

**Department of Civil & Environmental Engineering**

# **Graduate Student Handbook**

**Masters**

**Brigham Young University**

2021



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## Introduction

This student handbook contains a summary of policies and procedures that MS-Thesis or Project graduate students in the Department of Civil & Environmental Engineering are expected to know and follow. This handbook explains the procedures that are to be followed in the course of obtaining a degree but does not cover every conceivable situation. Students are invited to counsel with their Faculty Advisor, Graduate Program Manager or the Graduate Coordinator about special circumstances.

### ***Minimum Registration and Residency Requirements***

- **You must register for a minimum of 2.0 hours in the semester or term you are admitted**
- Active Status- to retain active status in your graduate program students must register for and complete at least 6 credit hours with acceptable grades per academic year.  
An Academic year is considered September through August.
- Minimum Registration is at least two hours of credit during any semester (including two hours combined spring/summer terms) in which student uses university facilities, consults with faculty, thesis defense, graduates, or works as a TA/RA.
- International students are required to be registered as full-time students and must register for and complete at least 9.0 credit hours each fall and winter semesters or 4.5 credit hours in a term
- Credit hours:  
**Thesis program:** 31 minimum approved hours which includes 6 thesis hours and 1 hour of Graduate Seminar.  
**Project program:** 31 minimum approved hours which includes 3 project hours and 1 hour of Graduate Seminar.
- Program of Study: Master's degree students should outline their Program of Study under the direction of their graduate committee during their first semester, completing it no later than the third week of the second semester.
- Evaluations: evaluation of the student's graduate program progress by his/her department advisor is required at least twice each academic year.
- Residency requirements: residency is required for the major part of the work. This work must be completed under the specific direction of a graduate faculty member while the student is in residence at BYU. "In residence" is defined as (1) being registered for credit as a graduate student and (2) living and conducting research in the general vicinity of the university, where the student has ready access to research facilities and consultation with the faculty. Further, all work must be completely open for university review and publication. Any exceptions to the above must be supported by written approval from the department and college and obtained in advance of any work being performed.
- Prospectus: Students must submit a written prospectus on their proposed research topic during their first semester of graduate seminar.
- Defense: students must complete an oral defense of thesis or oral presentation of project.
- Cumulative 3.0 GPA or above in all program of study courses.
- Students who are graduating must be registered for a minimum of 2 credit hours when they defend and when they graduate. It is preferred that you register for dissertation, thesis, or project..
- For a more detailed description see: <https://cce.byu.edu/masters-information> and <https://gradstudies.byu.edu/page/minimum-registration-requirements>
- The master's degree must be completed within five years of admission to the master's program atBYU.

## Program Requirements

### Graduate Advisor and Committee members

Each graduate student is required to select a graduate committee composed of at least three members. The chair of the graduate committee, or graduate advisor, must be from the student's major department. During the first semester, the student works with their graduate advisor to select the committee on [GradProg](#).

### Program of Study and GradProg

The Program of Study is a carefully considered plan which identifies the student's focus, lists all courses required, and sets up a plan of courses. During the Seminar in the first Semester of the graduates' program the student will learn how to use the [GradProg](#) system to set up the required Program of Study. Each Program of Study must meet the minimum university degree requirements and all the requirements as explained in this handbook.

Students must register for and attend the weekly graduate seminar (CEEn 691R) during their first two semesters while at BYU. The GradProg system will be introduced. Official announcements regarding graduate study are made at the seminar. The seminar also serves to broaden graduate education through exposure to technical ideas in a variety of areas.

Master's degree students should outline their Program of Study under the direction of their faculty advisor during their first semester, completing it no later than the third week of the second semester. Thirty (30) hours of coursework and directed design or research are required; one hour of seminar credit is also required. A GPA of 3.0 or higher must be maintained.

*These hours must include:*

- Thesis Option: 6 hours of thesis credit (CEEn 699R)
- or
- Project Option: 3 hours of project credit (CEEn 698R)

*These hours include:*

- Maximum of 3 credits of approved courses numbered from 300 to 499.
- In some restricted instances students seeking a master's degree may apply credit taken during the senior year at BYU toward the degree, but in no instance can this credit apply to both a baccalaureate and a graduate degree. Senior and post-baccalaureate credit combined cannot exceed 10 semester hours in a graduate program.
- Maximum of 7 hours of approved transfer or non-degree courses.
- Courses may be applied to the MS degree within five years of taking the course.

