Preface

The policies and procedures related to graduate study included in this manual are effective for all graduate students in the Department of Civil, Structural, and Environmental Engineering (CSEE), effective August 1, 2015. All students should be aware of the contents of this manual as they progress through their academic careers in CSEE. Any exceptions to these policies and procedures must be approved by the Department Chairperson or Director of Graduate Studies. The Department reserves the right to modify the procedures and requirements described herein. Such modifications generally will not be considered as retroactive.

In accordance with federal and state laws, no person in whatever relationship with the State University of New York at Buffalo shall be subject to discrimination on the basis of age, religion or creed, color, disability, national origin, race, ethnicity, sex or sexual orientation, marital, or veteran status.
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1.0 General Information

1.1 Introduction
This manual is designed as a general reference for students pursuing graduate degrees in the Department of Civil, Structural and Environmental Engineering (CSEE) and for their faculty advisors. Policies and procedures of CSEE, the School of Engineering and Applied Sciences (SEAS) and the Graduate School of the University at Buffalo (UB) are listed. Different degree programs are described in Chapter 2, and policies that apply to all graduate students are in Chapter 3. Chapter 4 contains general support information.

Some CSEE requirements for graduate studies may be more rigorous than those included in other UB and SEAS documents. If there is a conflict between these requirements and others at the University, the most rigorous must be satisfied. Generally the department policies will be most rigorous.

A student who wishes to petition for waiver from any of the policies and procedures presented in this manual should consult with his or her advisor first and gain approval for the waiver from the Director of Graduate Studies (DGS).

Additional information on UB, SEAS and CSEE can be found in various electronic resources, as listed in Table 1.1.

Table 1.1 – Additional UB, SEAS and CSEE Electronic Resources.

<table>
<thead>
<tr>
<th>Title</th>
<th>Publisher</th>
<th>URL Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate School Policies and Procedures</td>
<td>The Graduate School</td>
<td><a href="http://grad.buffalo.edu/Academics/Policies-Procedures.html">http://grad.buffalo.edu/Academics/Policies-Procedures.html</a></td>
</tr>
<tr>
<td>Student Affairs Website</td>
<td>Student Affairs</td>
<td><a href="http://www.student-affairs.buffalo.edu">http://www.student-affairs.buffalo.edu</a></td>
</tr>
<tr>
<td>Graduate School Financial Support</td>
<td>The Graduate School</td>
<td>[<a href="http://grad.buffalo.edu/FinancialSupport/Scholarships">http://grad.buffalo.edu/FinancialSupport/Scholarships</a> Fellowships.html](<a href="http://grad.buffalo.edu/FinancialSupport/Scholarships">http://grad.buffalo.edu/FinancialSupport/Scholarships</a> Fellowships.html)</td>
</tr>
<tr>
<td>SEAS Web Site</td>
<td>SEAS</td>
<td><a href="http://www.eng.buffalo.edu">http://www.eng.buffalo.edu</a></td>
</tr>
<tr>
<td>The Graduate School Web site</td>
<td>The Graduate School</td>
<td><a href="http://www.grad.buffalo.edu">http://www.grad.buffalo.edu</a></td>
</tr>
<tr>
<td>UB Web Site</td>
<td>The University at Buffalo</td>
<td><a href="http://www.buffalo.edu">http://www.buffalo.edu</a></td>
</tr>
<tr>
<td>CSEE Web Site</td>
<td>CSEE</td>
<td><a href="http://www.civil.buffalo.edu/">http://www.civil.buffalo.edu/</a></td>
</tr>
</tbody>
</table>

1.2 Initial Advisement and Registration
Graduate study is individual in nature and requires frequent interaction between a student, his/her academic advisor (hereafter referred to as “advisor”), and other faculty members. To initiate this important process, each student is assigned a preliminary
advisor upon admission. The preliminary advisor will: (1) work with the student to decide coursework that should be taken during the first semester of graduate study (or until the student finds a different advisor); (2) assist with general questions a student may have about the program, including research opportunities; and (3) help the student find a different advisor, if necessary, for those students wishing to prepare a project, thesis, or dissertation. For students choosing the all-course M.S. option (Section 2.2) the preliminary advisor will normally be the advisor for the duration of the student’s graduate program. Students wishing to do a project, thesis, or dissertation must work out a mutual agreement with their advisor, not necessarily the same person as the preliminary advisor, who will supervise that work. Any advisor also may be of assistance to counsel in non-curricular matters, such as health; housing; deficiencies in English comprehension, speaking, or writing.

Students enrolling in graduate study for the first time should report to the CSEE Office of Graduate Studies at least one week prior to the first day of classes. The CSEE Office of Graduate Studies, located in 212 Ketter Hall, is the central resource for all administrative issues related to graduate studies. International students registering for the first time also should report to the International Student and Scholar Services office in Talbert Hall for assistance on housing, visa status, and orientation before coming to the department. All incoming students must attend the department’s orientation, which provides a general overview of the policies and procedures related to graduate studies in CSEE. This orientation typically is held the week before the beginning of the fall semester. If they have not already done so, students should meet with their preliminary advisor in the week before classes. After consultation with their preliminary advisor, new students will register for their first semester classes after the department orientation.

2.0 Graduate Programs and Degree Requirements

2.1 Areas of Study and Degree Options
CSEE currently offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Civil Engineering, and a M.S. degree in Engineering Science. The civil engineering degrees are intended for students who already have a background in civil, environmental, or a closely related field in engineering. The M.S. degree in Engineering Science focuses on environmental engineering and science. It is designed for students with a baccalaureate degree in a natural science, math, or a branch of engineering not closely related to civil or environmental engineering. Students admitted to this program should have a strong math background, including familiarity with differential equations.

Specialized program areas are listed in Tables 2.1 to 2.7 and include Bridge Engineering, Computational Engineering Mechanics, Environmental and Water Resources Engineering, Geomechanics and Geotechnical Engineering, Structural and Earthquake Engineering, and Transportation Systems Engineering. When admitted, a student is enrolled into one of these degree programs and a formal application procedure must be followed if a student wishes to change specialty area or degree.
With the exception of the Engineering Science area, which is for M.S. only, each of the above specializations also may be pursued for the Ph.D. degree.

While graduate students typically pursue degree options within one of the above technical areas, graduate study and research programs, by nature, are designed to allow for flexibility to meet student needs and interests. Graduate students, working with their advisor, are responsible for developing the program of study that fits their needs and career goals, within the guidelines described in Chapter 3.

2.2 Master of Science Program

There are three main options for the M.S. program:

1.) **Course-based**, aimed for those students who wish to develop an advanced understanding of material in their area of specialization, but are not interested in completing a project report. This option is usually the shortest path to the M.S.

2.) **Project-based**, provides opportunities for students to work on applied problems in their field of study without involving a research component. The written project report is an opportunity for students to develop communication skills. An oral presentation also may be included, at the discretion of the advisor.

3.) **Thesis-based**, designed to provide a fundamental, research-oriented program of advanced study for students wishing to enhance their knowledge and understanding within a specialized discipline. A main difference between a project and a thesis is that the thesis must involve an element of original research. Like the project report, the thesis also provides an opportunity to develop writing and presentation skills.

Graduate students preparing for careers in engineering practice often follow either the all course or project option, while those planning on further graduate education would normally choose the thesis option. For all three options a minimum of 30 credit hours must be completed for the degree. Further information can be found in Section 2.2.2.

2.2.1 Programs of Study

Programs of study are outlined for each of the specialization areas within CSEE in Tables 2.1 to 2.7. Note, however, that not all courses are taught in all semesters or in all years; it is the student’s responsibility, with help and approval of the advisor, to develop a plan of study that takes into account class scheduling. For each program, the required courses as well as elective courses are specified. Unless pre-approved by the student’s advisor and the department DGS, a maximum of three of the courses that are to be counted towards the course requirement for a master’s degree may be taken outside the department. Ph.D. programs may include additional courses outside the department, as long as they are approved by the student’s advisor. A required course can be replaced only if the student can demonstrate that he/she has already taken an equivalent course before entering UB. A petition must be filed by the student and approved by the instructor (of the course they wish to replace), and the DGS. In this
case, the student will be required to take an alternative course, as specified by the DGS and the student’s advisor.

Required courses vary between programs of study to reflect specific fundamental knowledge required in those programs. *Taking elective courses not listed in the table requires prior approval from the student’s faculty advisor.* Such approval should be documented in a memo to the DGS. Descriptions of all required and elective courses listed in these tables can be found on the department web site at [http://www.civil.buffalo.edu/graduate/graduate-courses/](http://www.civil.buffalo.edu/graduate/graduate-courses/), or on the websites of the different departments indicated. Class schedules also can be found online at [http://registrar.buffalo.edu/schedules/](http://registrar.buffalo.edu/schedules/) – this is a good resource to check which courses are, or recently have been offered.

