

Scholarly Ethics and Integrity Component in Graduate Education

The Charles E. Via, Jr. Department of Civil and Environmental Engineering

Introduction

In response to CGS&P Resolution 2012-13B, “Scholarly Ethics and Integrity Component in Graduate Education”, the faculty of the Charles E. Via, Jr. Department of Civil and Environmental Engineering (CEE) have developed a plan to address and implement required content for the CEE graduate program. Included in this plan are required graduate courses and orientation seminars. In addition, CEE graduate students will have opportunities to participate in special seminars and enroll in graduate courses with a focus on scholarly and professional ethics.

Topics covered in CEE

The first four topics listed are identical to the list of Required Topics in CGS&P Resolution 2012-13B. The remaining three topics are derived from the list of Optional Topics.

1. Plagiarism and other violations of the Graduate Honor Code
2. Proper use of professional conventions in citation of existing research and scholarship, accurate reporting and ownership of findings, and acknowledgement of contributions to the work
3. Ethical standards in teaching, mentoring and professional activities
4. Available avenues for reporting alleged misconduct
5. Appropriate lab procedures and maintenance of lab notebooks and other research documentation
6. Fair use of publications, software and equipment
7. Discipline-specific professional ethics

Implementation

Topics 1 through 7 noted above, including the four required topics noted in CGS&P Resolution 2012-13B, will be covered in a required Seminar course. Graduate studies in CEE are administered through five program areas representing various sub-disciplines within the field of civil and environmental engineering: Construction Engineering and Management, Environmental and Water Resources Engineering, Geotechnical Engineering, Structural Engineering and Materials, Transportation and Infrastructure Systems Engineering. Each program area offers a seminar course that is required of all graduate students for completion of either the M.S. or Ph.D. degree. For students in the Construction Engineering and Management graduate program this course is CNST 5944 (Seminar). For students in the remaining program

areas this course is CEE 5944 (Seminar). Each course will dedicate a requisite number of seminars to cover the required topics. While the topics will be identical, each program area will tailor the delivery of content in a manner that reflects their sub-discipline.

All CEE graduate students receiving a graduate degree will include at least one semester of either CNST 5944 or CEE 5944 on their individual Plan of Study. Faculty in each program area will track whether students have completed this requirement and confirm participation and completion with the CEE Graduate Coordinator.

In addition to enrollment in Seminar, the CEE Department will also provide opportunities for further exploration of these topics. Before the start of classes in August and January, the CEE Graduate Committee will organize an orientation seminar. All incoming students will be required to attend. The objective of these seminars is to define issues pertaining to scholarly ethics and emphasize the paramount importance of academic integrity in graduate education and research. Dr. Marc Edwards, CEE faculty, will present case studies to reinforce ethical principles in the university environment. In addition, a list of ethic-focused courses offered at Virginia Tech, including CEE 5804 (Engineering Ethics and the Public) will be made available to incoming students for their use in developing their Plans of Study with their major advisors.

Throughout the academic year, the CEE Department sponsors special lectures on discipline-specific topics that can include professional ethics. All CEE graduate students will be notified of these events through a dedicated listserv. In the event that a lecture or special event on ethics is sponsored by another department or organization, CEE graduate students will be encouraged to attend.

Following approval by the Graduate School, the CEE Department will implement this plan beginning in August 2014. Each Spring semester the CEE Graduate Committee will review implementation of the plan and make recommendations to the Department Head if modifications are deemed necessary.

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May 19, 2014

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Introduction

In response to CGS&P Resolution 2012-13B, “Scholarly Ethics and Integrity Component in Graduate Education”, the faculty of the Charles E. Via, Jr. Department of Civil and Environmental Engineering (CEE) developed a plan to address and implement required content for the CEE graduate program. The CEE plan was approved by the Graduate School on May 20, 2014 and was subsequently implemented as stated.

During the previous academic year (2015-16), an assessment by the CEE Graduate Committee resulted in a revision to the departmental plan. The aim of the revised plan is a more complete and thorough introduction of required and recommended topics and to facilitate timely and early compliance with this requirement for new CEE graduate students. The introduction of the required topics, including the Graduate Honor Code, for all incoming CEE graduate students will remain in effect.

Topics covered in CEE

The first four topics listed are identical to the list of Required Topics in CGS&P Resolution 2012-13B. The remaining three topics are derived from the list of Optional Topics.

1. Plagiarism and other violations of the Graduate Honor Code
2. Proper use of professional conventions in citation of existing research and scholarship, accurate reporting and ownership of findings, and acknowledgement of contributions to the work
3. Ethical standards in teaching, mentoring and professional activities
4. Available avenues for reporting alleged misconduct
5. Appropriate lab procedures and maintenance of lab notebooks and other research documentation
6. Fair use of publications, software and equipment

Implementation

Topics 1 through 6 listed above, including the four required topics noted in CGS&P Resolution 2012-13B, will be achieved using the Responsible Conduct of Research (RCR) training through

the VT Office of Research and Innovation. All new CEE graduate students are required to complete the RCR training prior to enrollment. In addition, reading material pertaining to the VT Graduate Honor System is required including completion of a reading quiz. These topics will be discussed at a mandatory orientation session for all new CEE graduate students as a means to reinforce required topics and provide an opportunity to address questions and concerns. The CEE Department will track the progress of each student and confirm completion of requirements as a prerequisite to submitting the Plan of Study to the Graduate School.

Discipline-specific professional ethics

A non-mandatory component of the CEE plan is discipline-specific professional ethics. All CEE graduate students will be provided with learning opportunities in the subject of professional ethics. CEE faculty work to convey the principles of professional ethics in our field and the expectations of professional civil engineers through our courses and mentoring of students. However, it is difficult to track graduate student exposure to these topics on a case-by-case basis.

Each program area in CEE offers a seminar course that is required of all full-time graduate students for completion of either the M.S. or Ph.D. degree and is available to all part-time students. The course numbers for seminars are CNST 5944 for students in the Construction Engineering and Management graduate program and CEE 5944 for students in the remaining CEE program areas. While topics related to ethics will not be identical, each program area tailors the delivery of content in a manner that reflects their sub-discipline. Another opportunity pertaining to professional ethics is the 3-hour graduate course, Engineering Ethics and the Public (CEE 5804), offered each Fall semester.

Throughout the academic year, the CEE Department sponsors special lectures on discipline-specific topics that can include professional ethics. All CEE graduate students will be notified of these events through a dedicated listserv. In the event that a lecture or special event on ethics is sponsored by another department or organization, CEE graduate students will be encouraged to attend.

Assessment

Each Spring semester the CEE Graduate Committee will review implementation of the plan and make recommendations to the Department Head if modifications are deemed necessary.