*These hours may NOT include:*

- Any courses with D or E grades
- Any course credit applied toward a BS degree
- Any additional seminar courses beyond one required hour
- Any skill requirement courses
- Any courses numbered below 300

## **Receive Biannual Evaluations**

The progress of each graduate student will be evaluated twice each year, in January and September. The student's faculty advisor rates the graduate student as making satisfactory, marginal, or unsatisfactory progress. The faculty advisor may consult with other members of the graduate committee when determining this rating. The faculty advisor reports the student's progress to the graduate program manager. Students whose progress is rated as marginal or unsatisfactory will receive notification to meet certain requirements to return to satisfactory status.

### **The evaluation given to a student will include:**

- Specific tasks the student must complete in order to maintain or regain a satisfactory rating
- Clear deadlines established for each of the specified tasks
- A recommendation of faculty member(s) they can contact for more information or support

### **Marginal progress may include the following:**

- Failure to submit a Program of Study and establish a graduate committee by the end of first semester
- Failure to submit a prospectus by the end of second semester
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Minimal contact with the committee chair

### **Unsatisfactory progress may include the following:**

- Failure to submit a Program of Study since prior evaluation
- Failure to submit a prospectus since prior evaluation
- Failure to resolve any problems or fulfill any requirements indicated in a previous marginal or unsatisfactory review
- Minimal or no contact with the committee chair
- Poor performance in research or registering for thesis hours when little or no work has been performed
- Program of Study GPA below 3.0 or Program of Study course grade below 2.0
- Unacceptable ethical or professional behavior

If a student receives a marginal or unsatisfactory rating and has not improved his or her performance in accordance with the actions outlined on a previous evaluation, by the time of the next evaluation, the student should meet with his committee chair to determine possible recourse, if any, to termination. The biannual evaluation is used by the department to satisfy criteria for continuing funding. It is also used by the BYU Financial Aid Department to determine eligibility for financial aid.

A student receiving two consecutive marginal and/or unsatisfactory student evaluation ratings will be terminated.

## **Policy for Dismissal and Grievances**

A student's graduate status may be terminated for the following reasons:

- Failure to satisfactorily complete the conditions of acceptance
- Failure to fulfill the university's minimum registration requirement
- A request to withdraw
- Consecutive and unsatisfactory ratings or two less than satisfactory ratings are received in succession.
- Failure to make what the department or the university deems to be satisfactory progress towards a graduate degree
- Failure on the final oral examination (defense of thesis)
- Violation of the university's standards of conduct or Honor Code
- Failure to comply with the time limit (five years for a master's degree)

***A student dismissed or facing dismissal may request review of termination or impending termination. Such requests should be submitted in writing to the department chair. A student who wishes further consideration may request review by the college dean. Ultimately, a final request for review may be made to the Dean of Graduate Studies who may appoint a committee to review the matter. All requests for review of termination must be initiated within one year of the semester in which the termination takes place.***

## **Thesis vs. Project Options**

The intent of a thesis is to advance the state of the art, while the intent of a project is to apply the state of the art. The results of a thesis should be publishable as a journal or conference article, while the results of a project may or may not be publishable. Students completing a thesis receive 6 credit hours for their effort, while students completing a project receive 3 credit hours for their effort. Work on a thesis is more likely to be funded than work on a project. Both a thesis and a project are reviewed by a graduate committee comprised of three faculty members. A thesis is presented to the faculty committee, while a project is usually presented in graduate seminar. Expectations regarding the quality of written and oral presentation are the same for both a thesis and a project.

### ***Thesis Option***

The student must complete an original research study under the direction of the chair of the advisory committee. A written thesis must be prepared by the student and approved by the advisory committee. The thesis is orally defended before the advisory committee, although additional faculty and others may be in attendance. Copies of the thesis are distributed to the advisory committee at least two weeks prior to the oral thesis defense.

If using a published article as part of your dissertation make sure that you reserved the rights to publish as a dissertation.

In the oral thesis defense the student will spend approximately one-half to one hour presenting his or her thesis work and approximately one-half hour responding to questions from the committee. The student will be judged on mastery of the thesis subject and on the quality of thesis work. The committee may vote as follows:

1. *Pass*
2. *Pass with qualifications*: In this case the student must complete the minor revisions or requirements specified by the committee to the satisfaction of the committee chair, who then sends a written approval to the Graduate Office.
3. *Recess*: In this case the student must pass a second and final oral thesis defense no sooner than one month later. The new date must be rescheduled with Graduate Studies.
4. *Fail*: In this case the graduate degree program of the student is terminated.

