the things that you really love in addition to

your work. Even if you really love your work, you should have something else that helps you unwind.”

“Engineering grad students tend to treat grad school like a workplace, not school. Treat it like school as well; have fun and meet people.”

“Have a balanced life. Don’t get tunnel vision about your research. Investigate non-technical opportunities at Cornell as well. Your research won’t always work and that’s really depressing if it’s your entire life.”

10.2 We Wish We Had Known

“I wish I knew how important the choice of advisors is. Not only does the graduate program differ from department to department, but between two professors in the same department. My course of study is significantly different from other students in my same concentration. Advisors are also a crucial resource after graduation when you are looking for a job. I have found some students who can get a job, with just the mention of their advisor’s name.”

“I would have liked to know that I didn’t have to live so close to campus. I didn’t realize that graduate housing was so much higher than market price — and so small!”

“I wish I had known about some clubs I go to now: the Fingerlakes Cycling Club, Outing Club, and dancing. There is a lot of dancing in the area. If you want to get into dance in Ithaca, try the dance classes. There are a number of teachers in the area.”

“I wish I had known how important an advisor is to one’s research. I didn’t realize that my work would really revolve around his interests.”

“I wish I’d known ahead of time that even though I had a fellowship, I had to link up with a research program to get any funding for laboratory work. In this respect, I’ve been cheap labor for my advisor, since most of my tuition is paid by the fellowship, and yet I’m dependent on my advisor and the research group to pay the lab fees — and so my research gets closer and closer to my advisor’s interests!”

“I would have liked to have understood the exam process for each type of graduate degree (for my specific department). With people briefly mentioning Q’s, A exam, B exam, defense, etc. I wasn’t sure what each meant, when they were taken and what each exam was intended to test.”

“Finding an advisor does not necessarily mean finding a thesis topic. And both of these are your jobs.”

“One should find other things to do. One should take advantage of everything there is to do at Cornell, including taking language classes, taking classes in other departments, and so on.”

“I wish I had been aware of the level of aggression that is required to get and keep attention from faculty members and the field. It is incredibly easy to fall through the cracks.”

“A simple explanation of the parking rules. Parking can be confusing in Ithaca. On most of Ithaca’s streets, parking is prohibited between 2am and 5am on the odd side (i.e. odd house numbers) of the street on odd dates and the even side of the street on even dates [at least from December to April to allow for snow removal]. In practical terms, this means that if you park your car before midnight, you park it on the odd side on an odd date and on the even side on an even date. Always lookout for hydrants and do not park facing opposite the direction of traffic. When parking on campus in the evening, watch out for no-night-parking signs. Make sure that you find a long term parking spot for your car before you leave for the holidays. Each holiday season, more student cars are towed than the towing companies have storage space for and this gets very expensive. When looking for housing, consider parking space as well. It is a BIG hassle to move your car every night from one side to the other.”

“I wish I had detected the downtown Ithaca theaters earlier (Kitchen, Firehouse, Hangar), I can really recommend them. They are usually not much more expensive than a movie ticket, and most times I really enjoyed the show, which I can’t say of most movies.”

“I shop at P&C. **Not** Wegmans. Only shop at P&C or Tops for basics, unless you need international specialty foods, or bagels, or subs. Wegmans’ 14” subs are the best food. They’re about \$7 and you get at least two meals per sub.”

“Winters last longer than I thought...”

“I wish I had kept better experimental writeups of everything I did immediately after I did it because when you’re writing your thesis it’s really hard to remember exactly how you did everything and what samples you used and what conditions you used. You should make sure that you not only have all this documented in your lab notebook but you may as well write a few paragraphs ”paper-style” immediately after you get every result. I think it would have also helped me be more targeted and focused on my thesis if I had tried to write things for my thesis from the beginning.”

“You don’t have to wait for your advisor to tell you what your thesis is on. You have a lot of control. When I was a new student I didn’t think I had very much control over what I was working on, but it turns out that you have a lot of options to work on a lot of projects. If you want your research to go a certain way or you want to work on a different project that will help shape your thesis, you can propose it to your advisor. They’ll be happy that you are taking control.”

“One of the best things to know when you start graduate school is that everybody finds their first year hard. It’s easy to forget that or not realize that everybody has trouble their first year. It’s important to have friends and talk to other people.”

“I would really like to see some more honesty on the part of the faculty. It would be nice to know what they truly value and what they just say they value. Facetime? Long hours in the lab? Publications? Teaching skills? Which is it?”

“There are some books about graduate school that are insightful. Look at these books before you start to give you some direction, let you know what to expect and prepare you for the bad times of graduate school. The Cornell career library has a few of these books. There is a guy from Stanford who spent eleven years getting his Ph.D. who wrote one. He really knows how to do a Ph.D., what to do and what not to do.”

