Ethics and Integrity Requirement Proposal

Graduate Program in Engineering Mechanics (EM)

Beginning in Fall 2014, all students entering the Engineering Mechanics (EM) graduate program will be required to complete the following two activities in order to satisfy the *Resolution to Include a Scholarly Ethics and Integrity Component in Graduate Education* (CGS&P Resolution 2012-13B):

1. **Attend the EM program orientation.** Attendance is taken at this orientation and will be recorded in each student's record. During orientation, the Engineering Mechanics Ethics and Integrity Requirements will be presented, and students will be informed of the timeline for satisfying these requirements. Orientation will include presentations/discussions on EM and Graduate School policies and procedures, an introduction to the Virginia Tech Graduate Honor System, and campus resources for assessing conduct and reporting misconduct. Students are expected to complete this requirement prior to the first semester of enrollment. Students who enroll late or are otherwise unable to attend the EM orientation prior to the first semester of enrollment are required to attend orientation before their second semester of enrollment.

2. **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. On completion of this course, students are awarded a certificate of completion. This certification must be submitted to the EM Graduate Coordinator (currently Lisa Smith) within the first month of graduate enrollment; the certificate will be recorded in the student's record.

The completion of the EM Ethics and Integrity Requirement will be noted in the Plan of Study submitted for Program and Graduate School approval.

The proposed procedure for the EM 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 BSE 5944 Graduate Seminar 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)](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 BSE 5944 Graduate Seminar 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 BSE 5944 Graduate Seminar 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 ([Training and Professional Development | Research and Innovation | Virginia Tech (vt.edu)](#)). 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 BSE graduate students to report alleged misconduct will be presented at the required BSE 5944 Graduate Seminar. 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 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 EM 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 EM Ethics and Integrity Requirement. During the EM program orientation we will address intellectual property issues and the use of VTIP (Virginia Tech Intellectual Properties (VTIP) | Innovation and Partnerships | Virginia Tech) guidelines for determination of authorship, proper purchasing procedures, and appropriate use of university facilities and equipment (including computing resources). Individual laboratory procedures and documentation policies, including IRB approval, varies by research group, and will be handled by Faculty supervisors.