### ***Project Option***

For the project option, the student is required to complete a research, design, or special topic project under the guidance of the chair of the advisory committee. This project is not as extensive as the thesis study and need not be original research. Three hours of credit is allowed for the project. In order to provide adequate time to accomplish the work, the student should select and begin working on the project during the first semester of their MS study. The project should require synthesis of information from several sources and/or a comprehensive design of an engineered faculty. For design projects, cooperation with professional engineers is encouraged to solicit actual design problems and information.

A written project report is required, but not for archival purposes in the Harold B. Lee Library, as occurs with a thesis. The written text will be reviewed and corrections made by the advisory committee. The student must allow time for revising his or her report as part of the project. The project is to be presented orally to students and faculty, usually as part of a graduate seminar. The project report will be graded by the student's advisory committee and must be submitted to the committee before the oral report is given. Submittal should occur several weeks before the deadline date. After the student has made final corrections to the project report, a completed Signature Page, along with a pdf copy of the project, should be submitted to the department. A spiral bound copy is submitted to the committee chair.

## ***Submit Prospectus***

The Prospectus must be submitted by the end of the first semester. A prospectus defense may be held at the request of the committee. The purpose of the prospectus is to define the scope of the thesis or project. The prospectus establishes the minimum requirements for completion of the thesis or project and helps prevent the student from undertaking an unrealistic project. When written early in the program, the prospectus provides focus that will help expedite completion of the thesis or project.

## ***Examination Requirement***

There is no written comprehensive examination requirement for the Master of Science Degree. An oral presentation of the project and defense of the thesis is required as noted below.

## ***Graduation***

Graduation deadlines are usually early in the semester you plan to graduate so make sure you follow the deadlines and plan ahead. Note that the undergraduate application deadline is a different date than the Graduate student deadline date. The [Graduation application and deadlines](#) can be found on this webpage.

## ***Defend and Finalize Thesis***

Students must have approval of their graduate committee in GradProg in order to schedule the oral examination or defense. Committee member approval on GradProg certifies that the student and the thesis are ready for the oral exam; therefore, it is essential that students submit their thesis to the committee several days before the defense in order to get approval and be able to schedule on GradProg. The input of the title of your thesis is also required before the GradProg system is ready to schedule the defense. The Program manager can help with checking the formatting.

Care should be given in establishing the date, and time of the defense with all members of the committee. This requires advance planning. Be aware of the deadlines for the semester you want to defend your thesis and graduate.

Members of the Graduate Committee will serve as the examining committee. Spouses, parents, and friends are welcome to attend the oral examination; small children should not attend. Refreshments are neither required nor expected.

The examination format is as follows:

- The student's research is presented.
- The general audience is excused.
- Questions are asked by committee members.
- The decision (pass, pass with qualifications, recess or fail) is announced.

The presentation should last approximately 30 minutes. Consideration should be given to the following expectations:

1. A well thought-out, well-organized, cogent summary of the student's work including:
  - An explanation of how the current work relates to the student's discipline
  - The rationale behind the project in the context of available literature
  - If the student has been part of a research team or lab, an explanation of the student's intellectual contribution to the project and a description of how the student's work fits into the broader research conducted in this lab
  - The questions or issues the current work was designed to address
  - The way the design, method, and/or approach addressed those questions

- The analysis of data gathered
- The results, outcomes, final products, or performance

2. An interpretation of results, findings, contributions, insights, and conclusions and their significance. What does this work add to existing knowledge?

3. A discussion of implications the work suggests for future research or creative endeavor.

4. A discussion of any applied or clinical implications suggested by the work.

5. Thoughtful, well-founded responses to all questions the committee members might ask.

It is likely that the graduate committee will request revisions of the thesis. Students should discuss the revisions with committee members and do their best to comply with their requests. The committee will approve the revisions in GradProg for the student to pass.

**Note:** Students should allow at least a full week following their defense to finish all remaining requirements before leaving campus.

**Submit revised thesis to committee.** Complete the revisions suggested during the defense and submit again on GradProg or an external tool so that all the committee members can approve the thesis defense on GradProg.

**Create the pdf for the ETD.** Students submit their theses or dissertations as a single PDF (portable document format) file. Typically, the PDF files are generated using Adobe Acrobat software (not Reader), which retains all formatting information and allows the addition of multimedia objects. Documents prepared with many common software programs and document preparation systems, Microsoft Word, WordPerfect, TeX, LaTeX, and other applications that can output to a print file (postscript) can be easily converted to PDF files. The library is a good resource if you are having trouble.

