Graduate Student Handbook

Department of Civil and Environmental Engineering

http://www.cee.vanderbilt.edu/

July 2010
Main Number- 615-322-2697  
Vanderbilt University  
Civil and Environmental Engineering  
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Civil and Environmental Engineering FACULTY

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<tr>
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<td>Thabrew</td>
<td>Lanka</td>
<td>2-2697</td>
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<td><a href="mailto:lanka.thabrew@Vanderbilt.Edu">lanka.thabrew@Vanderbilt.Edu</a></td>
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<td>2-7012</td>
<td><a href="mailto:h.truelove@Vanderbilt.Edu">h.truelove@Vanderbilt.Edu</a></td>
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<td>Turner</td>
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<tr>
<td>Stammer</td>
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<td>3-8060</td>
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<tr>
<td>Troxel</td>
<td>Lori</td>
<td>2-0055</td>
<td>295 JH</td>
<td>2-3365</td>
<td><a href="mailto:lori.a.troxel@vanderbilt.edu">lori.a.troxel@vanderbilt.edu</a></td>
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<tr>
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<td>John</td>
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<td><a href="mailto:john.r.veillette@vanderbilt.edu">john.r.veillette@vanderbilt.edu</a></td>
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<tr>
<td>Brown</td>
<td>Kevin</td>
<td>287JH</td>
<td>23365</td>
<td></td>
<td><a href="mailto:Kevin.g.brown@vanderbilt.edu">Kevin.g.brown@vanderbilt.edu</a></td>
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Help Desk  
Security  
Security Emergency
Helpful information for new Graduate Students

1. Getting a Parking Permit

Parking Services located in Wesley Place (2043 Scarritt Place, off 21st Avenue South)
http://www.vanderbilt.edu/traffic_parking/

New students should go in person to register the vehicle and receive a parking sticker. Parking decals are available from the Office of Traffic and Parking, 7:30 a.m. to 4:00 p.m., Monday to Friday; closed 12:30 p.m. to 2:00 p.m. on Wednesdays; closed holidays.

Applicants must bring:
1. Student identification cards. If residing off campus, students must provide verification of address (e.g., copy of lease, utility bill).
2. Social Security Number.
3. A copy of the state vehicle registration certificate for each vehicle to be registered.
4. Drivers License.
Continuing students will be able to register on-line. See the web site for details.
2. Getting a Student ID Card

The CARD Office
184 Sarratt Student Center, Nashville, TN 37240, (615) 322-2273
M-F 8:30-4:00
http://thecard.vanderbilt.edu/faq.php

The CARD is your student ID card. With it you are able to access, debit spending accounts, VU Meal Plans, libraries, authorized areas of the Jacobs Hall & Featheringill Hall and the Student Recreation Center. By completing the CARD Selections and Guarantor Agreement Form, VU Meal Plans and debit spending funds will be placed into your account at the beginning of the semester. There are two debit-spending plans available - the Flexible Spending Account (FSA) and the Meal Money Account (MMA) and various VU Meal Plan selections.

What to bring to get a CARD?

Students: Driver’s License (in addition, your letter of admission)
Students, Faculty, and Staff will receive their first CARD free of charge. Replacement Cards will cost $15.00 payable by cash, check, or with flexible spending debit account funds.
Spouse ID Cards: Spouse cards of full time students can be obtained by paying a fee of $10, showing students’ ID and proof of marriage.
3. **Registering for classes**

1. Meet with your academic advisor, DGS during first two semesters, prior to registering for classes, to select appropriate courses (to satisfy program requirements and student interest).

2. **New** students will be assisted with registration by **Brenda Jordan, Registrar**, School of Engineering.

   Office: 104-C Featheringill Hall
   Address:
   Vanderbilt University
   VU Station B 351519
   Nashville, TN 37235
   Phone: 615-322-5900
   Fax: 615-343-0670
   Email: brenda.s.jordan@vanderbilt.edu

3. **Continuing students** can register for classes on-line using **OASIS** (Online Access to Student Information Systems).

   In order to do so, the students require the following:
   - VUNet ID and e-password
   - Registration code (PIN) from their academic advisor

   For instructions on the use of OASIS please visit, [http://registrar.vanderbilt.edu/registrat/oasis1.htm](http://registrar.vanderbilt.edu/registrat/oasis1.htm)

Students are responsible for registering of courses and timely payment of all fees and charges. Students should stay abreast of the various course registration and drop/add deadlines. Failure to do so may cause late fees being applied to student accounts.

If you have any questions, do not hesitate to contact your academic advisor, DGS, or the School of Engineering registrar.
4. Getting your VUNet ID

Please visit the web link below for information on acquiring your VUNet ID:
https://vunetid.vanderbilt.edu/

Some FAQ’s are reproduced below:
Q. What is a "VUnetID" and how do I get one?
A. VUnetID is the means for Vanderbilt users to identify themselves to the services on VUnet, the campus data network. Currently enrolled students and faculty and staff members on record with Human Resource Services are automatically eligible for a VUnetID. You will have the same VUnetID for as long as you remain a student or employee of Vanderbilt. You must activate your VUnetID by visiting:
https://www.vanderbilt.edu/epassword
Upon doing so, you will be assigned a VUNet ID and a Password.
Q. How do I change my v-password?
A. If you know your current v-password, you may change it on-line.
Q. What do I do if I've forgotten my v-password?
If you have forgotten your v-password, you must ask a VUnet Services Administrator to set your VUnetID to "re-authorization" status. You will then be able to set a new password using the authorize tool.
Q. What is an e-password?
The enhanced security password is the latest, most secure way of identifying yourself to online services at Vanderbilt. The extra security an e-password provides is necessary for access to secure applications. Students can use it to access things like their academic records. These and other applications are possible only with users operating in the more secure environment an e-password provides. For more information, see the http://its.vanderbilt.edu/support/faq.php
Q. How do I change my VUnetID?
You cannot change your VUnetID once one has been assigned to you. It doesn't really matter if your name has changed because nobody uses your VUnetID other than you.
5. Accessing your VUWebmail
Most students today have a variety of email applications including hotmail, yahoo, comcast, google, etc. However it is important that student activate their VUNet ID and start viewing their VU mail account on a daily basis.
VU mail is the preferred method of communication between the faculty/staff in Department of Civil and Environmental Engineering and the students. Information pertaining to class work, and other important announcements related to the Department and the School is disseminated via VU mail.
Once you have activated your account you can view your email by visiting the following web site regardless of whether you are on-campus or off-campus.
https://vuwebmail.vanderbilt.edu/webmail/src/login.php

Please visit the web link below for information on the use of your VU mail:
http://its.vanderbilt.edu/vumail/

Some FAQ’s are reproduced below:
Q: What is my login / password for my VUWebmail?
Login with your VUnet ID and password. VUwebmail currently requires "e-password if you have it, v-password if you don’t." If you’ve forgotten your password, visit http://www.vanderbilt.edu/epassword/

Q: How much mail storage space do I get on the VU mail system?
All users are granted a 20-megabyte disk space quota when their account is set up. You can pay for additional disk space through Information Technology Services (ITS) (https://its.vanderbilt.edu/quotarequest/).

6. Using your VUspace
VUspace gives you space to put your web page and enable you to share files and other resources over the network. Files you save in your VUspace can be accessed from just any networked computer you might use. For further information about VUspace visit: http://its.vanderbilt.edu/vuspace/
7. **Where can I find other relevant information?**

[http://www.vanderbilt.edu/students.html](http://www.vanderbilt.edu/students.html)

The web link above is a good resource for information on various topics including:

- Schedule of Courses
- Academic Calendar (holidays, exams)
- Library (on-line catalogs, journals)
- Student Handbook (rules and regulations, rights and privileges)
- OASIS (register for classes)
- Honor Code
- Activities and Organizations
- Student Recreational Center
- Student Accounts
- Financial Aid
- Student Loans
Karen Page

Administrative Assistant

Office: Room 269, Jacobs Hall
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        VU Station B 351831
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Email: karen.d.page@vanderbilt.edu

Karen provides clerical and administrative support to faculty, students, and staff. Her responsibilities include grants management, personnel and payroll administration, purchasing and accounting functions at the department level.

Karen Fuller

Graduate Program Assistant

Office: Room 275, Jacobs Hall
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Fax: 615/322-3365
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Karen assists and coordinates graduate student affairs in the Civil and Environmental Engineering Department.
Anna M. Oldham
Administrative Assistant I
Department of Civil & Environmental Engineering
Office: 275 Jacobs Hall; Phone: 615 322-6405; Email: Anna Oldham

Anna plans and coordinates seminars and other meetings in the department.

Rossane P DeLapp
Research Instrumentation Analyst
Lab Manager and Safety and Environmental Compliance Officer

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VU Station B 351831
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Fax: 615-322-3365
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Maintains and operates environmental analytical instrumentation on research projects and provides support to faculty, students, and staff in the areas of laboratory access, laboratory procedures, and purchasing/procuring laboratory equipment.