For each of the specialization areas, all M.S. students must complete 6 credit hours from required courses as part of their 30 semester credits of approved graduate coursework. Suggested elective courses are listed in Tables 2.1 to 2.7, and students also may choose courses from other departments, but *all elective courses must be pre-approved by the student’s advisor.* Courses listed as an alternative required course may be taken as an elective if not used to fulfill the requirement. If there is any question regarding appropriate choices, the student should check with his/her advisor, the Graduate Studies Coordinator (GSC) or the DGS. The final set of coursework counting towards the degree should be approved by the student’s advisor and documented by sending an email memo to the GSC with a listing of the courses. Elective coursework may include individualized, or informal classes (i.e., Individual Problems, CIE 501, 502, 601, and 602 – Section 3.3) as part of the 30 required credits. Each such course requires force registration and filling out an Informal Course Form (available on the department web page) which includes a brief description of the course. Further information is contained in the following sections.
Table 2.1. M.S. Civil Engineering with a concentration in Bridge Engineering

| REQUIRED COURSES | CIE 584 Bridge Engineering I  or  
|                  | CIE 579 Bridge and Highway Infrastructure Management and Public Policy  
|                  | CIE 508 Probabilistic Analysis and Design  or  
|                  | CIE 532 Statistical Methods in Civil Engineering  
| ELECTIVE COURSES | CIE 430 Design of Wood Structures*  
|                  | CIE 500RAN Advanced Concrete Materials  
|                  | CIE 511 Advanced Mechanics of Solids  
|                  | CIE 515 Advanced Structural Analysis  
|                  | CIE 516 Advanced Mathematics for Civil Engineers  
|                  | CIE 519 Structural Dynamics and Earthquake Engineering I  
|                  | CIE 524 Steel Structures  
|                  | CIE 521 Plastic Analysis  
|                  | CIE 525 Concrete Structures  
|                  | CIE 526 Finite Element Structural Analysis  
|                  | CIE 528 Composite Structures  
|                  | CIE 533 Structural Design and Construction of Foundations  
|                  | CIE 534 Earthquake Engineering and Foundation Dynamics  
|                  | CIE 577 Bridge Earthquake/Hazard Engineering  
|                  | CIE 580 Emerging Technologies in Bridge Engineering  
|                  | CIE 585 Prestressed Concrete Design  
|                  | CIE 619 Structural Dynamics and Earthquake Engineering II  
|                  | CIE 625 Aseismic Base Isolation  

* Students who wish to take this course must submit a petition to allow it for graduate credit.

Table 2.2. M.S. Civil Engineering with a concentration in Computational Engineering Mechanics

| REQUIRED COURSES | CIE 511 Advanced Mechanics of Solids  or  
|                  | CIE 546 Environmental Fluid Mechanics  
|                  | CIE 516 Advanced Mathematics for Civil Engineers  
| ELECTIVE COURSES | CIE 512 Risk and Reliability in Geotechnical and Structural Engineering  
|                  | CIE 515 Advanced Structural Analysis  
|                  | CIE 520 Random Vibrations and Stochastic Structural Dynamics  
|                  | CIE 526 Finite Element Structural Analysis  
|                  | CIE 528 Composite Structures  
|                  | CIE 530 Mechanical Behavior of Materials  
|                  | CIE 617 Advanced Finite Elements  
|                  | CIE 623 Plastic Behavior of Materials  
|                  | MAE550 Optimization in Engineering Design  
|                  | MAE555 Continuum Mechanics  
|                  | MAE562 Analytical Dynamics  
|                  | MAE567 Vibration and Shock 1  
|                  | MAE568 Vibration and Shock 2  
|                  | MAE609 High Performance Computing 1  
|                  | MAE610 High Performance Computing 2  
|                  | MTH537 Intro to Numerical Analysis 1  
|                  | MTH538 Intro to Numerical Analysis 2  

### Table 2.3. M.S. Civil Engineering with a concentration in Environmental and Water Resources Engineering

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>CIE 532 Statistical Methods in Civil Engineering</th>
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<tbody>
<tr>
<td></td>
<td>CIE 546 Environmental Fluid Mechanics</td>
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<thead>
<tr>
<th>ELECTIVE COURSES</th>
<th>CIE 541 Groundwater Engineering</th>
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<tr>
<td></td>
<td>CIE 543 Water Quality Modeling</td>
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<td>CIE 550 Hydrologic Engineering</td>
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<td>CIE 556 Physical-Chemical Processes</td>
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<td>CIE 563 Air Pollution</td>
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<td></td>
<td>CIE 564 Chemical Principles of Environmental Engineering</td>
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<td>CIE 565 Biological Principles of Environmental Engineering</td>
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<td></td>
<td>CIE 569 Hazardous Waste Management</td>
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<td></td>
<td>CSE 503 Computer Science for Nonmajors</td>
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<td></td>
<td>EAS 521 Principles of Engineering Management</td>
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<td>EE 571 Sustainable Energy</td>
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<td>GEO 506 GIS</td>
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<td></td>
<td>GEO 515 Conservation Biogeography</td>
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<td>GEO 553 Remote Sensing</td>
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<td>GEO 548 Stream Restoration</td>
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<td></td>
<td>GEO 549 Fluvial Geomorphology</td>
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<td></td>
<td>GEO 559 GIS for Environmental Modeling</td>
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<td>GEO 561 Ecohydrology</td>
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<td></td>
<td>GEO 575 Landscape Modeling with GIS</td>
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<td>GEO 570 Integrated Environmental Management</td>
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<td></td>
<td>GLY 514 Hydrogeology</td>
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<td></td>
<td>GLY 530 Groundwater Modeling</td>
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<td></td>
<td>GLY 560 GIS for Earth Scientists</td>
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<td></td>
<td>GLY 562 Aqueous Geochemistry</td>
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<td></td>
<td>GLY 565 Environmental Remote Sensing</td>
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<td></td>
<td>IE 507 Design and Analysis of Experiments</td>
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<td></td>
<td>MAE 519 Turbulent Flow</td>
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<td>MAE 550 Optimization in Engineering Design</td>
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<td>MTH 537 Intro to Numerical Analysis</td>
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<td>MTH 538 Intro to Numerical Analysis 2</td>
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<td></td>
<td>SPM 534 Global Health</td>
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<td>SPM 549 Environmental Health</td>
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<td>SPM 551 Epidemiology Applied to Environmental Health</td>
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<td></td>
<td>PD 505 Urban Planning and Environmental Change</td>
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<td>PD 578 Environmental Planning</td>
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<tr>
<td></td>
<td>GEO 642 Law, Land, and the Environment</td>
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<td></td>
<td>PMY 626 Toxicology Principles and Practice</td>
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</table>
Table 2.4. M.S. Civil Engineering with a concentration in Geomechanics and Geotechnical Engineering

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>CIE 511 Advanced Mechanics of Solids or CIE 530 Mechanical Behavior of Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CIE 516 Advanced Mathematics for Civil Engineers or CIE 512 Structural Reliability and Safety</td>
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<table>
<thead>
<tr>
<th>ELECTIVE COURSES</th>
<th>CIE 531 Design and Construction of Earth Structures</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CIE 533 Structural Design and Construction of Foundations</td>
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<tr>
<td></td>
<td>CIE 534 Earthquake Engineering and Foundation Dynamics</td>
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<td></td>
<td>CIE 526 Finite Element Method</td>
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<td></td>
<td>CIE 529 Pavement Design</td>
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<td></td>
<td>CIE 535 Geoenvironmental Engineering</td>
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<td></td>
<td>CIE 541 Groundwater Engineering</td>
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<td></td>
<td>GEO 519 Transportation</td>
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<td></td>
<td>GEO 520 Transportation and Spatial Information</td>
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<td></td>
<td>CIE 621 Elasticity</td>
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<td>CIE 623 Plastic Behavior of Materials</td>
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<tr>
<td></td>
<td>CIE 630 Geotechnical In Situ and Lab Testing</td>
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<tr>
<td></td>
<td>CIE 645 Boundary Element Methods</td>
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<tr>
<td></td>
<td>GEO 506 GIS</td>
</tr>
</tbody>
</table>
### Table 2.5. M.S. Civil Engineering with a concentration in Structural and Earthquake Engineering

| REQUIRED COURSES | CIE 511 Advanced Mechanics of Solids or  
|                  | CIE 530 Mechanical Behavior of Materials  
|                  | CIE 516 Advanced Mathematics for Civil Engineers or  
|                  | CIE 508 Probabilistic Analysis and Designs  |
|                  | CIE 500RAN Advanced Concrete Materials  
|                  | CIE 512 Structural Reliability and Safety  
|                  | CIE 513 Stability  
|                  | CIE 515 Advanced Structural Analysis  
|                  | CIE 517 Plates and Shells  
|                  | CIE 518 Masonry Structures  
|                  | CIE 519 Structural Dynamics and Earthquake Engineering I  
|                  | CIE 520 Random Vibration  
|                  | CIE 521 Plastic Analysis  
|                  | CIE 524 Steel Structures  
|                  | CIE 525 Reinforced and Prestressed Concrete  
|                  | CIE 526 Finite Element Structural Analysis  
|                  | CIE 528 Composite Structures  
|                  | CIE 530 Mechanical Behavior of Materials  
|                  | CIE 533 Structural Design and Construction of Foundations  
|                  | CIE 534 Earthquake Engineering and Foundation Dynamics  
| ELECTIVE COURSES | CIE 561 Wind Engineering and Turbulent Flow  
|                  | CIE 577 Bridge Earthquake/Hazard Engineering  
|                  | CIE 580 Emerging Technologies in Bridge Engineering  
|                  | CIE 584 Bridge Engineering I  
|                  | CIE 585 Prestressed Concrete  
|                  | CIE 596 Expert Systems in Civil Engineering  
|                  | CIE 616 Experimental Methods in Structural Engineering  
|                  | CIE 617 Advanced Finite Elements  
|                  | CIE 618 Blast Engineering  
|                  | CIE 619 Structural Dynamics and Earthquake Engineering II  
|                  | CIE 620 Seismic Design and Analysis of Nonstructural Building Components  
|                  | CIE 621 Elasticity  
|                  | CIE 623 Plastic Behavior of Materials  
|                  | CIE 625 Aseismic Base Isolation  
|                  | CIE 626 Structural Control  
|                  | CIE 644 Seismology  
|                  | CIE 645 Boundary Element Methods  |
Table 2.6. M.S. Civil Engineering with a concentration in Transportation Engineering