“Not everyone who comes to graduate school ends up completing it. This isn’t a bad thing. Ph.D.’s aren’t for everyone, and sometimes one doesn’t realize this until one tries. There is no shame in deciding to leave, for whatever reason. While I don’t

advocate quitting, because one may think it easier than finishing, I think it's important to realize that it's an option that is available for whatever reason one wants. Don't feel trapped in a life you don't want: change topics, advisors, or do something else with your life. I think it took me the better part of a year to realize that it was OK for me to leave without a Ph.D. I felt a non-spoken pressure from my family and the community to get going on a research topic. The pressure wasn't really there; it was in my head. The people at Cornell want you to succeed, but it doesn't mean getting a doctorate."

10.3 Life in Research

"The most difficult part of being in a research group is when there are personality conflicts within the group. I did not get along with a member of my research group and I found that antagonism and competition can be very detrimental to research. I think that the best way to resolve a problem is to realize that you don't have to be best friends with them. Simple friendliness is all that is really necessary."

"I think the most important thing to keep in mind while doing research is to keep setting goals and checkpoints for yourself. Try to have a weekly meeting with your advisor (or with yourself if necessary) where you go over what you accomplished last week and what you plan to accomplish in the coming week. Also have 3-month, 6-month and 12-month plans in place as well. These will change of course, but having something to focus on is incredibly important."

"If you are in a research group with people who enjoy what they are doing and you can share your experiences and understanding, then it is a wonderful thing. But, if you are in a research group where people don't like their work and just want the degree, that can be very frustrating and discouraging."

"Figure out what your research tempo is and listen to it. Some people work best on a regular 9–5 work schedule, while others prefer to work in sporadic fits and starts. One of the great things about graduate school is that you can follow any working style and schedule that you and your advisor agree on. Keep in mind that finding outlets for non-research interests and taking time

out for them can help you be more focused and motivated during the time when you are in your office or lab.”

“I’ve had a wonderfully positive experience working in a research group. We all share the same office, which allows for an easy exchange of ideas and an immediate support network. Although we don’t spend much social time together outside of the office, since we are all at different points of life and with different outside responsibilities, our research group feels a bit like a family. In addition, I’ve worked closely with a post-doc during my first few years here, and he has taught me more than he will ever realize. I feel very comfortable working with him, and since he is much more accessible than my advisor, I often turn to him for help and guidance. The experience of this research group has added a whole new level to my graduate studies and increased my appreciation for, understanding of, and interest in my work.”

“You should plan what you want to do and then do it. Don’t flounder. Before you run an experiment, plan it out.”

“Find the perfect match with your advisor, because there is no bad advisor or good advisor, you just have to find a good match for you.”

“Start early, but don’t expect instant results. Research takes time. So think about what problem you want to work on, but expect it to take a while to develop.”

“I recommend when you get here and are trying to figure out general guidelines for research that you try to identify if you’re the type of person who likes to have complete freedom to do a complete problem on your own or if you’d rather find an advisor who has a project all set up and you can just fit in and pick a place in it. It makes a big difference.”

“When it reaches the very end, it’s probably better to have spent extra time and worked on something you really like than it is to try to finish faster and work on something that happens to be there. Because when it gets to the end and you really don’t care about your work and you think it’s not worthwhile, that’s really frustrating. So spend a little time in the beginning looking around for something you’re really interested in and if it means taking an extra semester or an extra year because

you can't find the right project right away, that's okay — it's probably worth it in the end."

"Don't assume everything is going to work."

"Don't be in a rush to pick your advisor. Don't feel like you have to settle on a research topic or a research advisor. Just make sure that the person is doing what you're really going to be interested in. Because it doesn't really matter if you find an advisor your first semester or your second semester. You're not going to have that much of a chance to get in-depth research done your first year with all your classes. Otherwise you might end up changing advisors midstream and that's not very good."

"Think about getting involved in a large research group. If you find yourself working pretty much on your own or with just your advisor or one other person, you don't have people to give you feedback, help you out when you're having a hard time, and celebrate with when you're having good times. You would be surprised how much of a difference that makes."

"Definitely do research and also publish papers so that you can go to conferences. I think they are very motivating."

"Start early. Just find ideas. Start doing something even during your first semester instead of waiting to finish all of your course work before you do your research."

"Remember that doing research gets you your Ph.D., not classes/classwork and not knowing all areas in your field."

"Never make yourself indispensable to your advisor or they might not want to let you go."

"How much time you have to spend working totally depends on who your advisor is. If your advisor wants you to work very hard, then you have to work very hard, no matter what."

"I stay in my office a lot of the time, but I'm not necessarily working all of that time. I spend about eight hours a day in the office, but I only spend about half of that working. Lately, I've been working midnight until 8 AM and that's working well for me. It's more quiet and I get more done."

"It probably took me about six months to decide on my first research project. That's normal and nothing to worry about,

because sometimes you don't come with the necessary background so you first have to start taking classes and then once you get those classes it's easier to do research."

"When your first research paper will be done will depend on your advisor and your background. Try to publish as early as possible, but first concentrate on your coursework and get that done and over with so you can have more time to do research."

"Keep a broad mind about your studies. Think about the community and social context that you are working in, what your career goals are, and how your work fits into these things."

"Start to read literature in your field at an early stage of grad school rather than relying on formal coursework to learn this information."

10.4 Fun Things We Do

"Summers in Ithaca are awesome. You should definitely spend some summers in Ithaca."