David R DeLapp  
Senior Research Engineer

Office:  
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VU Station B 351816  
Nashville, TN 37235  
Phone: 615-343-8505(?)  
Fax: 615-322-3365  
Email: david.r.delapp@vanderbilt.edu

Maintains structures and materials laboratories and acts as an instructor.
Staff Resources - School of Engineering

Dolores A. Black
Coordinator, Graduate Student Recruiting.
School of Engineering

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Brenda S. Jordan
Registrar

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System Administrator III
School of Engineering

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Technical Supervisor II
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Department of Electrical Engineering and Computer Science

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Fax:
615-343-6702
Email:
lewis.saettel@vanderbilt.edu
Homepage:
http://www.vuse.vanderbilt.edu/~lfs/lfs.html
Graduate Student Handbook

This Handbook is intended to supplement and not replace direct, open, and frequent communication between students and their respective advisors, Directors of Graduate Studies, other faculty and staff, and the Department Chair. Students are encouraged to ask questions and seek clarification of requirements and expectations set forth in this handbook or in any of the references cited herein.
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I. INTRODUCTION

Graduate students at Vanderbilt University are governed by the rules and regulations set by the Vanderbilt University Graduate School. These are documented in the black paperback book entitled The Bulletin of Vanderbilt University, Graduate School, as well as on the Vanderbilt University website at http://www.vanderbilt.edu/catalogs/grad/Grad01.html.

Honor Code is in effect for all degree candidates in the Graduate Program. All homework and examinations are to be accomplished under the Honor Code rules, unless otherwise specified by the instructor. Violation of the Honor Code will be referred to the Honor Council and can result in the termination of degree candidacy.

Please refer to http://www.vanderbilt.edu/gsc/honor_council_rules.php for information regarding the Graduate Honor Council.

This document defines the requirements and guidelines for the Civil and Environmental Engineering graduate program. Course requirements are defined as well as several of the procedures students will need to follow to successfully complete their program here at Vanderbilt. In special circumstances students may receive a waiver pertaining to the requirements defined in this Handbook. To request a waiver, the student must submit a letter to the Director of the Graduate Studies (DGS) in their respective program, clearly indicating the requirement(s) the student is requesting to be waived, and the reasons for the request.

While every effort shall be made to inform students of impending deadlines, it is ultimately each student’s responsibility to see that they submit needed documents as required by the Civil and Environmental Engineering Department and the Graduate School.

DEGREES OFFERED: Master of Science, Master of Engineering, Doctor of Philosophy

Degree programs in Civil Engineering at the M.S., M.Eng., and Ph.D. level are offered in structural engineering, structural mechanics, and transportation engineering, and at the M.S., and M.Eng. level in construction management.

Degree programs in Environmental Engineering are offered at the M.S., M.Eng., and Ph.D. level.

Degree program in Environmental Science are offered at the M.S. and Ph.D. level. Students interested in the Environmental Science graduate program should contact the DGS in Environmental Engineering for additional information.

The Ph.D. requires a dissertation and a minimum of 36 hours of formal course work for Civil Engineering majors and a minimum of 39 hours of formal course work for Environmental Engineering majors. The M.S. degree has two options: (a) 24 hours of graduate-level course work and a research thesis, or (b) 30 hours of graduate-level course work.
The M.Eng. degree is an advanced professional degree for engineers, and is offered by the School of Engineering. Students are required to complete 30 hours of formal coursework and a project report. The M.Eng. degree is overseen by the School of Engineering Associate Dean of Research and Graduate Studies, and administered through the School of Engineering Registrar’s Office.

II. M.S. AND M.ENG. PROGRAMS FOR CIVIL ENGINEERING

A. Transfer Credit
The following information is provided as guidance in assisting students with course selection. However, students are reminded that the final course selection is to be undertaken in consultation with their research/academic advisor and the DGS.

Up to six hours of graduate level coursework in pursuit of a M.S. degree with the equivalent of an A or B grade may be transferred to Vanderbilt. Requests for transfer of course credits should be made in the prescribed format (see Appendix E) to the Director of Graduate Studies (DGS) for the Civil Engineering program, Prof. P.K. Basu (322-7477, prodyot.k.basu@vanderbilt.edu). The DGS will forward the student request to the Graduate School once it has been determined that the credit hours are equivalent to a graduate level course offered by Vanderbilt. The course transfer requests are subject to approval of the Dean of the Graduate School.

B. Course Requirements for Structural Engineering area of study
The M.S. degree in Civil Engineering with a Thesis Option requires a minimum of 24 semester hours of coursework. Students are required to take the following courses. Exceptions may be allowed under special circumstances.

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<td>CE 302</td>
<td>Advanced Mechanics of Solids II</td>
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</table>

The remaining nine (9) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s research advisor.

The M.S. degree in Civil Engineering with a Non-thesis Option requires a minimum of 30 semester hours of coursework. Students are required to take the courses listed above, and the remaining fifteen (15) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor.
The M.Eng. degree in Civil Engineering requires a minimum of 30 semester hours of coursework and a project report. Students are required to take the courses listed above, and the remaining fifteen (15) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor. The student should contact the DGS for requirements related to the project report.

C. Course Requirements for Transportation Engineering area of study

The M.S. degree in Civil Engineering with a Thesis Option requires a minimum of 24 semester hours of coursework. Students are required to take the following courses. Exceptions may be allowed under special circumstances.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 255</td>
<td>Transportation System Design</td>
<td>3</td>
</tr>
<tr>
<td>CE 256</td>
<td>Urban Transportation Planning</td>
<td>3</td>
</tr>
<tr>
<td>CE 257</td>
<td>Traffic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE 259</td>
<td>Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CE 262</td>
<td>Intelligent Transportation Systems</td>
<td>3</td>
</tr>
<tr>
<td>CE 275</td>
<td>Environmental Risk Management</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining six (6) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s research advisor.

The M.S. degree in Civil Engineering with a Non-thesis Option requires a minimum of 30 semester hours of coursework. Students are required to take the courses listed above, and the remaining twelve (12) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor.

The M.Eng. degree in Civil Engineering requires a minimum of 30 semester hours of coursework and a project report. Students are required to take the courses listed above, and the remaining twelve (12) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor. The student should contact the DGS for requirements related to the project report.

D. Course Requirements for Construction Management area of study

The M.S. degree in Civil Engineering with a Thesis Option requires a minimum of 24 semester hours of coursework. Students are required to take the following courses. Exceptions may be allowed under special circumstances.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 286</td>
<td>Construction Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CE 287</td>
<td>Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CE 288</td>
<td>Construction Planning and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CE 299</td>
<td>Construction Law and Contracts</td>
<td>3</td>
</tr>
<tr>
<td>MT 251</td>
<td>Finance and Accounting for Engineers</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining nine (9) semester hours are selected from courses in the major or from related areas of interest approved by the student’s research advisor.

The M.Eng. degree in Civil Engineering requires a minimum of 30 semester hours of coursework and a project report. Students are required to take the courses listed above, and the remaining fifteen (15) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor. For requirements related to the project, the student should contact the DGS, or Director, Construction Engineering and Management Program, as needed.

**E. Selection of a Research/Academic Advisor**

The DGS will act as an advisor to the students until a research/academic advisor is assigned by the DGS.

Research advisors and general research areas are determined by the end of the Fall semester of the first year in residence. Each student is encouraged to meet with graduate faculty members in the area of interest to discuss research opportunities. Each student then must submit to the DGS, the top three preferences of their research topics. In assigning a research topic and advisor, priority will be given to externally funded research projects. Student preferences, along with consideration of faculty preferences and funding, will be used to assign advisors. Every effort will be made to match students with their preferred projects; however, student preferences cannot be guaranteed.

**F. Thesis Requirements**

The M.S. thesis must adhere to the guidelines and standards set by the Graduate School and requires the signed approval of at least two graduate faculty members in the Civil and Environmental Engineering Department. The work for the thesis is conducted under the direction of student’s research advisor. A presentation of the M.S. should be scheduled in conjunction with the student’s research advisor. The thesis presentation should be publicized at least a week in advance within the students’ department. Each student must make an oral presentation of the student’s thesis research no
later than three weeks before the end of the term in which the degree is to be granted. Students are responsible for verifying exact dates by visiting the Graduate School Academic Calendar website (http://www.vanderbilt.edu/gradschool/).

**G. Thesis Registration and Binding**

The two options for thesis submission is – a) Electronic, or b) Hardcopy. Under both the options, first it is necessary to notify the graduate the intent to graduate. Secondly, write up the thesis satisfying the format requirements stated under “Thesis and Dissertation Guidelines” in [http://www.vanderbilt.edu/gradschool/current_s](http://www.vanderbilt.edu/gradschool/current_s). Next, it is necessary to obtain final approval from the thesis director. This is followed by obtaining final format approval by Ms. Liz Leis at Graduate School (322-3494 and liz.leis@vanderbilt.edu). For specific information on electronic submission, see [http://www.vanderbilt.edu/gradschool/current_students/index.html#esteps](http://www.vanderbilt.edu/gradschool/current_students/index.html#esteps).