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>CIE 536 Traffic Operations and Design or CIE 539 Travel Demand Forecasting or CIE 576 Geometric Design of Highways</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CIE 532 Statistical Methods in Civil Engineering or CIE 573 Transportation Analytics or CIE 5XX Traffic Safety</td>
</tr>
<tr>
<td>ELECTIVE COURSES</td>
<td>CIE 507 GIS Applications in Civil Engineering CIE 508 Probabilistic Analysis and Design CIE 529 Pavement Materials and Design</td>
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<td></td>
<td>CIE 537 Traffic Flow Theory CIE 555 Discrete Choice Analysis CIE 572 Transportation Systems Modeling and Control</td>
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<td></td>
<td>CIE 631 Transportation Network Analysis CIE 632 Transportation Systems Management and Control CSE 515 Introduction to Parallel Computing</td>
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<td>CSE 555 Introduction to Pattern Recognition CSE 574 Introduction to Machine Learning ECO 521 Urban Economics</td>
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<td>ECO 580 Econometrics 1 GEO 506 GIS GEO 519 Transportation GEO 520 Transportation and Spatial Information</td>
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<tr>
<td></td>
<td>GEO 605 Spatial Statistics IE 511 Social Network Behavior Models IE 512 Decision Analysis</td>
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<td>IE 551 Simulation and Stochastic Models IE 572 Linear Programming IE 573 Discrete Optimization</td>
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<td>IE 575 Stochastic Methods IE 576 Applied Stochastic Processes IE 662 Queuing Theory</td>
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<td>IE 675 Game Theory IE 677 Network Optimization IE 678 Urban Operations Research</td>
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<td>MGO 636 Supply Chain Design, Modeling and Optimization MGO 638 Logistics and Distribution Management PD 562 Transportation, Land Use &amp; Urban Form</td>
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<tr>
<td></td>
<td>PD 571 3D Visualization &amp; Urban Simulation STA 545 Statistical Data Mining I</td>
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Table 2.7. M.S. Engineering Science with a concentration in Environmental Science

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>CIE 532 Statistical Methods in Civil Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CIE 562 Ecological Engineering or</td>
</tr>
<tr>
<td></td>
<td>CIE 546 Environmental Fluid Mechanics</td>
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<tr>
<td></td>
<td>CIE 541 Groundwater Engineering</td>
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<td></td>
<td>CIE 543 Water Quality Modeling</td>
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<td></td>
<td>CIE 550 Hydrologic Engineering</td>
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<td></td>
<td>CIE 556 Physical-Chemical Processes</td>
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<td></td>
<td>CIE 563 Air Pollution</td>
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<tr>
<td></td>
<td>CIE 564 Chemical Principles of Environmental Engineering</td>
</tr>
<tr>
<td></td>
<td>CIE 565 Biological Principles of Environmental Engineering</td>
</tr>
<tr>
<td></td>
<td>CIE 569 Hazardous Waste Management</td>
</tr>
<tr>
<td></td>
<td>CIE 647 Groundwater Restoration</td>
</tr>
<tr>
<td></td>
<td>CSE 503 Computer Science for Nonmajors</td>
</tr>
<tr>
<td></td>
<td>EAS 521 Principles of Engineering Management</td>
</tr>
<tr>
<td></td>
<td>EE 571 Sustainable Energy</td>
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<td></td>
<td>GEO 506 GIS</td>
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<td></td>
<td>GEO 515 Conservation Biogeography</td>
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<tr>
<td></td>
<td>GEO 548 Stream Restoration</td>
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<tr>
<td></td>
<td>GEO 549 Fluvial Geomorphology</td>
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<td></td>
<td>GEO 553 Remote Sensing</td>
</tr>
<tr>
<td></td>
<td>GEO 559 GIS for Environmental Modeling</td>
</tr>
<tr>
<td></td>
<td>GEO 561 Ecohydrology</td>
</tr>
<tr>
<td></td>
<td>GEO 570 Integrated Environmental Management</td>
</tr>
<tr>
<td></td>
<td>GEO 575 Landscape Modeling with GIS</td>
</tr>
<tr>
<td></td>
<td>GLY 514 Hydrogeology</td>
</tr>
<tr>
<td></td>
<td>GLY 560 GIS for Earth Scientists</td>
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<td></td>
<td>GLY 562 Aqueous Geochemistry</td>
</tr>
<tr>
<td></td>
<td>GLY 565 Environmental Remote Sensing</td>
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<tr>
<td></td>
<td>IE 507 Design and Analysis of Experiments</td>
</tr>
<tr>
<td></td>
<td>MAE 519 Turbulent Flow</td>
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<td></td>
<td>MAE 550 Optimization in Engineering Design</td>
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<tr>
<td></td>
<td>MTH 537 Intro to Numerical Analysis</td>
</tr>
<tr>
<td></td>
<td>MTH 538 Intro to Numerical Analysis 2</td>
</tr>
<tr>
<td></td>
<td>MTH 558 Mathematical Finance</td>
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<td></td>
<td>PMY 626 Toxicology Principles and Practice</td>
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<td></td>
<td>SPM 534 Global Health</td>
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<tr>
<td></td>
<td>SPM 549 Environmental Health</td>
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<tr>
<td></td>
<td>SPM 551 Epidemiology Applied to Environmental Health</td>
</tr>
<tr>
<td></td>
<td>URP 578 Environmental Planning Methods</td>
</tr>
<tr>
<td>ELECTIVE COURSES</td>
<td>CIE 546 Environmental Fluid Mechanics</td>
</tr>
<tr>
<td></td>
<td>CIE 562 Ecological Engineering or</td>
</tr>
<tr>
<td></td>
<td>CIE 546 Environmental Fluid Mechanics</td>
</tr>
</tbody>
</table>
2.2.2 Advisors and Committee for M.S. Project/Thesis Option
All M.S. students opting for project or thesis as the culminating experience must select, with mutual agreement, an advisor as soon as possible but no later than the end of their second semester of full-time study. All advisors and core committee members must be members of the Graduate Faculty at UB, as determined by the Graduate School. Once selected, students are required to consult with their advisor to plan their coursework and research for each remaining semester. The advisor provides guidance and helps direct the student’s project or thesis. The advisor also helps form the thesis committee, which is chaired by the student’s advisor, and must include at least one other faculty member from CSEE. A committee is not needed for projects, although the student and advisor may opt to include additional committee members, for either project or thesis.

2.2.3 Culminating Experience Requirements
Each M.S. program of study includes a culminating experience that can be in the form of a comprehensive examination, a 3-credit project, or a 6-credit thesis (Table 2.8). It is possible to petition for up to 4 credits for a project, and for as little as 3 credits for a thesis. In these cases the student should consult with his/her advisor to write a memo to the DGS to document the reasons for deviation from the standard number of credit hours. The all-course option, which requires 30 credit hours of coursework and a comprehensive exam, is the default option for all entering M.S. students. A student may, however, with the approval of his/her advisor, choose a project or thesis as the culminating experience. In these cases, it is the responsibility of the student to identify a project or thesis supervisor and to work out a project or thesis topic with her/him. The coursework, culminating experience, and projected time for each M.S. option are summarized in Table 2.8. Requirements for comprehensive examination, thesis and project are outlined below.

Table 2.8. Master’s Degree Culminating Experience Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Minimum Credits of Approved Coursework</th>
<th>Culminating Experience</th>
<th>Estimated Time to Completion*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-course</td>
<td>30</td>
<td>Comprehensive examination</td>
<td>9 – 16 months</td>
</tr>
<tr>
<td>Project</td>
<td>27</td>
<td>3 credit project and presentation</td>
<td>12 – 16 months</td>
</tr>
<tr>
<td>Thesis</td>
<td>24</td>
<td>6 credit M.S. thesis and defense</td>
<td>18 – 24 months</td>
</tr>
</tbody>
</table>

* Times are estimated based on previous experience.

Comprehensive Examination. The comprehensive exam is a critical review of a journal paper that is chosen by the faculty in the area of concentration for each student. Students in their final semester are given a short list of papers to choose from, usually about half-way through the semester. The paper choices are submitted by faculty in
each of the CSEE concentration areas, and the distribution of papers is coordinated by the DGS. Students should read the paper and develop a critical review, following a format that is provided by the DGS. This exercise is an opportunity to bring together material and information gained through graduate coursework. Reviews will be due on the last day of classes for that semester, and will be graded by the faculty member who provided the paper. Grading is pass/fail, based both on technical merit and written presentation. If a student does not pass this exercise, the faculty member will provide feedback on what needs to be done to improve to a passing mark. This feedback will be provided within 1 week from the date of submission. The student will then have until one week before final grades are due to submit a revised report. If the student still does not pass, the exercise will be repeated the following semester. Students will have one retake opportunity. Note that continuous registration is required (Section 3.1) for students who have not yet completed all degree requirements. If a passing grade is not achieved the second time a student tries the comprehensive exam, the student may be dismissed without degree.

M.S. Project. The M.S. project report shall be submitted to the student’s advisor, who has sole responsibility for its review, revision, and acceptance. A second reader of the M.S. project report also can be assigned, at the discretion of the advisor. After acceptance of a final draft of the M.S. project report, an oral presentation may be required. If in doubt whether a presentation is required, the student should check with her/his advisor.

