Ethics and Integrity Requirement Proposal

Graduate Programs in Electrical and Computer Engineering

The Bradley Department of Electrical and Computer Engineering (ECE) 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." ECE graduate students who have satisfied these requirements through the procedure proposed herein will have this fact noted in their plan of study when this plan is submitted to the Graduate School for approval.

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

1. All entering ECE graduates students are required to attend a half-day orientation prior to the beginning of the fall or spring semester. Attendance is taken at this orientation and will be recorded in each student's departmental record. At this orientation the ECE Ethics and Integrity Requirements will be presented, and students will be informed of the timeline for satisfying these requirements.

2. All new graduate students are required to complete the ECE 5944, Graduate Seminar, twice (in both the fall and spring semesters). During the fall semester, a session organized by ECE Student Services will cover two topics: (a) ECE and Graduate School policies and procedures, and (b) an introduction to the Virginia Tech Graduate Honor System. Attendance is taken at this seminar will be recorded in the student's departmental record.

3. All new ECE graduate students will be required to successfully 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 ECE Student Services within the first month of graduate enrollment and will be recorded in the student's departmental record.

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

The proposed procedure for the ECE 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)](#)) 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 ECE 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 BSE through our BSE 5944 Graduate Seminar series.