Distance Education in ECE:
Vision, Objectives, and Status

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Vision

• To be renowned as a source of state-of-the-art, no-hassle, reputable, and personalized distance education of quality comparable to our on-campus offerings and those of our peer institutions.
Current Status

• We offer graduate degree programs and graduate certificates.

• (Nearly all) classes take place in distance-education classrooms and are produced by the VCC.

• Distance revenue is shared with department (20%, currently $600) and instructor (20%).

• Promotion and marketing is through Global Learning.
Objectives

- Triage
- Survey (and promotion)
- Planning
Objectives - Triage

• Advising of distance students
  – Understanding their needs and objectives
  – Clustering them into groups
  – Identifying our current strengths and weaknesses

• Near-term planning of distance offerings
  – To match the needs of existing distance students

• Survey of existing certificates
  – Elimination of obsolete certificates
  – Update of “problematic” certificates
Objectives - Survey

- ECE faculty, alumni, and Academy
- Past and present distance students
- DCE and Global Learning
- Engineering Management
- I/UCRC members
- National Labs with whom we have close relationships
- Offerings across campus
  - Identify overlap and synergy
- Offerings of our peer institutions
Objectives - Planning

• Frequency and format of distance offerings
• Incentives for faculty participation
• Ownership of learning artifacts
• Infrastructure – who pays for it, who controls it, who uses it
• Promotion and marketing
• Residency requirements (full degrees offered?)
Graduate Certificate Programs

- Four three-credit-hour courses are required.
- **Credit earned in the certificate can be counted toward the master’s degree.**
- A student needs to earn a B or better in *each* certificate course to continue on for their master’s degree without needing to submit GRE/GMAT scores.
- Starting with a certificate does not waive any prerequisite requirements.
- Average GPA of 3.0 or better (a grade of B or better) throughout the certificate is required for its completion.
ECE Admission Requirements for Certificates

- BS degree in any field of engineering.
- A minimum of 24 months of post B.S. professional work experience.
- Employment while taking certificate courses.
Current ECE Certificates

• Computational Intelligence (joint with EMSE)
• Electric Machines and Drives
• Electric Power Systems Engineering
• Information Assurance and Security Officer Essentials (joint with CS)
• Network-Centric Systems (joint with EMSE)
Certificate Enrollments in the Past Five Years (through Fall 2015)
Total = 177

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<th>Enrollments</th>
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<td>Electric Power Systems Engineering</td>
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<td>Information Assurance and Security Officer Essentials</td>
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<tr>
<td>Network Centric Systems</td>
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Certificates Awarded in the Past Five Years (through Fall 2015)
Total = 27

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<td>15</td>
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<tr>
<td>Information Assurance and Security Officer Essentials</td>
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Graduate Degree Programs

• MS (thesis and non-thesis) is offered in both EE and CpE.
• Same requirements and admission criteria as on-campus programs.
• Admission requirements:
  – Bachelor’s degree in related field from ABET accredited university (or equivalent international), with GPA ≥ 3.3/4.0
  – GRE V≥148 (420 on previous scale); Q≥ 160 (760 on previous scale); GRE V+Q≥308 (1180 on previous scale); GRE WR score ≥ 4.0
  – GRE is waived for students who have completed one of our certificates.
  – International requirements: TOEFL>92 iBT; 580 PBT; 237 CBT
• Once admitted, a student will be given three years to complete the program.
• Maintaining a B average is required.
Degree Enrollments in the Past Five Years
(through Fall 2015)
Total = 107

CP ENG-MS: 17
CP ENG-PHD: 10
EL ENG-MS: 75
EL ENG-PHD: 5
Degrees Awarded in the Past Five Years (Through FS15)
Total = 11

CP ENG-MS: 3
EL ENG-MS: 8
Spring 2016 Course Offerings

• 17 distance (graduate) courses offered.
• 45 students enrolled.
Causes for Concern

- **Incentives for faculty participation**
  - Currently 20% of revenue ($600) goes to the instructor’s SRI for each distance student enrolled

- **Impact on on-campus students**

- **Quality of presentation**
  - Devices/technology to be used

- **Availability of distance classrooms**

- **Remote access to labs**
Tasks Completed/In Progress

- Coordination with Global Learning
- Employment of GTA for distance learning
- Survey of (recent) past and current offerings, enrollments, etc.
- Audit of all current distance students
- Three-course pilot of ad-hoc distance classroom
- Development of short- and long-term plans and evaluation metrics for distance education in ECE