M.S. Thesis. The M.S. thesis must be successfully defended before an open audience and the student’s M.S. thesis committee. The student’s advisor will provide guidance to form the committee. Faculty members from other departments also can participate on a student’s committee, but may not replace the two required departmental representatives except when approved by the DGS (in such cases the main advisor still must be from CSEE). Prior to the M.S. thesis defense, the student in consultation with the advisor will prepare a draft of the thesis that is considered close to a final version and is deemed “defendable”. This process will normally require several iterations. It is worth keeping in mind that the process of writing often generates new ideas that will require additional time. Upon completion of the thesis, the student must prepare a “reader’s copy” of his/her thesis at least 14 working days before the scheduled defense. During this period the student’s committee members will review the document and decide whether revisions are required or if the defense can take place as scheduled. If revisions are necessary, then additional time will be needed for further review. Once the thesis is ready for defense, departmental announcements must be posted one week prior to the defense. The defense consists of an oral presentation open to the public, including questions, followed by a session with more in-depth questions with the student’s thesis committee only. After the defense, the committee will determine whether the student has successfully defended the thesis or if additional work is required. After successfully completing a thesis defense, the candidate must submit to the Graduate School an electronic copy of the thesis as described at [www.grad.buffalo.edu/etd/](http://www.grad.buffalo.edu/etd/) and a completed copyright and billing form ([http://grad.buffalo.edu/Academics/ETD.html](http://grad.buffalo.edu/etd/)). An M Form must be submitted to the GSC at the conclusion of all degree requirements.
The Graduate School will accept any self-consistent format that follows conventions of a recognized discipline, but some general formatting standards are also expected as outlined in the Guidelines for Electronic Thesis/Dissertation Preparation and Submission booklet. This booklet is available on the Graduate School's website at: http://www.grad.buffalo.edu. Final formatting should be determined in consultation with the student’s advisor and committee.

2.2.4 Important Milestones for M.S. Degree

As shown in Table 2.9, M.S. students, in consultation with their advisor, are required to meet appropriate milestones as they progress through their academic program. The dates shown in Table 2.9 are meant to be general guidelines and it is the responsibility of each student to meet appropriate deadlines.

In addition to the completion of coursework and the culminating experience, the following paperwork must be completed:

- TA evaluation forms (for teaching assistants) – filled out every semester a student serves as a TA;
- Annual progress report;
- Notification to GSC of coursework and intended graduation date (Section 3.12);
- Application to graduate through HUB;
- M-Form (for thesis) or final conferral documents (for project or all-course) at matriculation;
- Exit Survey; and
- Departing Student Form

The procedures for applying to graduate are shown in Section 3.12. When all requirements for graduation have been completed (course work plus culminating experience), the M-Form will be completed for students pursuing the thesis option. The M-Form provides information on the degree option and dates for completion and must be signed by the student’s advisor, committee members, and the DGS or department chairperson. For the project option the advisor will notify the DGS and GSC when all degree requirements have been fulfilled. For the all-course degree option, the preliminary advisor or the DGS will confirm when the comprehensive exam is successfully completed. Upon completion of all requirements, students are required to complete an Exit Survey administered by SEAS. Data collected in this survey are used to evaluate program strengths and areas needing improvement, employment benchmarking, and student evaluation of their graduate experience at UB. The Departing Student Form also must be filled out and submitted. This form documents that the student has cleaned up her/his lab and office space. It must be signed by the faculty advisor and turned in to the GSC before final conferral documents will be processed.
<table>
<thead>
<tr>
<th>Student Action</th>
<th>Initial course registration</th>
<th>Choose MS option, if not all-course</th>
<th>Continuing registration</th>
<th>Apply to graduate school</th>
<th>Revisions to expected graduation plan</th>
<th>Culminating experience</th>
<th>Submission of final conferral documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>First semester of program</td>
<td>No later than end of 2nd semester</td>
<td>Every semester until graduation</td>
<td>By end of second semester, or no later than beginning of final semester</td>
<td>Any time program is changed, e.g., conferral date, topic, committee members, etc.</td>
<td>Towards end of program</td>
<td>After completion of all degree requirements</td>
</tr>
<tr>
<td>Process</td>
<td>Meet with preliminary advisor to map out courses and register for first semester</td>
<td>Students wishing to choose M.S with thesis/project should meet with faculty to identify an advisor who will guide thesis or project</td>
<td>Fill out Graduate Student Advisement Form and meet with advisor; submit form to GSC Note: all thesis, project, dissertation, and individual problems courses must be force registered by the department</td>
<td>Send a memo (by email) to the GSC with your intended graduation date and other information as listed in Section 3.12, with a copy to your faculty advisor, who must approve of your plan; apply to graduate on HUB</td>
<td>As needed, email the GSC and your advisor with any changes to your graduation information. Advisors must email approval of these changes to the GSC</td>
<td>Thesis: Write and defend thesis; electronically submit thesis, submit Catalog and Billing form, and M-form Project: Write project, approved by advisor, who sends confirmation of completion to GSC All-course: Pass comp exam</td>
<td>Thesis: Advisor and committee members sign M-form, forward to GSC Project and all-course: GSC will communicate with the advisor, DGS, and the Graduate School to confirm that degree requirements have been met</td>
</tr>
<tr>
<td>Resources</td>
<td>Attend graduate student orientation before the start of classes.</td>
<td>Students should consult Departmental webpage to ascertain faculty research interests.</td>
<td>See GSC in 212C Ketter.</td>
<td>See GSC in 212C Ketter; see Registrar website</td>
<td>See GSC in 212C Ketter.</td>
<td>See advisor and GSC in 212C Ketter.</td>
<td>See GSC in 212C Ketter.</td>
</tr>
</tbody>
</table>

**Table 2.9. Milestones During M.S. Program**

Note: GSC is the Department Graduate Studies Coordinator (212 Ketter Hall)
2.3 Doctor of Philosophy Program
The Doctor of Philosophy (Ph.D.) program emphasizes research in a specialized area and includes a dissertation that expresses a high level of independent scholarship. The procedures for satisfying the requirements of the Ph.D. degree in CSEE are based on successful completion of the following:

- An approved program of graduate coursework;
- All the components of the Ph.D. qualifying examination, as described below; and
- Defense and approval of the dissertation.

In most cases a student should develop a relationship with a faculty member who will serve as the student’s advisor through the end of the student’s graduate program, and will work with the student in developing the dissertation research. This relationship can begin from the time the student starts the PhD program, but in any case a potential advisor must be identified before the student can sit for the qualifying exam (see below). As noted in Section 1.2, the preliminary advisor is not necessarily the same as the advisor who supervises research.

2.3.1 Responsible Conduct of Research (RCR) Training Requirement
In addition to the above components, all Ph.D. students are required to document their successful completion of “Responsible Conduct of Research” (RCR) training when they submit their Application to Candidacy (ATC) for their Ph.D. degree. This training requirement may be fulfilled by completing the Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research with a score of 80% or higher. Other ways to satisfy this requirement are to take either PHI 640 or RPN 541, but we strongly recommend the online option, for reasons of both time and cost. Please refer to the Graduate School Manual of Policies and Procedures regarding this policy for more information: [http://www.grad.buffalo.edu/policies/phd.php](http://www.grad.buffalo.edu/policies/phd.php).

2.3.2 Ph.D. Program Coursework
Course work for the Ph.D. degree should reflect a well-defined area of study and must be approved by the student’s advisor and research advisory committee (see following section). Such approval will be evidenced by signing the student’s Application to Candidacy. The full program of coursework should be formulated by the student and his/her advisor in the first or second semester past a master’s degree, or equivalent. The required and elective courses for the M.S. programs listed in Tables 2.1 through 2.7 also are applicable for Ph.D. programs, but students should keep in mind that specific course requirements may differ – one should always check with the advisor for details or clarification. The Ph.D. program consists of a minimum of 72 credit hours beyond the bachelor’s degree. A maximum of 36 credit hours of previous graduate level coursework can be transferred towards the Ph.D. (also see Section 3.2). All transfer credits are subject to approval by the student’s advisor, the DGS, and the Graduate School. Ph.D. programs must include from 12 to 24 credit hours of dissertation and 12 to 18 hours of coursework, depending on transfer credits. Ph.D. students will not receive credit for repeating courses taken earlier for the M.S. degree at UB or at other institutions.
2.3.3 Ph.D. Advisory Committee

Students pursuing a Ph.D. are guided primarily by their advisor and research advisory committee. The advisory committee has the responsibility of evaluating and approving the student’s program of coursework as well as advising the Ph.D. research and dissertation. This committee must include the advisor, who is a faculty member of CSEE and at least two additional faculty members from the university, one of which is also from CSEE. In cases where two faculty co-advise the student, a third committee member from CSEE is required. More than three committee members is acceptable, as long as the core committee membership satisfies the above constraints. Each of the three core required faculty members serving on Ph.D. committees must be members of the UB Graduate Faculty; Associate Members of the Graduate Faculty may not serve on Ph.D. committees as one of the three required core committee members, but may serve as additional committee members. Similarly, members from outside the University (e.g., industry representatives or faculty from other universities) can serve on Ph.D. committees, but not as one of the three required core committee members. The advisory committee should be formed, in consultation with the advisor, after passing the qualifying exam.