In the case of hardcopy submission, in addition to student’s personal copies, two unbound copies of the final signed and approved thesis must be submitted to the graduate school. Students must also furnish, at their expense, two hardbound copies of the signed M.S. thesis to their DGS, one for their advisor and one for the thesis library in the conference room. A fee established by the Graduate School is required for the binding of these thesis copies. For further information on hardcopy submission, please see [http://www.vanderbilt.edu/gradschool/current_students/index.html#hsubmit](http://www.vanderbilt.edu/gradschool/current_students/index.html#hsubmit).

Students are responsible for verifying the exact dates by visiting the Graduate School Academic Calendar website at [http://www.vanderbilt.edu/gradschool/](http://www.vanderbilt.edu/gradschool/).

**H. Notification of Intent to Graduate**

All degree candidates are required to complete and submit the Notification of Intent to Graduate Form to the Graduate School. Students may obtain a copy of the form and additional information by visiting [http://www.vanderbilt.edu/gradschool/current_students/](http://www.vanderbilt.edu/gradschool/current_students/).
III. M.S. AND M.ENG. PROGRAMS FOR ENVIRONMENTAL ENGINEERING

A. Transfer Credit
The following information is provided as guidance in assisting students with course selection. However, students are reminded that the final course selection is to be undertaken in consultation with their research/academic advisor and the DGS.

Up to six hours of graduate level coursework in pursuit of a M.S. degree with the equivalent of an A or B grade may be transferred to Vanderbilt. Requests for transfer of course credits should be made in the prescribed format (see Appendix E) to the Director of Graduate Studies (DGS) for the Environmental Engineering program, Prof. James Clarke (322-3897, james.h.clarke@vanderbilt.edu). DGS will forward the student request to the Graduate School once it has been determined that the credit hours are equivalent to a graduate level course offered by Vanderbilt. The course transfer requests are subject to approval of the Dean of the Graduate School.

B. Course Requirements for Environmental Engineering area of study
The M.S. degree in Environmental Engineering with a Thesis Option requires a minimum of 24 hours of coursework. Students are required to take the following courses. Exceptions may be allowed under special circumstances.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVE 264</td>
<td>Environmental Assessments</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 270</td>
<td>Thermodynamics, Kinetics and Mass Transfer</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 271</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 272</td>
<td>Biological Unit Processes</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 273</td>
<td>Environmental Characterization and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 276</td>
<td>Ground Water Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>ENVE 277</td>
<td>Physical Chemical Unit Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining three (3) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s research advisor.

The M.S. degree in Civil Engineering with a Non-thesis Option requires a minimum of 30 semester hours of coursework. Students are required to take the courses listed above, and the remaining nine (9) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor.
The M.Eng. degree in Civil Engineering requires a minimum of 30 semester hours of coursework and a project report. Students are required to take the courses listed above, and the remaining nine (9) semester hours may be selected from approved list of elective courses in the major or from related areas of interest with approval from the student’s academic advisor. The student should contact the DGS for requirements related to the project report.

C. Selection of a Research/Academic Advisor

The DGS will act as an advisor to the students until a research/academic advisor is assigned by the DGS.

Research advisors and general research areas are determined by the end of the Fall semester of the first year in residence. Each student is encouraged to meet with graduate faculty members in the area of interest to discuss research opportunities. Each student then must submit to the DGS the top three preferences of their research topics. In assigning a research topic and advisor, priority will be given to externally funded research projects. Student preferences, along with consideration of faculty preferences and funding, will be used to assign advisors. Every effort will be made to match students with their preferred projects; however, student preferences cannot be guaranteed.

D. Thesis Requirement

The M.S. thesis must adhere to the guidelines and standards set by the Graduate School (http://www.vanderbilt.edu/gradschool/current_students.html) and requires the signed approval of at least two graduate faculty members in the Civil and Environmental Engineering Department. The work for the thesis is conducted under the direction of student’s research advisor. A presentation of the M.S. thesis should be scheduled in conjunction with the student’s research advisor. The thesis defense should be publicized at least a week in advance within the students’ department. Each student must make an oral presentation of the student’s thesis research no later than three weeks before the end of the term in which the degree is to be granted. Students are responsible for verifying exact dates by visiting the Graduate School Academic Calendar website (http://www.vanderbilt.edu/registrar/calendar.htm).

E. Thesis Registration and Binding

In addition to any personal copies a student may desire, two unbound copies of the final signed and approved thesis must be submitted to the Graduate School no later than fourteen days before the end of the term in which the degree is to be awarded. Students are responsible for verifying the exact dates by visiting the Graduate School Academic Calendar website (http://www.vanderbilt.edu/registrar/calendar.htm). A fee established by the Graduate School is required for the binding of these thesis copies. The student must also furnish, at their expense, two hardbound copies of the signed M.S. thesis to their DGS, one for their advisor and one for the thesis library in the conference room.
F. Notification of Intent to Graduate

All degree candidates are required to complete and submit the Notification of Intent to Graduate Form to the Graduate School. Students may obtain a copy of the form and additional information by visiting http://www.vanderbilt.edu/gradschool/current_students/.

You may also prepare and submit your thesis or dissertation in electronic form by following the instructions on the Graduate School website under "Information for Current Students" at www.vanderbilt.edu/gradschool/.
IV. Ph.D. PROGRAMS IN CIVIL & ENVIRONMENTAL ENGINEERING

A. Course Requirements
The Ph.D. degree requires 72 semester hours of graduate work, of which minimum of 36 hours must be satisfied through formal coursework for Civil Engineering, while 39 hours must be satisfied through formal coursework for Environmental Engineering. Selection of coursework will be done through consultation with the DGS concerned and student’s research advisor.

Students who receive M.S. degrees at other institutions may transfer graduate level course credit hours to Vanderbilt with approval from the DGS and Graduate School. However, at least 24 hours of formal coursework must be completed at Vanderbilt. Only didactic courses with an A or B grade may be transferred. Students may not repeat courses, or take equivalent courses, for graduate credit.

B. Selection of a Research Advisor
The DGS will act as an academic advisor to the students until the student is assigned a research advisor. Prof. P.K. Basu (322-7477, prodyot.k.basu@vanderbilt.edu) is the DGS for Civil Engineering programs. Prof. James Clarke (322-3897, james.h.clarke@vanderbilt.edu) is the DGS for the Environmental Engineering programs.

Research advisors and general research areas are determined by the second semester of the first year in residence. Each student is encouraged to meet with graduate faculty members in the area of interest to discuss research opportunities. Each student then must submit to the DGS the top three preferences of their research topics. In assigning research topic and advisor, priority will be given to externally funded research projects. Student preferences, along with consideration of faculty preferences and funding, will be used to assign advisors. Every effort will be made to match students with their preferred projects. However, student preferences are not guaranteed.

C. Dissertation Committee
The Dissertation Committee members are selected by the student’s research advisor in consultation with the student. On advice from student’s research adviser, the DGS requests the Dean of Graduate School, using the prescribed form, to appoint such a committee. The Dissertation Committee is appointed by the Graduate School and oversees each Ph.D. candidate's research progress. This Committee shall be chosen by the end of the student’s third semester in residence. It consists of a minimum of four (4) members from the Vanderbilt University Graduate Faculty. Additional members may be added under special circumstances, with approval from the Graduate School. Students are encouraged to meet with their committee members at least once each semester.
The Dissertation Committee has the following functions:

- To approve the dissertation subject
- To administer the Qualifying Exam
- To monitor the progress of the dissertation
- To approve the dissertation and administer the Final Oral Exam

D. Ph.D. Program Examinations

Comprehensive Examination

Those students who plan to pursue doctoral work are required to pass a departmental Comprehensive Examination. Students should take the examination after two semesters of course work at Vanderbilt University. The examination is administered by the Civil or Environmental Engineering faculty in the students’ discipline and consists of three (3) sections:

- **Section 1: Fundamental knowledge**
  Demonstration of basic level of competency in fundamentals relevant to specified program

- **Section 2: Integrated problems**
  Demonstration of ability to carry out research by (i) seeking out new information related to open ended questions; (ii) critically evaluating work by others; (iii) developing and presenting logical arguments and responses to technical questions; and (iv) providing creative approaches to problem solving.

- **Section 3: Written and oral presentation**
  Demonstration of fluency in professional written and oral communications skills (in English)

The examination will typically be administered at the end of Spring semester (late May) of each year. In exceptional circumstances, the Comprehensive exam may be given at a different time. Students will be informed in writing of their exam results by the DGS within two weeks of the completion of all sections of the exam.

