ECE Graduate Program
• Master program admission requirement
• Master degree requirement
• Doctoral degree requirement
MS/ME Admission

• Minimum GPA 3.0 for both overall and major courses (provisional admission if GPA <3.0)

• Application
  – Online application through Office of Admission or Office of International Admission
  – Two letters of recommendation
  – Transcripts from all colleges attended
  – GRE
  – Resume
  – Personal statement of objectives
  – International students: TOEFL
Linked BS/MS or BS/ME Program

• Qualified undergraduate students can apply for the linked BS/MS or BS/ME program, typically at the junior year
• Two 500 level courses can be used for both the BS degree and the Master degree
• To enroll in the BS/MS or BS/ME program, the student contacts the GPD to complete a form, and attach transcripts, resume
• There is no need for a formal application
Online ME degree

- Working engineers have an option to take courses online
- An online ME option is available through ODU Online office (Gornto)
- Courses offered currently online (interactive)

  - Fall semester
    - ECE 506  Introduction to Visualization
    - ECE 516  Cyber Defense Fundamentals
    - ECE 570.  Foundations of Cyber Security
    - ECE 573  Solid State Electronics
    - ECE 601  Linear Systems
    - ECE 642  Computer Networking
    - ECE 648.  Advanced Digital Design
    - ECE 695  Characterization of Materials
    - ECE 772  Fundamentals of Solar Cells
    - ECE 731  Graduate Seminar

  - Spring semester
    - ECE 507  Introduction to Game Development
    - ECE 510  Model Engineering
    - ECE 519  Cyber Physical System Security
    - ECE 555.  Network Engineering and Design
    - ECE 562  Introduction to Medical Image Processing
    - ECE 607  Machine Learning
    - ECE 651.  Statistical Analysis and Simulation
    - ECE 762  Digital Control Systems
    - ECE 763  Multivariable Control Systems
    - ECE 731  Graduate Seminar

  - Summer semester
    - ECE 695 – Topics: Linear Algebra in Engineering
Leveling Requirement for BS not in EE or CpE

- BS not in EE or CpE: Require leveling courses
  - Part 1: general courses if not taken at BS
    - One year of college chemistry
    - One year of calculus-based college physics
    - Calculus III
    - Differential Equations
  - Part 2: major courses
    - Option A: minor in EE or CpE with GPA >=3
    - Option B: a number of leveling courses determined by GPD
Master Degree Requirement in ECE (to be cont.)

- 30 credits beyond BS degree
- Master of Science (MS) in Engineering – ECE
  - 8 courses + 6 thesis research credits & thesis defense
  - 1 credit hour of Graduate seminar
  - Total 31 credit hours
  - Need to find advisor after 18 credit hours
- Master of Engineering (ME) – ECE
  - Option A: 10 graduate courses + comprehensive exam, or
  - Option B: 9 graduate courses + ME project with faculty mentor
  - Total 30 credit hours in both options
  - Available in traditional (campus) and online (distance learning) formats
Master Degree Requirement in ECE – cont.

- Both MS and ME must have at least one math course: ECE 601, 611, 623, or 651, or **695 Linear Algebra**
- At least five courses at the 600 or higher level
- No more than three courses at the 500 level
- No more than three graduate courses from other departments
- All funded Master's students are required to attend Graduate Seminar (ECE 731)
- Graduate courses can be taken through the Commonwealth Graduate Engineering Program and the Virginia Consortium for Engineering and Science
PhD Admission

- Minimum GPA 3.5
- Application
  - Online application through Office of Admission or Office of International Admission
  - **Three** letters of recommendation (two from faculty or supervisor)
  - Transcripts from all colleges attended
  - GRE
  - Resume
  - Personal statement of objectives
  - International students: TOEFL
Doctoral Degrees in ECE

• Doctor of Philosophy (PhD) – 48 credits beyond Master degree →
  research intensive
  – 24 credit hours of graduate-level courses beyond the master's degree (not including Graduate Seminar),
  – 24 dissertation research credits
  – At least 1 credit hour of Graduate Seminar (ECE 831) is required
  – successful completion of a written diagnostic examination
  – successful completion of written and oral candidacy examinations,
  – successful completion of a dissertation research proposal, and
  – successful completion and public defense of a dissertation.
Doctor of Philosophy (PhD)

– At least five courses at the 800 level
– No more than three graduate courses from other departments
– All funded students are required to attend Graduate Seminar (ECE 831)
– Graduate courses can be taken through the Commonwealth Graduate Engineering Program and the Virginia Consortium for Engineering and Science
Doctor of Philosophy (PhD)

- Ph.D. Diagnostic Examination
  - Take it at the first time before the end of the second semester in the Ph.D. program
  - Need to pass the examination in no more than two attempts.
  - The second attempt, if necessary, should be taken at the next offered examination.

- University requires that students who have advanced to ABD (candidacy) be enrolled for at least one credit hour every fall, spring, and summer until graduation.
Linked BS/PhD Program

- Qualified undergraduate students can apply for the linked BS/PhD program, typically at the junior year.
- To enroll in the BS/PhD program, the student contacts the GPD to complete a form, and attach transcripts, resume.
- There is no need for a formal application.
Doctor of Engineering (DEng) Admission

• Minimum GPA 3.5
• Application
  – Online application through Office of Admission or Office of International Admission
  – Two letters of recommendation
  – Transcripts from undergraduate and graduate
  – Personal statement of objectives
  – International students: TOEFL
Doctoral Degrees in ECE

- Doctor of Engineering (DEng) → 48 credits beyond Master degree → practicing engineers seeking leadership positions (industry/gov’t)
  - 18 credit hours of core courses
  - At least 18 credit hours of graduate coursework in the student’s area of specialization
  - 12 hours of applied doctoral project
  - Project report + oral defense → addresses a complex but practical problem and provides a solution that satisfies specific constraints (technical, economic, safety, sustainability, environmental, etc.)
Doctor of Engineering (DEng)

- At least three fifths of the course work must be at 800-level.
- The 18 credit hours of core courses are:
  - ENMA 604 Project Management
  - ENGN 611 Financial Engineering
  - ENGN 612 Analysis of Organizational Systems
  - ENGN 811 Methodologies for Advanced Engineering Projects
  - ENGN 812 Engineering Leadership
  - ENGN 813 Engineering Ethics
Doctor of Engineering (DEng)

- 48 credit hours of graduate-level courses beyond the master's degree (not including Graduate Seminar),
- successful completion of a written diagnostic examination
- successful completion of written and oral candidacy examinations,
- successful completion of a project concept proposal,
- Written report of the project results
- Comprehensive oral defense of the doctoral project.