2.3.4 Ph.D. Qualifying Examination

Admission to formal candidacy for the Ph.D. degree requires successful completion of the CSEE Ph.D. qualifying examination. This examination consists of up to three parts, as described below. Different areas of the department may institute variations of the following, so students pursuing the Ph.D. degree should consult with their advisor about specific procedures and requirements.

All students wishing to take the qualifying exam must first arrange with a faculty member who agrees to serve as the student’s advisor, at least for the exam and to start the student’s research. The advisor will help form an examination committee, which also may become the student’s research committee. All students also must have a GPA of at least 3.0 in order to be eligible to take the exam.

Part I. A written comprehensive examination will be given using problems designed to test underlying mathematical and physical concepts covered in core courses related to each student’s area of specialization. Core courses are those that are required for each of the specialty areas, as listed in Tables 2.1 to 2.7. Note, however, that in some cases core requirements are slightly different for M.S. and Ph.D. programs. Students should check with their advisors to confirm material that will be covered. This part of the examination will be closed-book and will last four hours. An examination committee will be formed for each student taking the exam, which will determine the content and oversee grading. All students will be required to solve one question each in the two required core courses, and two or three additional questions covering material related to the student’s area of specialization. There may be more than one question offered in a particular area. Each problem will be graded on a pass/fail basis.

The Part I exam will be administered twice a year, usually on the first or second Saturday following the beginning of the fall or spring semester. All Ph.D.
students must take Part I no later than the beginning of their fourth semester in the Ph.D. program (i.e., students starting in the fall would take the exam by February of their second year). All students planning to take the examination must send an email to the GSC at least 2 months prior to the exam date, with their advisor copied, that they plan to take the exam. This message should state the intention to take the exam and that the student’s advisor agrees that the student is ready for the exam. A student must successfully complete Part I before moving on to Part II of the exam.

**Part II.** After passing Part I, the student will be given a take-home or oral exam, consisting of one or more problems designed by the student’s committee. Part II will take place within one month of Part I, with specific timing determined on an individual basis. Questions will be designed to test the assimilation of knowledge gained in coursework and the ability to formulate solutions, or solution approaches to new or open-ended problems. The objective of this part of the examination is to evaluate a student’s ability to carry out creative problem-solving that is essential to the successful completion of the Ph.D. degree.

**Part III.** At the conclusion of Parts I and II the student’s committee may, if desired, require an additional follow-up oral exam. This part of the examination may be structured to follow up on issues identified in Part I and/or Part II, it may include questions related specifically to a student’s research area, and/or it may include questions about any aspect of a student’s proposed area of research.

The student’s advisor should report the results of the examination to the student and to the DGS within two weeks of completing the qualifying examination (Parts I and II, and Part III if included). In the event a student does not pass, the examination committee will make a recommendation regarding whether the student should be allowed to take the exam a second time. A student may take the exam a maximum of two times. Even if a student passes, the committee may require certain coursework or other actions that should be taken to strengthen areas of possible weakness.

The student is not considered a Ph.D. candidate until passing the qualifying examination. Once that is done, the student will work with the advisor and committee to develop the Ph.D. research. Changes in advisor and committee membership are possible, depending on research direction and progress.

**2.3.5 Proposal Defense**

After passing the qualifying exam, the student should work with the advisor to develop a dissertation advisory committee, which could be the same as the exam committee discussed above. In collaboration with the advisor and committee, the student should develop her/his research. The proposal defense should take place no later than a year prior to the anticipated final dissertation defense. This process provides an opportunity to discuss research ideas and approaches, and helps insure the proposed (and presumably partially completed) work plan is adequate for the dissertation. The defense is a presentation and discussion with the dissertation committee, and a successful proposal defense becomes a plan for completing the dissertation. Students
are encouraged to interact regularly with their advisor and committee as they proceed with their research. The student’s advisor should alert the DGS by memo or email when a student has successfully passed the proposal defense.

2.3.6 Dissertation and Defense
Upon satisfactory completion of the qualifying examination and acceptance of a Ph.D. research proposal, the student should have a clear idea of the direction and expected end point for completing the dissertation research. The dissertation must represent an original and significant contribution to the state of knowledge in the candidate’s area of concentration. The final academic requirement to be satisfied by a candidate is the oral Ph.D. defense of his/her dissertation, which includes a public presentation by the candidate, an open session for questioning by the audience and committee members, and a closed session for additional questions by the committee members. General announcements for Ph.D. dissertation defenses must be posted one week prior to the defense, and should be distributed electronically to all faculty and graduate students (the GSC will assist with this). Announcements also may be posted in Ketter and/or Jarvis Halls; all faculty members and graduate students are invited to attend. Passing the defense indicates the Ph.D. committee is satisfied that the student possesses a true understanding of the material related to and contained in the dissertation. After successfully completing the dissertation defense, the candidate must submit to the Graduate School a digital copy of the dissertation, a copyright and billing form, and the Ph.D. exit survey. Students also need to submit a Departing Student Form before leaving. A completed and signed M-Form should be submitted to the GSC after the final dissertation has been uploaded to the Graduate School.

The Graduate School will accept any self-consistent format that follows conventions of a recognized discipline, but some general formatting standards also are expected as outlined in the Graduate School’s booklet entitled “Guidelines for Thesis and Dissertation Preparation and Submission”. This booklet is available on the Graduate School’s Web site at: http://www.grad.buffalo.edu.

2.3.7 Important Milestones During Ph.D. Program
As shown in Table 2.10, Ph.D. students in consultation with their advisors are required to meet appropriate milestones as they progress through their programs. The target dates shown in Table 2.10 are meant to provide general guidance and it is the responsibility of each student to meet the timelines appropriate for their situation.

In addition to coursework and dissertation, students must complete:

- TA evaluation forms (for teaching assistants) – filled out every semester a student serves as a TA;
- Application to Candidacy;
- Ph.D. student progress report (annually);
- M-Form (at matriculation);
- Exit Survey; and
- Departing Student Form
The Exit Survey is administered by SEAS. Data collected in this survey are used to evaluate program strengths and areas needing improvement, employment benchmarking, and student evaluation of their graduate experiences at UB. The Departing Student Form documents that the student has cleaned up her/his lab and office space.

The procedures for the Application to Candidacy are provided in Section 3.12. When all requirements for graduation have been completed (course work, dissertation defense, and administrative requirements as outlined above), the M-Form will be submitted. This is normally initiated by the student’s advisor or the GSC. The M-Form provides information on the dissertation (title, date of successful defense, statement of original work) and must be signed by the student, the student’s advisor, committee members, and the DGS or department chairperson.
Table 2.10. Milestones During Ph.D. Program

<table>
<thead>
<tr>
<th>Student Action</th>
<th>Initial course registration</th>
<th>Continuing registration</th>
<th>Selection of advisor</th>
<th>Qualifying examination</th>
<th>Application to Candidacy</th>
<th>Dissertation and defense</th>
<th>Submission of M-Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>First semester of program</td>
<td>Every semester until graduation</td>
<td>Prior to qualifying exam</td>
<td>Twice a year (in September and January or February)</td>
<td>Usually as soon as possible, after passing the Ph.D. qualifying examination*</td>
<td>At end of program</td>
<td>After dissertation defense</td>
</tr>
<tr>
<td>Process</td>
<td>Meet with preliminary advisor to map out courses and register for first semester</td>
<td>Fill out Graduate Student Advisement Form and meet with advisor. Hand in form to GSC. (All project, dissertation and individual problems courses must be force registered by department)</td>
<td>Students should meet with departmental faculty to identify an advisor who will guide his/her dissertation</td>
<td>Register with GSC; must be a current CSEE Ph.D. student, have a research advisor, and a GPA ≥ 3.0 to register</td>
<td>Fill out Application to Candidacy (must be typed) and meet with advisor. Student, advisor and committee members will sign, then give form to GSC for further signature. If needed, most changes to the Application to Candidacy form can be done with a Graduate Student Petition Form.</td>
<td>Write and defend dissertation, electronically submit dissertation to Graduate School, submit Catalog and Billing form, Ph.D. Survey, Departing Student Form, and M-form.</td>
<td>Have advisor and committee members sign M-form, then give to GSC.</td>
</tr>
<tr>
<td>Resources</td>
<td>Attend graduate student orientation before the start of classes</td>
<td>See GSC in 212C Ketter</td>
<td>Students should consult departmental webpage to ascertain faculty research interests</td>
<td>See advisor and GSC in 212C Ketter</td>
<td>See GSC in 212C Ketter</td>
<td>See advisor and GSC in 212C Ketter</td>
<td>See GSC in 212C Ketter</td>
</tr>
</tbody>
</table>

*For purposes of full time status, with advisor’s approval a preliminary ATC can be submitted prior to passing the qualifying exam.
3.0 Additional Policies and Procedures

The following policies and procedures are applicable to all graduate students in CSEE and conform with the policies and procedures of the Graduate School.