The possible outcomes of the Comprehensive Exam are as follows:

- Pass (student passes all three sections)
- Conditional pass (recommended action to be determined; e.g., additional coursework)
- Fail (student fails two or more sections)

Students failing the Comprehensive Exam may be at risk of loosing financial support and termination of degree candidacy. At the option of the faculty, a failing student may be given another opportunity to retake the exam.
Qualifying Examination

Students are acknowledged as a Ph.D. candidate only after they pass the Ph.D. Qualifying Examination. This Examination must be taken no later than the beginning of the third academic year. Each student’s Dissertation Committee administers this exam. It consists of a presentation and discussion of the student’s written Ph.D. dissertation proposal and related background material. This proposal is to be written in a format approved by a student’s research adviser. In preparation for the exam, the student must visit each member of the committee by the end of the fourth semester in residence in order to discuss the basis and goals of their dissertation. The completed proposal should be submitted to the Dissertation Committee at least two weeks before the date of the Qualifying Examination.

The purpose of the Qualifying Exam is:

- To test the student’s knowledge in the field of specialization
- To assess familiarity with published research in the field
- To determine if the student possesses critical and analytical skills needed for a scholarly career
- To confirm that the research topic and scope is consistent with the scholarly expectations of doctoral work

To schedule a Qualifying Examination, a letter must be written to the DGS. The letter must include the student’s name, student identification number, name of the student’s research advisor, names of Dissertation Committee members, and the proposed date, time, and location of the examination. This letter must be signed by the student’s research advisor and received by the DGS at least three weeks prior to the proposed exam date. The DGS will then request the Dean of Graduate School, using the prescribed form, to schedule a qualifying examination.

The Qualifying Examination may not be taken more than twice. The Chairman of the Dissertation Committee will advise the student in writing of the examination results as soon as possible after its completion.

Final Oral Examination

Once the student has completed the required course work, passed the Comprehensive and Qualifying Exams, completed the research to the satisfaction of the advisor, and satisfied the publication requirement (per the expectations), a Final Oral Exam will be administered.

The Final Oral Examination is a public presentation and defense of the written dissertation. The Dissertation Committee conducts the examination. Passing the Examination is a requirement for the Ph.D. degree.

At three weeks prior to this examination, the Chair of the Dissertation Committee should inform the DGS about the time and place of the Examination, the title of the dissertation, and the members of the Dissertation Committee. The DGS will then forward the same information to the Dean of the Graduate School using the prescribed form.
At least two weeks before the Final Oral Examination the candidate must submit a copy of the written dissertation to each member of their Dissertation Committee.

The Final Oral Examination must be scheduled to allow time for two copies of the signed, approved dissertation to be registered with the Graduate School no later than two weeks before the end of the term in which the student expects to graduate.

E. Dissertation Registration and Binding

The two options for dissertation submission is – a) Electronic, or b) Hardcopy. Under both the options, first it is necessary to notify the graduate the intent to graduate. Secondly, write up the dissertation satisfying the format requirements stated under “Thesis and Dissertation Guidelines” in http://www.vanderbilt.edu/gradschool/current_s. Next, it is necessary to obtain final approval from the doctoral committee after the oral examination. This is followed by obtaining final format approval by Ms. Liz Leis at Graduate School (322-3494 and liz.leis@vanderbilt.edu). For specific information on electronic submission, see http://www.vanderbilt.edu/gradschool/current_students/index.html#esteps.

In the case of hardcopy submission, in addition to any personal copies a student may desire, two unbound copies of the final signed and approved dissertation must be submitted to the Graduate School no later than fourteen days before the end of the term in which the degree is to be awarded. Students are responsible for verifying the exact dates by visiting the Graduate School Academic Calendar website at http://www.vanderbilt.edu/gradschool/. A fee established by the Graduate School is required for the binding of these thesis copies. The two dissertation copies registered with the Graduate School become the property of Vanderbilt University. Student must furnish, at their expense, two hardbound copies of the signed dissertation to the DGS, one for their advisor and the other for the thesis/dissertation library in the conference room. For further information on hardcopy submission, please see http://www.vanderbilt.edu/gradschool/current_students/index.html#hsubmit.

F. Notification of Intent to Graduate

All degree candidates are required to complete and submit the Notification of Intent to Graduate Form to the Graduate School. Students may obtain a copy of the form and additional information by visiting http://www.vanderbilt.edu/gradschool/current_students/.

You may also prepare and submit your thesis or dissertation in electronic form by following the instructions on the Graduate School website under "Information for Current Students" at www.vanderbilt.edu/gradschool/.
V. TYPICAL TIMELINES FOR CIVIL AND ENVIRONMENTAL GRADUATE STUDENTS

The following are some typical plans of study for graduate students in the Department of Civil and Environmental Engineering. It is to be noted that individual plans of study may differ slightly, and will be prepared for each student based on consultation with their DGS and research advisor.

CCH – Course credit hours; RCH - Research credit hours.

A. M.S. Thesis Program (For students with B.S. degree)
Expected time to completion: Four Semesters

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>CCH</th>
<th>RCH</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>9</td>
<td>0</td>
<td>Select thesis advisor &amp; thesis topic</td>
</tr>
<tr>
<td>2/1</td>
<td>9</td>
<td>0</td>
<td>Begin literature search and research</td>
</tr>
<tr>
<td>Summer/1</td>
<td>0</td>
<td>0</td>
<td>Continue research</td>
</tr>
<tr>
<td>1/2</td>
<td>6</td>
<td>0</td>
<td>Finalize thesis</td>
</tr>
<tr>
<td>2/2</td>
<td>0</td>
<td>0</td>
<td>Finish thesis and make oral presentation</td>
</tr>
</tbody>
</table>

B. M.S. Non-Thesis & M.Eng. Programs (For students with B.S. degree)
Expected time to completion: Three Semesters

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>CCH</th>
<th>RCH</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>9</td>
<td>0</td>
<td>Select thesis advisor &amp; thesis topic</td>
</tr>
<tr>
<td>2/1</td>
<td>9</td>
<td>0</td>
<td>Begin literature search and research</td>
</tr>
<tr>
<td>Summer/1</td>
<td>3</td>
<td>0</td>
<td>Work on Project Report</td>
</tr>
<tr>
<td>1/2</td>
<td>9</td>
<td>0</td>
<td>Complete and submit Project Report</td>
</tr>
</tbody>
</table>
### C. Ph.D. Program (For students with B.S. degree)

Anticipated time to completion: Four Years

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>CCH</th>
<th>RCH</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>9</td>
<td>0</td>
<td>Select thesis advisor &amp; dissertation topic; begin literature search</td>
</tr>
<tr>
<td>2/1</td>
<td>9</td>
<td>0</td>
<td>Comprehensive Examination</td>
</tr>
<tr>
<td>Summer/1</td>
<td>0</td>
<td>0</td>
<td>Continue dissertation research/Internship</td>
</tr>
<tr>
<td>1/2</td>
<td>6</td>
<td>3</td>
<td>Select Dissertation Committee</td>
</tr>
<tr>
<td>2/2</td>
<td>6</td>
<td>3</td>
<td>Qualifying Examination</td>
</tr>
<tr>
<td>Summer/2</td>
<td>0</td>
<td>0</td>
<td>Continue dissertation research</td>
</tr>
<tr>
<td>1/3</td>
<td>3</td>
<td>6</td>
<td>Meet with Dissertation Committee</td>
</tr>
<tr>
<td>2/3</td>
<td>3</td>
<td>6</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td>Summer/3</td>
<td>0</td>
<td>0</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td>1/4</td>
<td>0</td>
<td>9</td>
<td>Meet with Dissertation Committee</td>
</tr>
<tr>
<td>2/4</td>
<td>0</td>
<td>9</td>
<td>Complete writing Dissertation; take Final Oral Exam</td>
</tr>
</tbody>
</table>

### D. Ph.D. Program (For students with Graduate Degree – 12 Hours Credit Hours)

Anticipated time to completion: Three Years

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>CCH</th>
<th>RCH</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>9</td>
<td>0</td>
<td>Select thesis advisor &amp; dissertation topic; begin literature search</td>
</tr>
<tr>
<td>2/1</td>
<td>9</td>
<td>0</td>
<td>Comprehensive Examination</td>
</tr>
<tr>
<td>Summer/1</td>
<td>3</td>
<td>0</td>
<td>Select Dissertation Committee</td>
</tr>
<tr>
<td>1/2</td>
<td>3 (or 6)</td>
<td>6 (or 3)</td>
<td>Qualifying Examination</td>
</tr>
<tr>
<td>2/2</td>
<td>3 (or 0)</td>
<td>6 (or 9)</td>
<td>Meet with Dissertation Committee</td>
</tr>
<tr>
<td>Summer/2</td>
<td>0</td>
<td>3</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td>1/3</td>
<td>0</td>
<td>9</td>
<td>Meet with Dissertation Committee</td>
</tr>
<tr>
<td>2/3</td>
<td>0</td>
<td>9</td>
<td>Complete writing Dissertation; take Final Oral Exam</td>
</tr>
</tbody>
</table>
VI. PROCEDURES IN THE CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENT

A. General Guidelines

Communications
The majority of the communications in the Department of Civil and Environmental Engineering are conducted via email. Students should check their VUmail accounts and their department supplied mailboxes, at a minimum of once per day.