BYU Graduate Studies requires that a title page, abstract and table of contents be included in each thesis and dissertation. The format of the title page must comply with University style standards as communicated [here](#).

Formatting of the abstract and table of contents is at the discretion of the college style standards. If needed, default formatting guidelines for each of these pages, the thesis body, and sample documents are available [here](#).

To ensure that each thesis and dissertation is legible and accessible in printed and digital format, BYU Graduate Studies requires:

- US Letter sized pages (BYU Print and Mail suggests margins of at least  $\frac{3}{4}$ " to ensure quality of printed and bound documents)
- all fonts embedded in the PDF
- bookmarks for each chapter and heading that is present in the table of contents section in the PDF

Send a copy to the Graduate Program Manager to look over the formatting.

**Submit ETD on GradProg.** Once the student uploads the ETD in GradProg, the department, college and graduate studies will be notified. The ETD will need to be approved by Graduate Studies for the final document to be accepted. All approval is done online through the GradProg system.

**Note:** All blank pages must be removed from the PDF of the thesis prior to submitting the ETD. Renumber pages as required.



**Submit thesis for binding.** After receiving college approval, students are required to order just one bound copy of the thesis for their committee chair. Students may also order additional copies for their own use. The designated colors are blue cover with gold lettering.. All copies are ordered through BYU Print and Mail Services online at: [www.printandmail.byu.edu/theses](http://www.printandmail.byu.edu/theses). Students are responsible for payment of all copies.

**Submit Exit Survey** – Students are given a survey to complete. Comments are used to further strengthen the graduate program. These comments are kept confidential.

**Walk for Commencement and Convocation** – Students wishing to walk during commencement and convocation can order their cap and gown online. Students are permitted to walk early as long as they have had their oral examination before the graduation ceremonies.

## **Program Timeline**

- Choose a faculty advisor (committee chair) during the application process
- Submit program of study during 1<sup>st</sup> semester of graduate work
- Submit prospectus by end of 2nd semester
- Complete all provisions during first year (if admitted provisionally)
- Fulfill seminar attendance requirement during first year
- Meet with graduate advisor for bi-annual evaluations
- Have a plan to complete all courses on program of study prior to applying for graduation
- Apply for graduation by university deadline
- Submit best draft of thesis to faculty advisor at least one month prior to defense
- Submit defense draft to all committee members at least 2 weeks prior to scheduling defense
- Schedule oral defense when all of the committee has approved ready for defense in GradProg
- Submit a copy of thesis to the graduate program manager for first review prior to thesis defense
- Thesis defense done and passed by all committee members with any revisions made to thesis
- Make two copies of thesis, one in pdf without blank pages for online view (ETD), one with blank pages to be bound in professional book form
- Submit updated thesis in ETD for formatting review to the graduate program manager
- Submit EDT online in GradProg for approval from graduate studies, department and college
- Email bound book copy of thesis with blank pages to graduate program manager for review
- Submit PDF of thesis to Print and Services for the required bound copy for your Faculty Advisor

## **Financial Aid Options**

### ***Department Scholarships***

Students intending to complete a Masters in Civil Engineering at BYU are eligible to apply for departmental scholarships each year. Applications are available in January from this website: <http://ceen.et.byu.edu/content/scholarships>. The submission deadline is in March. Check with the CEEEn office for the specific deadline date. These awards are made in June for support beginning in the Fall semester. These awards are given once-a-year, and the student is responsible for applying prior to the deadline. Selection is based on:

- Scholastic merit (particularly on the applicant's program GPA and GRE scores).
- Need
- Contributions to the University through extracurricular activities. These scholarships may be received in addition to any assistantship or privately endowed awards listed below unless the total financial aid package exceeds the scholarship limitations stipulated by the University.
- International students are not eligible for department scholarships during the first year in the graduate program.

### ***Student Loans***

Federal Stafford Loans are available to graduate students who qualify. Only degree-seeking students who are making satisfactory academic progress will be considered for loan approval. International students are not eligible for Federal Stafford Loans. <https://financialaid.byu.edu/federal-loans>.