3.1 Continuous Registration, Full-time Status, and Residency

a) Students must maintain continuous registration, or a minimum of one credit hour in fall and spring semesters, until all degree requirements have been fulfilled. If such registration should be impossible, a leave of absence must be secured.

b) Under certain circumstances, including immigration requirements (for international students) and financial aid or scholarship regulations, students need to maintain full-time status. Full-time status is defined as registration for a minimum of 12 credit hours during each fall and spring semester, or a minimum of 9 credit hours if the student holds a graduate, teaching, or research assistantship. These definitions are used by agencies/organizations such as lending institutions, health insurance carriers, and the U.S. Citizenship and Immigration Service. Per immigration regulations, international students must maintain full time status during their entire period of graduate study at UB.

c) The only exceptions to the full-time status rule are (1) for the first semester of study it is possible to petition the International Student and Scholar Services office for a reduced course load, and (2) for students who have completed or will complete all of their course work in the semester for which full-time status is being requested, a Full-Time Status Form can be used even when registering for fewer than 12 credits (or fewer than 9 credits with assistantship). Unless a student is working on a thesis or dissertation, when more than one semester of less than 12 (or 9) credit hours registration is anticipated, full-time status will be granted for one semester only. For example, a student in an all-course M.S. program with 6 credits remaining to fulfill degree requirements cannot distribute those credits into two semesters.

d) The Full-Time Status form needs to be signed by the student's advisor and the department DGS. For Ph.D. students an Application to Candidacy (Section 3.12) must be submitted before full-time status will be approved. Further details may be found by referring to the Graduate School Policies and Procedures.

e) Ph.D. degree programs require a minimum residency requirement of the equivalent of two complete academic years of full-time study at UB. This includes two semesters of continuous full-time study not already applied to the master’s degree.

3.2 Transfer of Credits Taken at Other Universities

a) A maximum of 6 transfer credits of graduate course work may be applied toward the 30 credit hour requirement for a Master's degree.

b) A maximum of 36 transfer credits of graduate course work may be applied toward the 72 minimum credit hour requirement for the Ph.D. degree.

c) Only courses applicable to the engineering degree are acceptable as transfer credit. CSEE, in conjunction with the Graduate School, must approve all transfer
Students should fill out the appropriate form for acceptance of graduate credits taken outside of UB (form is available on Graduate School website).

d) Only those graduate courses completed with grades of "B" or better are eligible for consideration as transfer credit. However, the grade of the transferred course will not be counted towards the student’s grade point average at UB.

3.3 Informal Courses (Independent Study, Individual Problems)

a) Informal courses usually include Independent Study and Individual Problems. These courses are taught on an informal basis by arrangement with an instructor and do not have formal catalog descriptions. Informal courses can be taken by M.S. and Ph.D. students and, if the course is to be counted towards a degree, must be documented when registering for the course by completing a form available from the GSC or found on the department web page. This form includes a short narrative description of the content covered, means of evaluation, and signatures of the student and instructor. All informal courses are graded with a letter grade.

b) A maximum of 6 credit hours of informal course work may be applied toward the 30 credit hour requirement for the M.S. degree.

c) Excluding those credits applied towards the M.S. degree, a maximum of 6 additional credit hours of informal course work may be applied towards the minimum 72 credit hour requirement for the Ph.D. degree.

3.4 Undergraduate Courses for Graduate Credit

a) A student wishing to use an undergraduate course for graduate credit must submit a petition to the Graduate School prior to registering for the course in order to receive approval. This petition is done using a form available on the Graduate School website, called “Petition for Class Registration Outside Primary Career”. This petition must include a clear statement from the instructor of the course regarding what additional work will be required of the student to qualify for graduate credit. Copies of these petitions must be included in the Application to Candidacy. Retroactive approval will not be granted. Remedial courses, taken to make up deficiencies in a student’s undergraduate background, will not be considered for graduate credit.

b) Undergraduate courses must be at the 400 level to be considered for graduate credit, and a maximum of two such courses (6 semester hours of credits) may be applied toward a graduate degree. This maximum limit applies to both the M.S. and Ph.D. programs.

c) Undergraduate courses that carry 4 or more semester hours of credit will receive a maximum of 3 semester hours of graduate credit.

3.5 Inapplicable Credits

Credits for the following courses are not applicable towards the minimum requirements for Master’s and Ph.D. degree programs:

a) English Language Courses.

b) Any course not included in Tables 2.1 to 2.7 or not approved by the student’s advisor.

c) Remedial courses taken to fulfill department admission requirements.
3.6 Grading Policy

a) Load (L) grades are assigned to signify adequate progress in Theses, Project and Dissertations, since continuous registration is required. All ‘L’ grades will be changed to Satisfactory 'S' grades by the Office of the Registrar upon final acceptance of the Thesis, Project or Dissertation, and completion of all degree requirements (i.e., after submission of the M-Form).

b) All other grades in courses applicable to the degree must be letter grades: A, A-, B+, B, B-, C+, C, D, F, and FX (never attended), carrying quality points of 4.0, 3.67, 3.33, 3.0, 2.67, 2.33, 2.0, 1.0, 0, and 0, respectively. This requirement applies to informal courses as well.

c) For all graduate courses, an interim grade of Incomplete (IU) may be assigned if the student has not completed all requirements for the course. An interim grade of Incomplete (IU) shall not be assigned to a student who did not attend the course. The default Unsatisfactory (U) grade shall become the permanent course grade of record if the ‘IU’ is not changed through formal notice by the instructor upon the student's completion of the course within twelve (12) months after the close of the term for which the 'IU' is assigned. A shorter time frame for removal of the IU grade may be specified by the instructor.

3.7 Repeating Courses

Current UB Graduate School policy on repeating courses states “If a graduate student repeats a course that is normally not “repeatable” (“repeatable” courses include dissertation, research, thesis, project; independent study; directed readings, etc.), only the highest grade earned in the course will be counted toward the degree and used to calculate the grade point average associated with the graduate degree program requirements. However, the student’s official transcript will record all courses and accompanying grades attempted (including repeated courses). All resulting grades earned are calculated in the GPA reflected on the student’s final official transcript. SEAS places the additional stipulation that at most two such repeat attempts can be made for courses other than normally "repeatable" courses. This limit can be met in two different ways, by repeating the same course twice or by repeating two separate courses once each.

3.8 Non-Matriculated and Distance Graduate Studies

Students who hold a bachelor’s degree in engineering or applied sciences are permitted to register for graduate coursework as a non-matriculating students for a maximum of 12 credit hours. Applications as a non-matriculating student are administered using the university graduate admissions website, Gradmit, and admission must be approved by the DGS. Once registration reaches twelve hours, a service indicator will be placed on the student’s academic record by the Graduate School prohibiting further registration until the student matriculates into a graduate degree program. A Master’s student admitted on a provisional basis as a non-matriculated student must demonstrate his or her ability to perform satisfactorily at the graduate level before being admitted to the degree program as a matriculated student. The department will specify the conditions in the letter of admission offering provisional status.
Courses may be available through formal distance learning (the SEAS program is called EngiNet), or by special arrangement with a faculty member to take a course while not actually attending classes. Classes taken by distance learning (formally or informally) may not constitute more than 49% of a student’s total credit hours in a degree program. If the student is non-matriculating, the same 12 credit limit as noted above will apply.

3.9 Scholastic Standing
Exclusive of ‘S’ or ‘L’ grades, grades earned in courses counted toward the student’s M.S. or Ph.D. program must average a ‘B’ (3.00) grade point average or better to be in good academic standing in the graduate program. A minimum grade of ‘B’ in required courses must be achieved.

3.10 Academic Probation
For any of the following conditions, the student will receive an immediate academic review by the DGS. Upon completion of the academic review, the DGS may place the student on academic probation or recommend dismissal.

   a) the student receives a grade of ‘U’, ‘F’, or ‘D’ in any course required for completion of a graduate degree program; Note: a grade of ‘U’ or “F” also could result in dismissal (see below);
   b) the student’s cumulative GPA falls below the minimum of 3.0; or
   c) the student indicates a lack of ability as determined by the Director of Graduate Studies or the student’s advisor.

Students placed on academic probation will be issued a probationary letter by the Chair of the Department or the DGS, with a copy to the Graduate School and the student’s advisor, if applicable, indicating the conditions that must be met and an appropriate time frame in which to regain good academic standing in the graduate program. This time frame is usually one semester. A service indicator will be placed on the student’s account by the Graduate School to restrict future registration without departmental consultation.

3.11 Academic Dismissal
A graduate student may be dismissed from the program if any of the following conditions apply:
   a) a grade of "F" is earned in any course that could be applied towards the degree;
   b) more than two grades are obtained from among "C," "D," and "U" in courses which could be applied to the degree;
   c) the conditions of provisional admission have not been satisfied within one semester after admission;
   d) probationary status has not been removed after one semester, or within a timeframe determined by the DGS (as noted in a probationary letter);
   e) the cumulative grade point average for courses which could be applied to the degree falls below 2.5 at the end of any grading period;
   f) the student is found guilty of academic dishonesty according to existing regulations; or
g) more than four resigned “R” grades are obtained in courses which could be applied to the degree.

Students who are dismissed from the CSEE department will be issued a letter by the Chair of the Department or the DGS, with a copy to the Graduate School and the student’s advisor. A service indicator will be placed on the student’s account by the Graduate School to restrict future registration.

A student who has been officially dismissed and who seeks reinstatement must submit a formal request for reinstatement, along with a supporting statement of explanation, to the Chair of the Department. The request shall be reviewed according to the Policies and Procedures of the UB Graduate School. The Chair can readmit a student back into the program immediately following dismissal.

3.12 Applying to Graduate
The process for submitting formal intent to graduate is different for Master’s and PhD students. All students are expected to follow the time table outlined below in section 3.13.