Access
Students’ Vanderbilt identification card should allow students access to the building, to students’ personal offices, and other general use facilities in the Civil and Environmental Engineering department. Students will not have card access to any room that has not been authorized by the Department Chair. To request authorization to additional areas, please contact Mary Jean Morris, 2-2050; mary.j.morris@vanderbilt.edu

Telephone & Fax
Each graduate student office has a telephone available for student use. Phones are for local use. Fax machine is located in Room 267. For long-distance calls or faxing related to students’ research, students may obtain V-Net long distance authorization code from their research advisor. For personal long-distance calls, students should use personal cell phones or pre-paid calling cards.

Mail
Student mailboxes are located in Room 270 Jacobs Hall and should be limited to receipt of interoffice and campus mail. Having your personal mail sent to you in care of the department places a burden on office staff whose responsibilities include retrieving and distributing departmental mail. You may arrange for a personal campus post office box by contacting the Station B post office in Rand Hall in which to receive bills, statements, boxes, or other shipments. It is recommended that you have all personal, non-Vanderbilt related mail sent to your local home address.

Staff Responsibilities
Each member of the departmental staff is happy to provide guidance and answer students’ questions.

Supplies
Students may purchase supplies at the University Bookstore located in Rand Hall. Supplies furnished by the Civil and Environmental Engineering Department are for conducting the students’ professional activities in support of the department e.g., teaching and externally supported research, and not in support of students’ class requirements or personal needs.
Photocopying
The departmental photocopier in Room 267 is available to copy documents for carrying out your professional activities in support of the department e.g., teaching and externally supported research, and not in support of class requirements or personal needs.

Laboratory space
Laboratory space is assigned by the Department Chair in conjunction with specific research needs. Project proposals and requirements should be reviewed in advance with your research advisor. Mary Jean Morris will review all proposed laboratory projects for safety regulation compliance. All required safety training, specific to planned laboratory activities, must be completed prior to working in any CEE laboratory. Coordination with the Department Chair and Mary Jean Morris, is essential. See Appendix A.

B. Financial Aid Restrictions
Students receiving Vanderbilt University financial support must devote full-time to graduate study to the exclusion of other employment, except as approved by their Department Chair and the Graduate Dean.

C. Course Registration
All course registration is performed on-line via the OASIS system at http://oasis.vanderbilt.edu/. The procedure for the registration process is described fully in the Schedule of Courses issued each semester prior to the registration period, including a description of how to access OASIS.

All registered students are required to complete a Registration Data Form (RDF) every semester. Failure to complete the RDF will result in cancellation of registration. Online RDF can be found at http://www.vanderbilt.edu/gradschool/current_students/pdf/RDF.pdf.

Students are responsible for payment of late fees if they miss registration deadlines.

Course selection for first semester students will be made in consultation with the DGS. New students will meet with their DGS to prepare individual course schedules. Advisor approval codes are required before attempting to log onto the OASIS system. Students’ advisor approval code will be provided during their meeting with the DGS.

All other continuing students will select courses in consultation with their research advisor. Registration instructions will be provided to the student every semester. The type of financial support the student receives determines the number of credit hours that a student may take each semester. All courses for which financial support is provided through the Department must be approved by the student’s research advisor and be in support of the student's graduate degree program.
• Students with departmental financial support (e.g., teaching assistantships) may not register for more than nine credit hours each semester, or 18 credit hours during the academic year (Fall, Spring, and Summer terms). Registration for more than 18 credit hours may invalidate the departmental financial support. If a student registers for credit hours beyond the allowable, the student may be financially responsible for the tuition associated with the extra credit hours.

• Students with external support (e.g., research assistantships or other support) should check with their research advisor about the number of allowable credit hours. Generally, students with external support are limited to 24 credit hours during the academic year (Fall, Spring, Summer). If a student registers for credit hours beyond the allowable, the student may be financially responsible for the tuition associated with the extra credit hours.

If students encounter difficulty at any stage of registration or have any questions, they should contact Karen Page for assistance.

D. Seminar Attendance

Seminars on research and professional practice topics are scheduled weekly for Civil Engineering and Environmental Engineering areas of interest. The objectives of the Civil and Environmental Engineering Seminar Series are to introduce students and faculty to:

• Diversity in research approaches and thought;
• Research being carried out under the direction of Vanderbilt faculty in Civil and Environmental Engineering;
• World leaders in Civil and Environmental Engineering research and practice;
• Cutting edge research in areas closely related to current research in the department;
• Current topics in Civil and Environmental Engineering and closely associated areas beyond current research within the department; and,
• Professionals that may assist with future career development and research support.

All students are required to attend these seminars and attendance is monitored.

E. Progress Reviews

Prior to the completion of each semester, each student is required to submit/update their Graduate Studies Progress Report (see sample in Appendix D). Progress summaries are developed by the graduate students in concurrence with their research advisor. Progress Summaries are compiled and distributed to all departmental faculty members. At the beginning of each semester, progress of all students will be reviewed by the faculty. Each student is assigned a time to meet with the DGS to address any outstanding questions or issues. The goal of the progress reviews is to maintain focus on completion of graduate studies and provide early resolution to any difficulties that may arise.
F. Student Offices and Common Areas
Graduate student desk space is assigned by the Department Chair each semester. A professional atmosphere is to be maintained at all times in graduate student office space. Priority for desk space assignments is given to full-time graduate students with either teaching assistantships or research assistantships. You may not change your assigned desk location with another person or change the configuration of the room without direct permission from the Department Chair.

Students are assigned a workstation in an area where others are working as well. This could very well be a new experience for some, so a few rules and considerations should be kept in mind:

- Be considerate of your office mates and respect their need for quiet space and privacy
- Entertain visitors and meet with classmates in other locations - lounges, common space, etc.
- Refrain from music, protracted telephone conversations and other disturbances
- Warm up foods with strong odors in other locations
- Work out potential conflicts and activities in a positive, helpful and sensitive way
- Plan and participate in maintaining common spaces within your office (e.g., printer, microwave, refrigerator)
- Do not display potentially offensive materials around your personal space
- Maintain a professional workplace environment and positive, constructive attitude at all times
- Don’t put your office mates in the position of having to complain about you
- Upon leaving VU, after completing your degree program, clean out your desk, etc.

G. Safety and Security
Office doors should always be closed and locked. Students should not prop open doors or leave a room unlocked and unattended. Students are responsible for any personal property that they bring to campus. Neither the Department nor the University accepts any responsibility for loss or damage to student’s personal property. Students are encouraged to close open doors to unoccupied areas and report any suspicious persons to Campus Security. Emergencies are to be reported by calling 1-1911 (on-campus). Visit the Vanderbilt University Police Department link for additional security information [http://police.vanderbilt.edu/](http://police.vanderbilt.edu/).

Safety training is required of all graduate students receiving teaching and research assistantships or involved in laboratory research. See Appendix A for additional information. Students should contact Mary Jean Morris if they have questions.

General Evacuation procedures from Jacobs Hall and FGH:
- Exit the building using the nearest stairs.
- Assemble no closer than 50 feet from the building
- Look out for those who were near you, report anyone missing
- Do not congregate near response units or response activities
VANDERBILT UNIVERSITY POLICY FORBIDS REENTRY TO A BUILDING IN WHICH AN ALARM HAS OCCURRED UNTIL AUTHORIZATION BY VANDERBILT SECURITY.

H. Purchase Order (P.O.) Requisitions

When students expect to purchase equipment or supplies for their research, the following guidelines should be followed:

- Students should consult with their advisor, to determine what items are needed. Students should obtain the catalog number, description and cost of the supplies or equipment to be purchased, and the vendor address and phone number.
- Students should obtain a green P.O. request form, stored in the photocopier room. Students should provide all the requested information, and their advisor’s signature on the form.
- The completed form is to be deposited in the mailbox for Karen Page.

If the requested purchase is less than or equal to $500, the order will be placed by the department staff. If the purchase is on campus (i.e. the Bookstore or Chemistry Storeroom), the request is ordered using an 1180 form and can be delivered directly to the campus vendor by the student. Requests over $500.00 require a large purchase requisition or a capital equipment requisition form. Processing and ordering for the large purchase and capital equipment takes a minimum of 7-10 business days, therefore students are encouraged to plan ahead.

Students should refer to Appendix F for further details regarding Purchasing Procedure and Sample Purchase Order Form.

