

Summary of Admission and Degree Requirements for ECE Graduate Programs

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Old Dominion University

Note that this is an unofficial summary and may not include all information.
Please refer to the [ECE catalog](#) for the complete, official, updated requirements.

Outline

- Master program admission requirements
- Master degree requirements
- Doctoral program admission requirements
- Doctoral degree requirements

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

- Summer semester

ECE 695 – Topics: Linear Algebra in Engineering

- 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

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 Degree requirements 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 Degree requirements 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) degree requirements

- 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) degree requirements

- 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.