MS students should submit a memo by email to the GSC, copied to the advisor, with the following information by the deadlines noted below:

1. Expected conferral date
2. Person number
3. List of all courses to be applied to the degree
4. Culminating Experience (comprehensive exam, project, or thesis)
5. Area of Concentration
6. Advisor name
7. Committee members, if applicable

Advisors should review the information and respond to the GSC with their approval of the student’s plan. The student should then apply to graduate through the registrar’s website, http://registrar.buffalo.edu/degrees/index.php. Any changes that need to be made to expected conferral date, graduation plan, or committee need to be communicated via email to the GSC and the student’s advisor as soon as the student knows of the change.

PhD students will utilize the Application to Candidacy (ATC) form, available at http://www.grad.buffalo.edu, to submit their plan for graduation. This form serves as a useful planning document for the student and the student’s dissertation committee, and indicates to the Graduate School the student’s intended degree date. **Note:** it is important to maintain an accurate expected degree date with the Graduate School; changes to the ATC, if needed, may be made using a Petition Form available on the Graduate School’s web site. Once admitted to candidacy, a student may not need to enroll for 12 credits (9 credits for graduate, teaching and research assistants) to be certified as a full-time student. As such, it is important for the student to prepare and submit their ATC as soon as possible. The timing for submission of the ATC is
generally immediately following the successful completion of the qualifying examination for Ph.D. students. If the student has not completed all coursework, the ATC includes a summary of courses intended to be applied toward the degree. The following additional points should be noted with regard to the ATC:

a) The ATC must be accompanied with official transcripts to document any transfer credits, and informal course descriptions (for independent study). If the transfer credit form has not already been submitted (Section 3.2), this form must accompany the ATC.
b) Major revisions that are necessary in the ATC (e.g., significant change in topic or abstract, adding and/or deleting more than two courses, changes in anticipated graduation date, changing major advisor, etc.) must be submitted to the Graduate School for approval by the divisional committee (check on Graduate School website or with the Graduate Studies Coordinator to find appropriate forms).
c) Minor amendments to the ATC that become necessary through changes in registration (e.g., adding or deleting anticipated courses or credits) must be formalized through an amendment petition available on the Graduate School website.
d) The ATC for the Ph.D. degree must be filed within one year of passing the Ph.D. qualifying examination. Later filings may delay the student’s graduation.
e) The ATC must be submitted at least three months prior to the expected degree conferral date. Specific dates will be distributed by the GSC.
f) An approved ATC must be on file before a student may submit a Certification of Full-Time Status Form.

3.13 Other Required Forms

a) Progress reports. All graduate students should fill out an annual progress report in conjunction with their advisors. This form will usually be collected during the spring semester. The purpose of this form is to document satisfactory progress towards the degree, and includes coursework completion and progress with research. A form for this purpose may be found on the department web page.
b) CSEE Departing Student Checklist. This form must be submitted at the conclusion of a student’s program of study, and is required before the student will be able to graduate, unless an exception is approved by the chairman or DGS. This form documents clean up of any lab and office space (including desk) used by the student, and is intended to insure work space is orderly for the next student.

3.14 Degree Conferral Timetable for Receipt of Paperwork

It is the responsibility of the student to submit the proper paperwork on time to satisfy the general requirements for a degree as specified in the Graduate Student Manual of the Graduate School. Each graduate student must become familiar with these University regulations. The Degree Conferral Timetable for Receipt of Paperwork is summarized online at http://www.grad.buffalo.edu/policies/deadlines.php. The deadlines for 2015-2016 are shown in Table 3.1
Table 3.1. 2015-16 Timetable for Receipt of Paperwork

<table>
<thead>
<tr>
<th>Completed graduation plan must be submitted to the department by</th>
<th>For Degree Conferral on September 1</th>
<th>For Degree Conferral on February 1</th>
<th>For Degree Conferral on June 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed graduation plan must be received in the Graduate School by</td>
<td>June 1</td>
<td>September 1</td>
<td>February 1</td>
</tr>
<tr>
<td>Final conferral documents must be received in the Graduate School by*</td>
<td>July 1</td>
<td>October 1</td>
<td>March 1</td>
</tr>
<tr>
<td>Final conferral documents must be received in the Graduate School by*</td>
<td>Mid-August</td>
<td>Mid-January</td>
<td>Mid-May</td>
</tr>
</tbody>
</table>

* Exact dates vary year-to-year – check with Graduate School or GSC

3.15 Time Limits for Degree

a) M.S. degree – Four years from the first registration date in the graduate program, excluding approved leaves of absence. (For part-time students, the time limit is six years from the first registration date in the graduate program, excluding approved leaves of absence).

b) Ph.D. degree – Seven years from the first registration date in the program, excluding approved leaves of absence.

Requests for extensions of time limits must be petitioned using a Graduate Student Petition Form with departmental approval through the advisor and DGS. The student must be currently making active progress towards the degree. The petition will be presented to the SEAS divisional committee for approval before being submitted to the Graduate School. The petition must clearly explain reasons for requesting the extension, present a schedule for progress, and set a deadline for completion of the program. The extension is normally granted for a maximum period of one year.

3.16 Leaves of Absence

Requests for a leave of absence must be approved by the DGS using a Graduate Student Petition Form. The form must then be forwarded to the Graduate School by the end of the first week of the semester in which the leave is to begin. Therefore, a petition for leave of absence should be filed with the department prior to the start of the semester in which the leave is to begin. Leaves of absence will normally be granted for only one year at a time. Leaves of more than one semester require valid justification and documentation from the student and the student's advisor. Examples of valid justification include documented cases of financial hardship, illness, family situations, or compulsory military service. A student who leaves the program after completion of some graduate work but has not been given an approved leave of absence must reapply and be readmitted as a new student, according to university regulations. If the
break is for less than 5 years the student can file a semester record activation request and does not need to reapply to the program. There is a $350 fee for reactivation. The form needs to be approved by the department and by the Vice Provost for Graduate Education. Further information may be found on the Graduate School website, http://grad.buffalo.edu/Academics/Policies-Procedures/Registration.html. Continued

leaves of absence beyond two years will normally not be granted. International students are advised to consult with International Student and Scholar Services, 210 Talbert Hall, North Campus, (716) 645-2258, prior to applying for a leave of absence.

3.17 Graduate Research Assistantship Stipends Policy

Graduate Research Assistantship (GRA) stipends within CSEE are subject to the following policy.

a) Any appointment for a Ph.D. or M.S. research assistantship shall be at least at a level equivalent to current Teaching Assistantship stipends.

b) The total duration for which the GRA stipend is provided shall be communicated by the faculty to the research assistant at the start of the funding period to clearly provide an accurate assessment of the available funding.

c) The CSEE Chair will not sign GRA appointment forms that are below the stated stipend without a written explanation by the faculty member. It is at the discretion of the CSEE Chair to accept or reject such explanation. If the explanation is approved by the Chair and a lower RA stipend is assigned, the reasons for this deviation from the policy shall be communicated to the graduate research assistant.

3.18 Academic Dishonesty

Academic integrity is at the heart of all academic pursuits. As published by the University at Buffalo, academic dishonesty includes, but is not limited to, the following:

a) Previously submitted work. Submitting academically required material that has been previously submitted – in whole or in substantial part – in another course, without prior and expressed consent of the instructor.

b) Plagiarism. Copying or receiving material from any source and submitting that material as one’s own, without acknowledging and citing the particular debts to the source (quotations, paraphrases, basic ideas), or in any other manner representing the work of another as one’s own.

c) Cheating. Soliciting and/or receiving information from, or providing information to, another student or any other unauthorized source (including electronic sources such as cellular phones, tablets, laptop computers, etc.), with the intent to deceive while completing an examination or individual assignment.

d) Falsification of academic materials. Fabricating laboratory materials, notes, reports, or any forms of computer data; forging an instructor’s name or initials; resubmitting an examination or assignment for reevaluation which has been altered without the instructor’s authorization; or submitting a report, paper, materials, computer data, or examination (or any considerable part thereof) prepared by any person other than the student responsible for the assignment.
e) **Misrepresentation of documents.** Forgery, alteration, or misuse of any university or official document, record, or instrument of identification.

f) **Confidential academic materials.** Procurement, distribution or acceptance of examinations or laboratory results without prior and expressed consent of the instructor.

g) **Selling academic assignments.** No person shall sell or offer for sale to any person enrolled at the University at Buffalo any academic assignment, or any inappropriate assistance in the preparation, research, or writing of any assignment, which the seller knows, or has reason to believe, is intended for submission in fulfillment of any course or academic program requirement.

h) **Purchasing academic assignments.** No person shall purchase an academic assignment intended for submission in fulfillment of any course or academic program requirement.

The University at Buffalo takes its commitment to principles of academic integrity very seriously. All students are encouraged to carefully review the UB policies regarding academic integrity on a regular basis. Policies can be found at: [http://grad.buffalo.edu/Academics/Policies-Procedures/Academic-Integrity.html](http://grad.buffalo.edu/Academics/Policies-Procedures/Academic-Integrity.html). If there are any questions or uncertainty about what constitutes academic dishonesty, the student is encouraged to discuss the matter with her/his advisor.

As engineers, CSEE graduate students have special ethical obligations. From the National Society of Professional Engineers (NSPE) Code of Ethics, “engineers shall avoid deceptive acts” and “shall conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.” For additional information about the procedures in place within the CSEE department, see the academic integrity section of the departmental website (http://www.csee.buffalo.edu/undergraduate/current-students/academic-integrity/).

### 3.19 Computing Lab Policy

The department computing labs are located in 208 Ketter Hall and 215 Jarvis Hall. Access to these labs is a privilege provided to undergraduate and graduate students in CSEE. Lab facilities are to be used for academic work only; nonacademic or personal use is prohibited and could result in loss of access.