I. Student Travel

The full University Travel Policy can be found at: http://www.vanderbilt.edu/procurement/travel/policies_travel.shtml

Guidelines for reporting expenses include:

1. Effective July 1, 2008, the maximum reimbursement rate for personal mileage is $0.585/mile. The rate is subject to change.
2. Round-trip mileage from home to the airport is an allowable expense.
3. Original receipts are required for every expense except meals costing less than $25. This includes cabs, shuttles, trains, subways, registrations, parking, etc.
4. Expense claims for meals costing more than $25 must have both the receipt and a memo stating the reason for the expense; e.g. includes the cost of another person’s meal (give their name), average meal costs in the area are higher (name the city), etc.
5. Meal costs are reimbursed based on actual expenses, not a per diem, and there is no limit on the amount if there is adequate justification. Do not use rounded figures such as $5 for breakfast, $10 for lunch, and $15 for dinner. Costs for alcoholic beverages are disallowed on Federally sponsored projects and will be deducted from expense claims.
6. Small receipts, i.e. anything smaller than 8.5 inches x 11 inches, should be attached with tape or glue to a separate sheet of paper, preferably in sequential order on the date of occurrence.
7. Use of a self designed worksheet instead of using the yellow expense report form is not
acceptable. University Travel Policy requires that your expenses must be reported on the yellow expense report. If the travel period extends beyond the spaces on the yellow form, make a photocopy of the form before beginning to fill in the spaces in order to have enough blanks for each day of travel. The total expenses reported should be shown on appropriate line of the yellow page even if additional pages are used.

8. Expense reports that do not follow format and/or Vanderbilt University Travel Policy guidelines will be returned for compliance. Alternatively, they may be set aside awaiting an opportunity to sort and mount loose receipts, match receipts to the report, note missing documentation, and check the math.

9. Sign the expense report at “Travelers Signature”.

Students should contact Karen Page, if they have additional questions or need further clarification.

J. Disabilities

Vanderbilt University is committed to equal opportunity for students with disabilities. If a student has a physical or learning disability, the student should contact the Opportunity Development Center at [http://www.vanderbilt.edu/odc/](http://www.vanderbilt.edu/odc/), Baker Building, (615) 322-4705, for assessment and appropriate accommodation of student’s disability. The Opportunity Development Center will assist in notifying the student’s instructors of their evaluation and the necessary accommodations for class assignments, and exams.

K. Teaching Assistant Responsibilities

As a teaching assistant, the primary responsibility is to provide support to the professor in charge of the assigned class. Financial support as a teaching assistant obligates the recipient to 20 hours per week of service during the semester. Some flexibility may be provided through individual arrangements with the professor in charge of the class.

A teaching assistant’s specific duties are assigned by the professor in charge of the course to which the student is assigned and may include:

- Grading of homework, exams or other class assignments,
- Developing solutions for homework, exams or other class assignments,
- Holding office hours, problem sessions or help sessions,
- Recording and maintaining records of student performance,
- Facilitating communications with students (e.g., e-mails),
- Posting course materials to the web or making them available through the science and engineering library,
- Setting up and assisting with laboratory experiments,
- Photocopying, typing or otherwise assisting with preparation of class materials,
- Proctoring exams and quizzes, and,
- Other reasonable duties as may be assigned.
A teaching assistant may also be required to attend the lectures associated with the class. Teaching assistants should meet with the professor in charge of their assigned class or classes to discuss individual responsibilities and expectations as soon as notified of their assignment by the Chair. Teaching assistants should provide the professor in charge of their class or classes and with their e-mail address, home phone number, office phone number and desk location.

Satisfactory performance in your teaching assistant duties is a condition for continued financial support.

**L. Computer Usage Policies**

All students must abide by the current rules of conduct for the use of computers as described in Appendix F.

For information on university’s requirements on computer privileges and responsibilities please visit [http://www.vanderbilt.edu/aup.html](http://www.vanderbilt.edu/aup.html).
VII. HOLIDAYS

The offices of the Department of Civil and Environmental Engineering are closed on the following holidays:

New Year's Day (January 1)
Independence Day (July 4)
Thanksgiving Day (fourth Thursday in November)
Day after Thanksgiving (Friday after Thanksgiving)
Christmas Eve (December 24)
Christmas Day (December 25)

Students are required to notify their DGS and their research advisor of any absences and time away from campus.

VIII. IMPORTANT WEB LINKS

The following links provide a wealth of information relevant to graduate student life at Vanderbilt University and the Nashville Community.

Graduate School Catalog
http://www.vanderbilt.edu/catalogs/grad/Grad01.html

Intent to Graduate Form
http://www.vanderbilt.edu/gradschool/current_students/index.html#intent

Student Book Store

Student Health Center
http://www.vanderbilt.edu/student_health/

Vanderbilt University Environment Health & Safety
http://www.safety.vanderbilt.edu/index.htm

Vanderbilt University Graduate School Academic Calendar (Important Dates)
http://register.vanderbilt.edu/calendar.htm

Vanderbilt University Office of Student Accounts
http://www.vanderbilt.edu/stuaccts/
Vanderbilt University People Finder
https://phonedirectory.vanderbilt.edu/index.jsp

Vanderbilt University Police Department
http://police.vanderbilt.edu/

Vanderbilt University Schedule of Courses
https://webapp.mis.vanderbilt.edu/CourseListing/CourseSchedule.action

Online Access of Knowledge (OAK)
http://www.vanderbilt.edu/oak/

Vanderbilt Center for Teaching
http://www.vanderbilt.edu/cft

Exam Schedules
http://www.register.vanderbilt.edu/calendar/exams/

Office of International Services
http://www.vanderbilt.edu/ois

International Student & Scholar Services (ISSS)
http://www.vanderbilt.edu/isss/

Vanderbilt University and Vicinity Map
http://www.vanderbilt.edu/map/map.cgi?mode=1
Appendix A

CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENT
GENERAL SAFETY

At initial hire, every Vanderbilt employee is required to attend a general safety training class at the earliest opportunity, and attend an annual refresher course. This includes ALL faculty, staff, and students who receive financial compensation from the University as salary, wages, tuition, or stipend, etc. For all laboratory workers, additional safety and hazardous materials training is required. For the Civil and Environmental Engineering Department, Vanderbilt Environmental Health and Safety provides a once-a-year broad-based class which meets the above requirements. This training class is given early in the Spring semester. If you anticipate working in any CEE laboratory prior to this annual training, you MUST attend a safety training class given by VEH&S before you will be given access to any laboratory in the Department. The schedule of monthly classes can be found on the VEH&S website, www.safety.Vanderbilt.edu/. In addition, classes on biosafety and radiation safety topics are required for some laboratory workers.

FOR INFORMATION, PLEASE CONTACT MARY JEAN MORRIS,
CEE DEPARTMENT SAFETY AND ENVIRONMENTAL COMPLIANCE OFFICER,
ROOM 149 ENGINEERING JACOBS HALL, OR 322-2050.
mary.j.morris@vanderbilt.edu

- Without exception, food and beverages are not permitted in any laboratory. This includes computer laboratories, as well as all environmental engineering and structural engineering laboratories.
- Until safety training requirements are fulfilled, access to all CEE laboratories will be denied.
- If any violations of safe practices while working in CEE laboratories are reported, access to the laboratories will be terminated immediately.
- Be aware of locations of fire alarm pull stations, emergency exits and emergency telephones.
- Non-hazardous solids and other waste materials such as ordinary paper towels, wastepaper, etc., should be discarded into trashcans. Disposal of hazardous materials requires special procedures.

EMERGENCY EVACUATION

In the event of a fire or other emergency, everyone must leave the building IMMEDIATELY!

See Page 27, Section VII, G, Safety and Security, and J, Disabilities.

VANDERBILT UNIVERSITY POLICY FORBIDS REENTRY TO A BUILDING IN WHICH AN ALARM HAS OCCURRED UNTIL AUTHORIZATION IS GIVEN BY VANDERBILT SECURITY personEL.
Appendix B

HEALTH CARE AND HEALTH INSURANCE FOR STUDENTS AND FAMILY MEMBERS
(http://www.vanderbilt.edu/gsc/survival.html#Health_Care_and_Health)

A. Health Care and Health Insurance
Student Health Services combined with a quality insurance policy such as the university-sponsored policy will provide comprehensive care for students. Comprehensive health care for graduate students is primarily provided through the following measures, and are covered in more detail below:

- **Student Health Center** provides primary care services
- **Health Insurance or MCO** for hospitalization, accidents, emergencies, X-rays, sub-specialty care, etc.

B. The Student Health Center
The Student Health Center (SHC) is located in the Zerfoss Building behind Medical Center North, adjacent to the round wing. The entrance faces McTyeire House. Office hours are from 8:00 AM until 4:30 PM, Monday-Friday, and 8:30 AM to 12:00 noon on Saturdays. During scheduled holiday breaks, the office hours are 8:30 AM to 12:00 noon, Monday-Friday. In the summer, SHC is not open on Saturdays. SHC operates on an appointment system; therefore, students should call 322-2427 to schedule an appointment. Students with urgent problems will be seen on a same-day basis or "worked in" on a first-come first-serve basis if no appointments are available. Your medical record, which is used throughout the medical center, is housed at the SHC and its contents are confidential.

Basic primary medical care and some routine lab tests are provided at no cost. Many commonly used medications are dispensed very inexpensively but must be prescribed by a Student Health provider. Tennessee state law prohibits prescriptions from outside physicians to be filled through the Student Health Dispensary. Routine or annual examinations are provided on a "fee for service" basis.