"Bicycling. There are all kinds of off-roads with no traffic, all kinds of bike paths, and off-road riding. Ithaca is great for biking."

"I like photography. Digital cameras are really great."

"I would definitely advise taking an outdoor education class and getting involved in some kind of extracurricular activity. I came here and my first semester I didn't do anything besides my studies and that's really bad — that's really depressing. So my second semester I took a cross-country skiing class and a first aid class; they got me outside and meeting other people that I wouldn't normally meet otherwise. They aren't so expensive either, so you can just sign up for a course. This fall (2002) they are having a course that is free of charge where there are five or six different courses that let you explore different activities. In one course you might go rock climbing, to the Hoffman challenge course, hiking, and canoeing. And it's free so long as you fulfil your obligation to all of the classes, otherwise you get charged. It sounds like a good deal."

"One of the things I like to do when I want to blow off some steam is to go to the ceramics studio in Willard Straight and

spend some time doing something with my hands. I find it's a nice contrast to doing stuff with my brain."

"I like to hike the many trails in town. There are lots of hiking trails, mountain biking trails, and state parks. If you like to do stuff outside, this is the place to do it."

"I use the ice hockey rink on campus . Very frequently I take advantage of it to play hockey with my departmental team."

"I work out at the Cornell fitness centers."

"I go watch movies at the on-campus theaters."

"I play a couple of sports. The CS department hockey is really fun; if you're in CS you should definitely play hockey. I also play some ultimate frisbee right now. There are lots of physical education courses that you can take that are really fun and free. You can take ice hockey courses. I've taken a basketball course. My friend's taken a volleyball course. They are all free of charge and lots of fun."

"I've taken some courses with Cornell outdoor education, which is expensive, but it has opened me up to what is available in terms of things to do."

"I like to drive around the lake during the summer. It's beautiful. I like to do outdoor stuff in Ithaca. Students should take advantage of all of the wine tours, which you can't really get elsewhere."

"Ithaca has a couple of really good guitar shops. Ithaca Guitar Works has just about everything that you could want. Rumble Seat Music has really cool vintage stuff and just oddball kind of things."

"I've become involved with a local church which helps me bridge the gap between student world and adult world, which is really hard to do in this town."

"Travel."

"Writing papers at Stella's at 12:30am."

"I like to ride my bike on Snyder Hill Road."

"Play squash at the Grummand squash courts."

"Go see plays at local theaters."

“In summer and fall when the weather is pleasant, I like to go for picnics by the lake.”

“Play tennis at the tennis courts on north campus.”

“Go to the gym, it’s not that expensive. For any Engineering student, Teagle and Schoellkopf have convenient gyms, so that’s sort of good.”

“I like to swim, but Ithaca’s facilities are unfortunate. Teagle pool is okay.”

“All intramurals are great. Also, check out a Cornell sporting event such as hockey, basketball, lacrosse, or polo.”

“Cornell has very good sand courts for beach volleyball. It is really a lot of fun. Take advantage of it during the summer.”

“Ithaca does not allow for much crafting so you must go to Horseheads instead. That way you can get your crafting equipment such as stamps and markers and things.”

“Biking is good. It’s fun to bike to a picnic in one of the local parks. You can also bike around the lake or on the South Hill or East Hill recreation trail. You can get your bike serviced at The Outdoor Store on The Commons; that’s a good place to take it. They’ll do tune-ups for \$25 and they have lots of supplies.”

“The Lindseth Climbing Wall is a really nice place to go for rock climbing.”

“The Cornell Music Concert Series brings people to campus every month and also during the summer, so every other week or so there are classical music concerts on campus. There is also the Cornell Symphony Orchestra that has concerts once a month. The Performing Arts Center has modern dance and ballet and all sorts of different performances. The Ithaca Ballet performs there as well.”

“Try Ruloff’s for nightlife - it’s a good surprise.”

“Helen Newman Bowling Center is good, but avoid Ives Bowling - they have terrible ball returns and they damage your balls. Helen Newman has the only bar on campus, which is a big plus, it’s really cheap, and the people are really friendly there.”

“The intramural sports program is great, try either the grad league or the open league. Depending on the sport the different leagues have different competitions, so it varies whether open or

grad league is better. The cost varies, but it's pretty reasonable for a season - you get a lot of games. If you play with people you don't know, you can get to meet a lot of people. They have any sport you could imagine. They're pretty unorganized and fairly gender biased which is pretty frustrating but, that aside, it's still a pretty good time."

"I do ballroom dancing. I usually dance at the Helen Newman dance studio. They offer classes through the PE department, but you can also just use practice space there when it's free. You don't have to pay for just using the space either. There's a pretty big club of people on campus that do ballroom dancing, and it's a mixture of undergrads and grad students. There is also a lot of dancing out in the community. There's swing dancing, Argentine tango, Lindy Hop and so on."

"In the summertime, you can visit many U-pick fruit stands in the area; the fruit is much better than Wegman's and cheaper. Also during spring and summer, you can rent a Cornell garden plot for about \$15 for 5 months."