### ***Research Assistantships***

Several of the faculty have funds from both off-campus and on-campus sources to support students as research assistants. These awards support students at the normal current pay rate for research work up to **half-time (20 hours/week)**. This research work normally applies towards completion of the student's thesis or dissertation. Research assistantships are typically granted by faculty members in one of the three ways:

- The faculty member puts out an announcement in the department office when funds for such awards become available, and applications from students are then accepted.
- A student with an interest in a particular faculty member's area of research makes contact with that faculty member who can then give that student primary consideration as funds become available.
- The faculty member reviews a student's application for admission to graduate school and makes an award to the promising student at the time the student is admitted.

### ***Teaching Assistantships***

All graduate students are eligible for teaching assistantships with the exception of those who already have received **half-time research assistantship**. These awards support graduate students for work associated with the grading and teaching of courses. Applications are available in the department office.

### ***On-Campus Employment***

Student campus jobs other than assistantships and internships are listed at Student Employment Services. Graduate students wishing to seek on-campus employment must be registered for a minimum of two credit hours. Full-time graduate students are not permitted to work more than 20 hours at on-campus employment outside of their academic departments or 28 hours within their department. International students must be registered for at least 9 credit hours or have full-time status in order to work on campus. Special employment restrictions may apply to international students. For more information regarding on-campus employment, contact Student Employment Services at 801-422-3561.

# MS in Civil Engineering

## Transportation Emphasis

Course No	Course Title	Area	Credit Hours	Semester Offered
505	Concrete Mixture Design and Analysis	Pavements	1.5	W
526	Bridge Preservation	Pavements	1.5	W – odd years
543	Chemical Stabilization of Soils	Pavements	1.5	W – odd years
562	Traffic Engineering	Operations and Planning	3	F
563	Pavement Design	Pavements	3	F
565	Urban Transportation Planning	Operations and Planning	3	F
566	Pavement Management	Pavements	3	W – even years
568	Asphalt Mixture Design and Analysis	Pavements	1.5	F – even years
580	Technical Writing for Publication		1.5	F – even years
662	Transport Simulation	Operations and Planning	3	W
664	Transportation Site Planning	Operations and Planning	3	W

Transportation Engineering is divided into two general areas with little professional overlap:

- **Highway Pavement Materials:** Students should supplement these courses with relevant coursework from Civil and Environmental Engineering or from Geology.
- **Transportation Planning and Operations:** Students should supplement these courses with relevant coursework from Civil and Environmental Engineering, Statistics, Mathematics, Geography, or Public Management.

For further information on the Transportation Engineering emphasis within the department contact:

Materials	Dr. Guthrie	422-3864	guthrie@byu.edu	430 N
Planning	Dr. Macfarlane	422-8505	gregmacfarlane@byu.edu	430 H
Operations	Dr. Schultz	422-6332	gschultz@byu.edu	430 O

## Idealized Schedules

These schedules assume that students enter the program in Fall semester and have not already taken any of the listed courses.

### Planning and Operations

Semester	Class 1	Class 2	Elective 1	Elective 2
Fall 1	562: Traffic	565: Planning	Stat 511	<i>Elective</i>
Winter 1	662: Simulation	664: Site Planning	<i>Elective</i>	<i>Elective</i>
Spring / Summer	Research			
Fall 2	699 R (Thesis)			

Work with your faculty advisor and thesis committee to identify electives that will aid your research and career goals. Electives and substitutions include (check course catalog for offerings):

- CE 414: Engineering Applications of GIS
- CE 461: Geometric Highway Design
- CE 514: Geospatial Environmental Engineering
- Geog 410: Urban Planning Methods
- Geog 424: Urban Transportation Planning
- Geog 510: Professional Planning Studio
- Math 410: Introduction to Numerical Methods
- Math 525: Network Theory
- MPA 631: Public Program Evaluation
- MPA 632: Quantitative Decision Analysis
- MPA 634: Data Science for Managers
- MPA 675: Local Government 1: Form of Government and Service Delivery
- MPA 676: Local Government 2: Planning, Land Use, and Growth
- Stat 512: Statistical Methods for Research 2