C. Student Health Insurance
A Board of Trust policy mandates that all VU students have health insurance. Students are automatically enrolled and billed for the university sponsored plan unless an insurance waiver card available on the Student Accounts web site - http://www.vanderbilt.edu/stuaccts/ is submitted showing that you have comparable health coverage from another institution.

Students who have questions, should contact the Office of Student Accounts at 322-4092. The deadline for submitting the insurance waiver is generally at the start of the school year in Fall. Students should verify the exact date by contacting Student Accounts. International Students who are insured through a foreign company or through a sponsor must personally apply for a waiver with the institution.
International Services office (322-2753) before registration or it will be assumed that the student wishes to be enrolled in the university policy. Students submitting waivers should be aware that they are responsible for the timely completion of all forms, which their insurance providers require to cover services rendered.

Students who are covered by an HMO policy while attending Vanderbilt should still use Student Health as their primary care provider (PCP) because the care provided at the Center is pre-paid. Should it be necessary to refer a student to a specialty clinic, however, a student may be required by their HMO to seek the opinion of a designated PCP and/or seek pre-authorization for referrals to outside specialty clinics/hospitals.

It is important to know what kind of health insurance you have as well as specific information such as insurance carrier, group number, and policy number. This information allows Student Health to coordinate your comprehensive health care.

Student Health is similar to an HMO; being seen there first ensures that your deductible is waived and you get maximum insurance coverage. There is a deductible of $75 per condition for care received outside of the Student Health Center. This deductible is waived if the Student Health Center refers you to a health care provider in the Preferred Provider Network (which includes nearly, if not all, physicians at the Vanderbilt Medical Center). Be sure to get a referral form from Student Health to take to your referred physician at the time of your appointment (this includes referrals from Mental Health Services (in the Health Center) for mental health treatment). You will also need to submit a claim form for each condition, each year, for which you are referred or seen by a health care provider outside of Student Health. Most providers in the network will file on the student’s behalf, but always make certain that they are willing to do this.

When Student Health is closed, students should go directly to the Vanderbilt Emergency Department (ER), but you the student will be charged for the services. If the ER visit is for a true emergency, the deductible can be waived by contacting the Student Health insurance office at 343-4688 the following workday. Students must bring their Vanderbilt ID, insurance card, and Vanderbilt Clinic Card. Payment for services rendered is the student's responsibility.

**Insurance policy information:** Students who enroll in the Koster policy will receive their identification card in the fall. All new and returning graduate students should receive a detailed notice concerning insurance sometime in late June or early July. For dates of coverage students should consult with the Office of Student Accounts. Student policies are billed in one lump sum through the Office of Student Accounts. Unpaid balances accrue interest at a rate of 1.5% per month (APR 18%), and must be paid before you can register for the next semester.

Spouses and dependent children can be added to a student's policy for additional cost. These policies are administered directly through Koster and may be paid by Mastercard or Visa or on an installment plan. The cost for these add-on policies is outlined in the information you receive during the summer. Spouses and dependents cannot visit Student Health, so they must go first to a provider; they will be expected to pay the $75 deductible for services rendered. However, there is a maximum of four deductibles per person per year. Spouses and children will maximize their insurance benefit if they
are seen by providers in the Preferred Provider Network. Names of preferred providers can be obtained by calling the Koster on-campus representative at 343-4688.

For additional information about the policy, enrollment, or handling claims, contact The Koster Group at (800) 783-4483, visit the Student Health Center, or call the Vanderbilt Insurance Representative at 343-4688. You can also gather information from this website: http://www.vanderbilt.edu/student_health/vush.htm.
Appendix C

FACULTY AND STAFF OF THE DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Area of Expertise

Mark D. Abkowitz  Risk Management, Information Technology, Transportation
Malcolm E. Baird  Transportation Policy, Management and Operations
Prodyot K. Basu  Structural Mechanics, Modeling and Simulation
Alan R. Bowers  Wastewater Treatment, Pollutant Transport, Process Kinetics
Kevin G. Brown  Hazardous Waste Management
James H. Clarke  Sustainable Long-Term Management of Nuclear and Hazardous Waste, Environmental Forensics
Edsel Daniel  Environmental Management, Information Technology
James P. Dobbins  Environmental Management, Information Technology
Sanjiv Gokhale  Construction Management, Rehabilitation of Infrastructure
Andrew Garrabrants  Mass Transfer Processes for Inorganic Contaminants
George M. Hornberger  Catchment hydrology and hydrochemistry
David S. Kosson  Chemical and Environmental Engineering
Eugene J. LeBoeuf  Physicochemical Processes of Environmental Systems
Sankaran Mahadevan  Probabilistic Mechanics and Design, Reliability and Risk Assessment
Mark P. McDonald  Systems, Optimization, Risk & Reliability
Frank L. Parker  Hazardous and Radioactive Waste Management
Ken Pence  Risk and Security, High Risk Decision Making
Florence Sanchez  Mass Transfer Processes for Inorganic Contaminants
Leslie Shor  Investigation of bacteria in soil and sediment systems
Robert E. Stammer, Jr.  Traffic Engineering, Safety, and Accident Reconstruction
Lori A. Troxel  Undergraduate Teaching in Civil Engineering, ASCE advisor
John Veillette  Associate Dean, PAVE
Luoyu Roy Xu  Composite Materials, Solid Mechanics, Design

Area of Responsibility

David DeLapp  Senior Research Engineer
Rossane Delapp  Laboratory Research Engineer
Karen Fuller  Graduate Program Assistant
Mary Jean Morris  Laboratory Manager
Karen D. Page  Department Administrative Assistant
Appendix D

GRADUATE STUDIES PROGRESS REPORT TEMPLATE
(note: use as much space as needed to address each item below)

Date:

Name:

Primary faculty advisor(s):

Program and degree sought:

Semester and year of initiating degree program:

Anticipated degree completion (month/year):

If M.S. is sought, is this a research thesis based degree:

**Research thesis or dissertation tentative title and abstract:**
(title + 1 paragraph summary of research objectives and approach)

**Current research status:**
(bulleted summary of progress to-date)

**Research milestones for next 6 months:**

**Source of financial support:**

**Status on course work and other requirements:**
Courses completed to date:
(number and title)

Courses remaining to be completed for degree:
(number, title and semester to be completed)

Publications and Professional Presentations:
(provide full citations on completed and upcoming publications and presentations based on your research or activities while at Vanderbilt)

For Ph.D. students only:

Month/year for planned or completed comprehensive exam:

Month/year for planned or completed qualifying exam (proposal defense):

Month/year for planned completion of draft dissertation:

Dissertation faculty committee:

END
Appendix E  
Department of Civil & Environmental Engineering  
Application for Transfer of Graduate Coursework Credit

Name of Student_________________________________________________________

Designation: (TA, R.A., or other)_______Research Advisor (if known)___________

Student Identification No.:________________________________________________

Credit to be transferred from (name and location of school)_____________________

Name of Program:________________________________________________________________

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<th>Name of Course to be transferred</th>
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Graduate Credit Transferred: Proposed_______________ Approved _______________

Advisor’s Signature ____________________________    Date _____________________

DGS Signature ____________________________    Date _____________________

Notes: 1. Up to 24 credit hours may be transferred.

2. The student should furnish detailed syllabus of courses proposed for transfer and any other requested information to the instructor.

3. The instructor may evaluate the knowledge level of the student by giving an oral and/or written test.
Appendix F

RULES OF CONDUCT FOR USAGE OF INSTRUCTIONAL & RESEARCH COMPUTERS

Departmental computers and networks are for providing access to resources on and off campus, as well as the ability to officially communicate with other users worldwide. Such open access is a privilege, and requires that individual users act responsibly. Users must respect the rights of other users, respect the integrity of the systems and related physical resources, and observe all relevant laws, regulations, and contractual obligations.

Student user files may be subject to search under court order. In addition, system administrators may access user files as required to protect the integrity of computer systems. For example, following organizational guidelines, system administrators may access or examine files or accounts that are suspected of unauthorized use or misuse, or that have been corrupted or damaged.

Misuse of computing, networking, or information resources may result in the loss of computing privileges. Additionally, misuse can be prosecuted under applicable statutes. Users may be held accountable for their conduct under any applicable University or departmental policies and procedures. Complaints alleging misuse of CEE computing resources will be directed to those responsible for taking appropriate disciplinary action. Reproduction or distribution of copyrighted works, including, but not limited to, images, text, or software, without permission of the owner is an infringement of U.S. Copyright Law and is subject to civil damages and criminal penalties including fines and imprisonment.