All students are required to follow the UB-CIT (Computing and Information Technology) policies for computing lab use, which are maintained at: [http://www.buffalo.edu/content/dam/www/ubit/pdfs/it-policies/Computing and Network Use Policy.pdf](http://www.buffalo.edu/content/dam/www/ubit/pdfs/it-policies/Computing and Network Use Policy.pdf)

In addition to the UB-CIT policies, the following rules apply to the CSEE labs:

a) The CSEE computers are for academic and research use only. Downloading of files for personal use is strictly prohibited.
b) Access to the 208 Ketter lab requires a registered UB card (CSEE majors are automatically registered). The door to the lab must be closed at all times; propping open the door is prohibited.

c) Food and/or drinks are not allowed in the labs at any time.

d) Each user must log in to a single computer using his/her assigned UBIT login and logoff when the session is completed. Accessing an account belonging to a different student (with or without permission) is prohibited.

e) Users are permitted to access one computer at a time, and must remain with the computer while in use (except for short bathroom break). Unattended processes are subject to termination by the system administrator. Students can request special permission from SENS (email: senshelp@buffalo.edu) to access multiple computers for research purposes for a limited duration. Normally, such request would be considered only for off-peak hours when classes are not in session.

f) During times of peak activity (i.e., when other students are waiting), students should limit their session to a reasonable duration and essential academic usage.

g) Students may not install software or save files to local hard drives. All work should be saved to a portable storage device. Any temporary files left after logging off will be deleted by the system administrator.

h) Computers are to be left on at all times and should not be physically moved. Shutting down or restarting computers is prohibited. After logging off, any hardware problems should be reported to by sending email to senshelp@buffalo.edu.

i) Students may not move or otherwise interfere with supporting hardware, including but not limited to teaching station(s), networking cables/switches, and/or or security cameras.

Conformance with the above policies will be monitored through a variety of means, including but not limited to unannounced inspections by CSEE faculty, remotely monitored security cameras, and network monitoring. Violation will result in temporary or permanent loss of lab privileges at the discretion of the CSEE Department Chair, in conjunction with other possible penalties as defined in the UB-CIT policy. CSEE and SENS reserves the right, upon reasonable cause for suspicion, to access all aspects of its computing systems and networks, including individual login sessions to determine if a user is violating this policy or state or federal laws.

3.20 Publication Policy

All publications of scholarly work by CSEE graduate students are subject to the following policy.

a) Any student submitting work for publication conducted while they are or were a student in the department must have that work reviewed by her/his advisor prior to submittal.

b) Faculty review of papers submitted under this policy should acknowledge faculty review in the Acknowledgment section of the paper (unless the faculty is a co-author).
c) The department will pursue withdrawal of papers submitted without research/academic advisor review.

This policy is in no way intended to limit student desire for publishing independent work, rather, it is meant to help guide and protect the interests of the student, the faculty, the department, and the university.

3.21 English Requirements
From the Graduate School website, http://grad.buffalo.edu/Academics/Policies-Procedures/International-Admissions.html#assistants, International Student Admissions Policies state “In addition to the English Language Proficiency Requirement (demonstrated with a valid TOEFL or IELTS score), all international students who have been awarded graduate, research, or teaching assistantships (including Presidential Fellowships) must take the Speaking Proficiency English Assessment Kit (SPEAK) test upon arrival on campus. Registration for classes is possible only after taking the SPEAK test.” Furthermore, international students are expected to achieve a score of 55 or 60 on the SPEAK test, or a score of 50 plus a successful teaching demonstration before representatives from the ELI Program and their own department, in order to determine eligibility to teach. However, a teaching demonstration is only at the request of the student's department. It can be requested even for a student with a SPEAK score below 50, depending on department needs.

Students whose scores are below 55 on the SPEAK test are advised and may be required to take and pass Communication Skills for International Teaching Assistants (ESL 512) before being allowed to take on any teaching duties, regardless of the TOEFL score used for admission purposes. Upon completion of this course, Teaching Assistants take the SPEAK test again and are reevaluated to determine competence for assuming teaching responsibilities.

Students should refer to the above web site for further information.

3.22 Changing Program Area or Degree
Students are admitted into specific program areas as indicated in their letter of acceptance from the department. It is possible to change areas once in the program, but only with the permission of the faculty and the DGS. Students who wish to change specialty area should submit a formal request to the DGS, who then will poll the relevant faculty involved to determine whether the change is reasonable.

Students in the M.S. program who are interested in continuing on to a Ph.D. must submit a formal application through Gradmit. The GSC should be notified, and will work with the student to determine information from the student's prior application that could be copied to the new application. The GSC also will initiate a petition to waive the application fee (the application fee is usually waived when a student is moving from one degree to another in the same program). The student should insure all information is correct, upload a current UB transcript to the new application, and obtain at least two letters of recommendation from UB faculty. One of the faculty referees should indicate he/she is willing to serve as the student’s advisor. These applications will be reviewed
along with all new applications. Students in this situation should be aware that the GRE is required for Ph.D. applications, and would need to be taken if not already done so for the M.S. application.

4.0 Supplemental Information

4.1 Physical Facilities

4.1.1 Computing Resources Available to CSEE Graduate Students
Campus-wide computing resources, maintained by University at Buffalo Information Technology (UBIT) Services, are available to all CSEE graduate students. To access these resources, students are required to activate their UBIT account at the Computing Center (located on the academic spine adjacent to Fronczak Hall), or by following the directions available at consultation sites such as 101 Bell Hall. Workstations based on UNIX, LINUX and other computing platforms are available at several campus computing laboratories. Information regarding available UBIT resources is available at http://www.ubit.buffalo.edu.

SEAS also maintains extensive computing facilities for the support of academic and research activities. After receiving a UBIT Account, a SEAS account can be obtained by applying at the SEAS computer facility at 101 Bell Hall, or online at the Science and Engineering Node Services (SENS) website at http://www.sens.buffalo.edu/accounts/.

In addition to the above-mentioned resources, CSEE maintains laboratories in 208 Ketter and 215 Jarvis with personal computers based on the MS-Windows operating system. Students generally access these machines using their UBIT ID.

Access to the 208 Ketter and 215 Jarvis computing labs is a privilege provided to students in CSEE. All students are required to follow the CSEE Computing Lab Policies that can be viewed online at http://www.civil.buffalo.edu/uploads/students/computer_policy_2013.pdf, as well as the university-wide policies on computing and network use at http://www.sens.buffalo.edu/policies.

4.1.2 Research Centers and Laboratories
The Department is home to several well equipped research centers and state-of-the-art laboratories that graduate students often use in their research. Descriptions of the various research centers and laboratory facilities within CSEE can be found at http://www.civil.buffalo.edu/research/centers-and-laboratories/.

4.2 Miscellaneous

4.2.1 Student Clubs
The UB Student Association is home to over 130 clubs. Graduate students who wish to join professional student clubs can find more information at http://gsa.buffalo.edu/.
4.2.2 Safety
Safety precautions should be followed at all times. When in the shop or laboratories, all students must follow all safety rules and procedures. The student should become familiar with all relevant safety requirements and procedures before using any laboratory or shop equipment. All students must complete the Right to Know and Safety Training before they will be allowed to work in a laboratory. Information on these training modules will be provided at orientation meetings at the beginning of the school year. In case of an emergency, contact University Police at 645-2222.

4.2.3 Keys
Permission to obtain office and laboratory keys is granted by the Department Chair or his/her representative. Keys may be obtained from one of the departmental coordinators once permission is approved. Offices and laboratories should always be locked at night and/or whenever they are unoccupied. All keys must be returned to the department at the conclusion of a student’s graduate program.

4.2.4 Offices and Desks
Office and desk space, if available, is assigned to full-time students by the Department Chair or his/her representative. Desk space is generally provided to students with a graduate, teaching, or research assistantship only. It may not be possible for every student to be assigned desk space.

4.2.5 Mail, Telephones and Copying
Mail may be picked up from the mail room in 210 Ketter Hall or in the mailroom in 207 Jarvis Hall. Incoming mail is usually distributed before noon. All students should check their mail regularly to learn of any important announcements. Outgoing mail can be deposited in the department office. Students should have all personal mail sent to their local residences rather than to the University address.

A number of laboratories have phone service restricted to University calls and incoming calls. The main department phone number is 645-2114. Each office has its own extension. If long distance calls of an official nature are required, they should be made through the advisor's phone. Under no circumstances will COLLECT calls be accepted on any department phone. Personal calls should be made using personal phones or at pay phone stations.

There are two main copiers for department use, one in the department offices in 210 Ketter Hall and the other in 207 Jarvis Hall. These copiers may be used only by graduate students copying material associated with a research project or with a teaching assignment. The amount of copying done on these copiers should generally be limited to less than 50 copies. Large copy volumes should be taken to the University copy service in Jacobs Hall (Quick Copy Center). For students on research projects, an account to use a copier in the Science and Engineering Library (SEL) also can be arranged through the research project director. Any personal copying, including copying of notes, homework/examination solutions, journal articles, and thesis drafts is
not permitted on department copiers. Public copy machines are located in the libraries and in Great Lakes Graphics in the UB Commons.

4.2.6 Use of University Letterhead
University letterhead paper may not be used unless the letter is for official university business and the student's advisor has approved its use.

4.2.7 Faculty and Staff Contacts
Contacts for all CSEE faculty and staff can be found on the department web site at: http://www.civil.buffalo.edu/people/interactive-people-search/position:faculty/.