**MS in Civil Engineering: Water Resources/Environmental Emphasis**  
**Course Offerings (updated July 2021)**

Course No	Course Title	Credit Hours	Semester Offered
CE 414	Engineering Applications of GIS	3	F
CE 439	Water Resources Study Abroad	3	W/Sp*
STAT 511	Statistical Methods for Research 1	3	F
CE 514	Geospatial Software Development	3	W
CE 531	Principles of Hydrologic Modeling	3	F
CE 533	Advanced Hydraulic Routing	3	W
CE 534	Hydroinformatics	3	F
CE 535	Hydraulic Design of Channels and Control Structures	3	W
CE 547	Groundwater Modeling	3	F
CE 551	Water Treatment Facilities Design	3	F
CE 555	Environmental Chemistry	3	F
CE 635	Sediment Transport & River Restoration	3	Sp
CE 648	Groundwater Contaminant Transport	3	W
CE 651	Wastewater Treatment Facilities Design	3	W
CE 654	Water and Wastewater Advanced Treatment Processes	3	Sp

**For further information on the Water Resources/Environmental Engineering emphasis within the department contact:**

Environmental:	Dr. Sowby	422-5679	<a href="mailto:rsowby@byu.edu">rsowby@byu.edu</a>	Rm: 430 C
Environmental:	Dr. Williams	422-7810	<a href="mailto:pwilliams@byu.edu">pwilliams@byu.edu</a>	Rm: 430 L
Water Resources:	Dr. Hotchkiss	422-6234	<a href="mailto:rhk@byu.edu">rhk@byu.edu</a>	Rm: 430 K
Water Resources:	Dr. Miller	422-6331	<a href="mailto:wood_miller@byu.edu">wood_miller@byu.edu</a>	Rm: 430 W
Water Resources:	Dr. Nelson	422-7632	<a href="mailto:jimn@byu.edu">jimn@byu.edu</a>	Rm: 430 P
Hydrology:	Dr. Ames	422-3620	<a href="mailto:dan.ames@byu.edu">dan.ames@byu.edu</a>	Rm: 430V

**MS in Civil Engineering: Structures Emphasis**  
**Course Offerings (updated July 2021)**

Course No	Course Title	Credit Hours	Semester Offered
CE 507	Linear Finite Element Methods	3	F
CE 508	Structural Vibrations	3	F
CE 521	Advanced Structural Steel Design	3	F
CE 525	Bridge Structures	3	F
CE 528	Masonry Design	3	W
CE 529	Structural Wood Design	3	F
CE 607	Nonlinear Finite Element Methods	3	W

**For further information on the Structures Engineering emphasis within the department contact:**

Concrete, Masonry & Timber	Dr. Sorensen	422-7764	<a href="mailto:tsorensen@byu.edu">tsorensen@byu.edu</a>
Steel and Timber Analysis	Dr Judd	422-6333	<a href="mailto:johnn_judd@byu.edu">johnn_judd@byu.edu</a>
Structural Analysis & Finite Element Methods	Dr. Scott	422-6324	<a href="mailto:michael.scott@gmail.com">michael.scott@gmail.com</a>
Structures	Dr Shepherd	422-6311	<a href="mailto:kendrick_shepherd@byu.edu">kendrick_shepherd@byu.edu</a>

## MS in Civil Engineering: Geotechnical Emphasis

### Course Offerings (updated July 2021)

Course No	Course Title	Credit Hours	Semester Offered
CE 442	Foundation Engineering	3	F
CE 540	Geo-Environmental Engineering	3	F
CE 542	Deep Foundations and Retaining Systems	3	W
CE 544	Seepage and Slope Stability Analysis	3	W
CE 545	Geotechnical Analysis of Earthquake Phenomena	3	W
CE 547	Groundwater Modeling	3	F
CE 563	Pavement Design	3	F
CE 641	Advanced Soil Mechanics	3	See Schedule
CE 645	Field and Laboratory Testing of Soils	3	To be determined
CE 648	Groundwater Contaminant Transport	3	W

Geotechnical Engineering is strongly aligned with a number of related fields including, among others, Structural Engineering, Environmental Engineering, Water Resource Engineering, and Geology. As a result, supplemental courses selected from these disciplines within the department and other disciplines outside the department may be appropriate for individual students. A course list for graduate study will depend on an individual student's career goals, research objectives, and individual interests. Therefore, we strongly recommend that graduate students interested in Geotechnical Engineering consult with a geotechnical faculty member as they develop a final study list.

**For further information on the Geotechnical Engineering emphasis within the department contact:**

Dr. Rollins	422-6334	<a href="mailto:rollinsk@byu.edu">rollinsk@byu.edu</a>
Dr. Jones	422-7569	<a href="mailto:njones@byu.edu">njones@byu.edu</a>
Dr. Franke	422-1349	<a href="mailto:kfranke@et.byu.edu">kfranke@et.byu.edu</a>