Examples of Abuse

Examples of abuse include, but are not limited to, the activities in the following list:

- Using a computer account that you are not authorized to use. Obtaining a password for a computer account without the consent of the account owner.
- Using the Campus Network to gain unauthorized access to any computer systems.
- Knowingly performing an act, which will interfere with the normal operation of computers, terminals, peripherals, or networks.
- Knowingly running or installing on any computer system or network, or giving to another user, a program intended to damage or to place excessive load on a computer system or network. This includes but is not limited to programs known as computer viruses, Trojan horses, and worms.
- Attempting to circumvent data protection schemes or uncover security loopholes.
- Violating terms of applicable software licensing agreements or copyright laws. An example of such violation is acquiring and installing pirated software.
- Any commercial activity.
- Deliberately wasting computing resources.
- Using electronic mail to harass others.
- Masking the identity of an account or machine.
• Posting materials on electronic bulletin boards that violate existing laws or the University's codes of conduct.
• Attempting to monitor or tamper with another user's electronic communications, or reading, copying, changing, or deleting another user's files or software without the explicit agreement of the owner.
• Spamming newsgroups or individuals (sending lots of bogus articles to newsgroups or lots of E-mail to an individual in order to disrupt the newsgroup or annoy the individual).
• Disconnecting any departmental computing equipment from power or network.
• Connecting unauthorized equipment to the departmental computing network.

Activities will not be considered misuse when authorized by appropriate University officials for security or performance testing.

**Rules of Conduct**

You are required to follow the following rules of conduct, and your use of the computer account is your legal agreement to do so. This is like the agreement on shrink-wrapped software, which says, "If you open this you are accepting and are bound by the terms of the license."

• I will not use the computers to transmit or display any text, images or sounds that are defamatory or obscene or that threaten other users with harm. The laws and University policies that prohibit defamation, harassment, exploitation and intimidation in all forms bind me. Also, I am not permitted to use the computers for displaying, printing, storing or distributing matter that may offend others (e.g. pornographic or racist matter).

• I will not use a false identity in email or other communications via computer.

• I will not attempt or participate in unauthorized entry into another user's account or into another system. I will not view another person's computer files without permission or plagiarize from their computer files.

• I will not share the use of my account. I will change the password of my user account regularly. I will keep my password secret and will not hand over to anyone.

• I will not copy or distribute any available software without permission from the author or from the system administration. I will not install any third party software without permission from a faculty member and system administrator. Also, I am not permitted to install, use or distribute illegal copies (pirate copies) of licensed software. Improper use of copyrighted material is illegal and I know that I could be prosecuted for it. According to "No Electronic Theft Act" bill passed by U.S. Congress it is a criminal offense to willfully infringe a copyright by *sharing* as well as selling pirated software. Offenders will be subject to up to five years in prison, and a $250,000 fine.

• I will not play games on the departmental computers. Games typically waste network, disk and CPU resources, and often cause excessive wear to the mice and keyboards.
I will use this account for Vanderbilt coursework and research only. In other words, my departmental computer access privilege allows completion of Vanderbilt course assignments and research work as a Research Assistant as well as part of coursework. I will not use it for non-Vanderbilt tasks.

I will not use screen locks or disable a computer in any other way. My account will be disabled if I show such disregard for others. I understand that locking a terminal is a very selfish act and upsets others. (Denying access to an idle machine by "reserving" it for friends is also not allowed, unless that person has only stepped out of the lab for a very brief break). Also, any user logged in on the console can be logged out if their machine has been left unattended for 30 minutes. Basically, any user should be free to visit the restroom, to retrieve a printout, or to hold a brief discussion with a project partner or the lab staff.

I will not bring food or drinks into the labs. I understand that crumbs and spills require annoying and expensive cleanups at best; at worst they can ruin a computer. I understand that the administration has the right to disable a user's account without warning if the user is observed eating or drinking in a lab.

I will conserve disk space by not storing purely personal information. I will archive files that are not immediately needed, on to CDs, floppies, or zip disks. Also, I will regularly backup all my important files. (Disk quotas are imposed to prevent individual users from filling up the disk and making it impossible for other users to get any work done. This can occur either through accident, laziness, or malice. The system administrator may delete the files of users who consume excessive amounts of temporary disk space and ignore warnings to clean up.)

I will abide by the security needs of the laboratories by keeping the doors locked at all times. Also, I will not admit unauthorized persons to the computer labs.

I will keep the windows in the laboratory shut except in emergency situations, for instance, when the AC system is not working. (In extreme situations, filing a request with the appropriate staff member can change the thermostat setting).

I will not try to modify the hardware, or try to fix it on my own when it is not working. (In case of hardware and software problems send e-mail to UNIX systems manager Andy Richter at war@vuse.vanderbilt.edu for HPCL related problems in Room JH 168, and to WINDOWS systems manager Phillip VerMeulen at phil.vermeulen@vanderbilt.edu for PC related problems in Rooms JH 270 and JH 296. In all cases send a copy to Prof. Basu at p.k.basu@vanderbilt.edu and your advisor).

I will not use the network and servers to advertise commercial products or services, without written permission from appropriate official of the university.
• I will not leave jobs running in the background after I log out. I understand that it consumes computer resources and is not necessary in most situations. Also such background jobs may be killed without warning. In case of real need, I will contact my advisor about it.

• There are several printers located in the labs. These are provided for printouts required for approved CEE activities only and not personal use. I will try to conserve paper usage. I will not print multiple copies of the same document. (Users are expected to collect their output promptly and to keep the printer area clean of waste paper. The large poster printer in room JH 296 is not for student use. In rare instances, a faculty member may seek student assistance in the use of the printer.)

• I understand that it is not permissible to take away any hardware, printer paper, manuals, pieces of furniture or other pieces of equipment from the computer rooms.

• I cannot change the operational mode of the computers and the computers must remain switched on and must not be switched off.

• I understand that if a lab is reserved for teaching all students who do not take part in this have to leave the room well in advance of the lesson.
Appendix G

PURCHASING PROCEDURE

These procedures are for the benefit and protection of all who use University funds. Incomplete information and/or non-standard practices cause problems in the University business and accounting systems, resulting in delays, mistakes, or incorrect charges. The following steps apply to any member of this department. Prior signature approval is required for ALL expenditures. Individuals who initiate personal purchases or other obligations without proper authorization and documentation assume responsibility for meeting those obligations.

1. PREPARE A CE DEPARTMENT PURCHASE REQUEST FORM, GIVING COMPLETE INFORMATION. Please note the GREEN Purchase Request Forms have an added line for Vendor FEID# (Federal Exempt Tax Identification Number). If the vendor is new to the University, the number is required before the transaction can proceed. For vendors that have been used previously, it is not necessary for you to furnish the FEID#.

2. PREPARE A SEPARATE FORM FOR EACH VENDOR. Include a complete description of item(s), model number, or copy of page from catalog, etc., as well as other information that might be helpful for the transaction. Indicate added costs such as handling, shipping, or postage, etc. If the request is for equipment or other large expenditures, several quotations and other information may be necessary, as required by the Department or University.

3. OBTAIN FACULTY AND/OR PRINCIPAL INVESTIGATOR APPROVAL AND SIGNATURE. In the case of expenditure of restricted funds, the PI must approve the request. Incomplete requests cannot be processed. For expenditures of CE Department funds, the chairman’s approval must be obtained before requests are processed.

4. Approved, completed CE Department Purchase Request Forms should be placed in Karen Page’s mailbox in Room 267. Appropriate University forms will be prepared and forwarded for processing. Depending on the source of funds, the paperwork may be sent to Contract and Grant Accounting, before going on to Purchasing. Note that requests for purchases must cross several desks before a purchase order is issued, therefore, do not expect immediate results. If you wish to attempt to speed up the process, it may be possible for you to hand-carry documents through some of the approval steps.

5. VERIFY RECEIPT OF GOODS! Check off items on the packing slip, sign and date the list. Send it to Mary Jean Morris (for laboratory supplies and equipment) or Karen Page (for all other orders). If a packing slip is not provided, send a note. Unless informed otherwise, Accounts Payable presumes all orders have been received.

6. If return of materials is necessary, a RETURN GOODS FORM must be completed for inclusion with the package. This documentation is required to insure proper credit. Do not return anything without proper documentation! See Karen Page or Mary Jean Morris for additional instructions.

7. If you need assistance with the above procedures, or if you have questions, please contact Karen Page at extension 3-2373 or Mary Jean Morris at extension 2-2050.
# PURCHASE REQUEST FORM

**Vendor:**

**FEID#:**

**Website:**

**Address:**

**Confirming P.O.:**

**City, State, Zip Code:**

**Attention:**

**Phone:**

**FAX:**

**NOTE:** Small Purchase Orders must not exceed $500 total. No back orders. Items must be available immediately. By signature, the P.I. verifies sufficient funds available for this purchase. (9/04)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>How many?</th>
<th>Unit (ea, pk)</th>
<th>Model/Catalog Number</th>
<th>Description</th>
<th>Unit Price</th>
<th>Line Total</th>
</tr>
</thead>
</table>

Requested by: ____________________________ Date ____________

Charge: Account ___________ Center ___________-

Faculty/P.I. Approval: __________________ Date ____________ Account ___________ Center ___________-

Dept. Chair Approval: __________________ Date ____________ Account ___________ Center ___________-

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Final Draft: 10/15/04