Ethics and Integrity Requirement Proposal

Graduate Programs in Industrial and Systems Engineering

The Grado Department of Industrial and Systems Engineering (ISE) has developed the following procedure to satisfy the CGS&P Resolution 2012-13B, which requires "that all graduate students participate in ethics and integrity activities as part of their graduate studies." It will be noted on the ISE graduate student's plan of study with the inclusion of ISE 5024: ISE Graduate Seminar as one of their required courses. This will be effective for students entering fall 2014 and after.

The procedure proposed by ISE consists of the following three requirements to be made of all new ISE graduate students.

1. All entering ISE graduate students are required to attend a half-day new graduate student orientation prior to the beginning of their first fall semester of the ISE graduate program. At this orientation the ISE Ethics and Integrity Requirements will be presented, and students will be informed of the timeline and process for satisfying these requirements.

2. The ISE department will either have the Chief Justice of the Graduate Honor System or the Director of the Graduate Honor System as a guest speaker at the new graduate student orientation to discuss what the system entails.

3. All new ISE graduate students are required to enroll in ISE 5024: ISE Graduate Seminar in their first fall semester in the ISE graduate program. A new requirement of the seminar course will be that all students successfully complete the NSF Responsible Conduct of Research (RCR) requirement as implemented at Virginia Tech. Completing the on-line course created and maintained by the Collaborative Institutional Training Initiative (CITI) satisfies this requirement. Upon completion of this course, students are awarded a certificate of completion. This certificate must be submitted to the instructor of the ISE Graduate Seminar course and will be a part of their final grade in the course. The instructor of the course will then submit all certificates to the ISE Graduate Program office to be placed in the student's departmental record.

As stated, all new ISE graduate students must satisfy these three requirements. When students submit their plans of study for Departmental and Graduate School approval, the completion of the ISE Ethics and Integrity Requirement will be noted with the inclusion of ISE 5024: ISE Graduate Seminar.

The proposed procedure for the ISE Ethics and Integrity Requirement satisfies the four required topics enumerated in the Appendix to CGS&P Resolution 2012-13B in the following specific ways.

Required Topic 1: Plagiarism and other violations of the Graduate Honor Code

The definition of plagiarism and responsibilities of graduate students as research participants is covered in the first module of the CITI online course entitled "Introduction to Responsible Conduct of Research." Specific examples and information on best practices are given within the following modules: "Research Misconduct," "Publication Practices and Responsible Authorship," and "Data Acquisition, Management, Sharing and Ownership." In addition, as part of the required new graduate student orientation students will be introduced to Virginia Tech resources on plagiarism and other violations of the Graduate Honor Code; specifically those resources at the Graduate Honor System (Graduate Honor System | Graduate School | Virginia Tech (vt.edu) and the Virginia Tech Library System's "Outline of Plagiarism and how to avoid it" (http://www.lib.vt.edu/instruct/plagiarism/index.html).

Required Topic 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

This required topic is covered in the fourth module of the CITI on-line course entitled "Publication Practices and Responsible Authorship." In addition, as part of the required new graduate student orientation students will be introduced to Virginia Tech resources on proper citations of existing research, the reporting and ownership of findings and the acknowledgement of contributions of work. These resources include those resources available at the Graduate Honor System (Graduate Honor System | Graduate School | Virginia Tech (vt.edu) the "Information Appropriately" module from VT Libraries (http://info-skills.lib.vt.edu/using_info/index.html), and the "Intellectual Integrity Guidelines" available from the Virginia Tech Research Office (http://www.research.vt.edu/intellectual-property-virginia-tech).

Required Topic 3. Ethical standards in teaching, mentoring, and professional activities

This required topic is covered in the CITI on-line course modules entitled "Conflicts of Interest and Commitment," "Mentor/Trainee Responsibilities," "Peer Review," and "Collaborative

Research." In addition, as part of the required new graduate student orientation students will be introduced to Virginia Tech resources on ethical standards in teaching, mentoring, and professional activities. In particular, Virginia Tech courses on training on research misconduct are provided through the Networked Learning Initiatives (The Research Office provides a general informational PowerPoint presentation about misconduct

([PowerPoint Presentation (vt.edu)](#)). The "IRB Human Subjects Research Tutorial" provides information on the procedures and approval requirements for the use of human subjects in research ([Training for Human Subjects Research | Research and Innovation | Virginia Tech (vt.edu)](#) Finally, the Virginia Tech Research Office provides conflict of interest training and resources([Conflicts of Interest and Commitment | Research and Innovation | Virginia Tech (vt.edu)](#)).

Required Topic 4. Available avenues for reporting alleged misconduct

The available avenues for ISE graduate students to report alleged misconduct will be presented at the required new graduate student orientation. The particular avenues available to students include the Graduate Honor System ([Graduate Honor System | Graduate School | Virginia Tech (vt.edu)](#) and the Committee on Faculty Ethics ([Committee on Faculty Ethics | Faculty Senate | Virginia Tech (vt.edu)](#)). Both will be presented). Both will be presented and described. Examples of how these resources can be used will be provided in the seminar and based on situations that have previously arisen in the ISE graduate program.

Optional Topics

In addition to the required topics detailed above, the CGS&P resolution also includes a number of optional topics that may be covered by the proposed Ethics and Integrity Requirement. We plan on addressing intellectual property issues (and the use of the VTIP, ([Virginia Tech Intellectual Properties (VTIP) | Innovation and Partnerships | Virginia Tech](#) and appropriate grant and contract management, including common compliance issues specific to ISE through our required new graduate student orientation.

Note:

The above requirements apply as stated for all graduate students pursuing the ISE Masters and PhD degrees. Students enrolled in the Systems Engineering (SYSE) and Engineering Administration (MEA) degree programs are required to complete program orientation and capstone project courses (ENGR 5204 Systems Engineering and ISE 5114 Engineering Administration) which include the same content in response to CGS&P resolution requirements. These students are not required to enroll in ISE 5024 – ISE Seminar.