UNDERGRADUATE PROGRAM GROUP ADVISING

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Department of Electrical and Computer Engineering
Spring 2018
General Guidelines

- Students are responsible for the material contained in the Catalog which can be found online here: http://catalog.odu.edu.
- The ECE Department, (Undergrad Coordinator, Faculty Advisor, CDA, and Chair) will help you as much as possible-- but you have to make good choices and take responsibility.
Outline of Presentation

- Advising Procedures
- Reminders/Changes
- Program Revisions
- Upcoming course options
- Policies on Academic Continuance
- Special Programs

- Opportunities
- Upcoming Events
Advising Procedures

- Step 1---Prepare tentative schedule using the Plans tab in DegreeWorks
- Step 3--- Attend Group Advising session, if required, for general information.
- Step 4--- Following these sessions, meet with your Faculty Advisor and have him/her sign and date your curriculum sheet.
- Step 5--- Return the signed form to Ms. Kinney’s mail box in the ECE office. The advisor block will then be removed on March 29.
- Step 6--- Register for your courses online, beginning the week of April 2. Check myODU for your Time Ticket for registration

Problem solving??

- Meet with Ms. Kinney (KAUF 231A) or Dr. Lakdawala (KAUF 217) or faculty advisor for more in-depth discussions.
Meeting with your Faculty Advisor

- Contact your assigned Faculty Advisor and arrange to meet with him or her.
- Your Faculty Advisor’s Office Hours are available on the ECE website: http://www.odu.edu/ece.
- Obtain the Faculty Advisor’s signature on the Curriculum Sheet and return to Ms. Kinney’s mailbox in the ECE front office.
Registration Overrides

- Students not yet officially declared as ECE major, still listed as Engineering Intended: expect Major Restriction on ECE 2XX-level courses.

- Contact Ms. Deb Kinney, dkinney@odu.edu, to process an override. Give your name and UIN and the name of the pre-approved course, including the CRN.

- For all registration errors, contact Deb Kinney, dkinney@odu.edu, for overrides, giving your UIN and a screen shot of the error message.
Limited Enrollment Courses

- **ECE 458** Instrumentation (spring and summer) - is restricted and requires prior approval.
  - Sign the wait list at time of advising for spring and summer semesters. The list is in Ms. Kinney’s office.
- **ECE 387** Microfabrication Lab (required course for EE students only) - is restricted to the top 18 students in ECE 332 Microelectronic Materials and Processes. You may choose a technical elective to replace this class, if desired.
Upper-Level General Education Requirements

- 12-credit minor
- Double major/Double degree
- EE minor for CpE major
- CpE minor for EE major
- Modeling and Simulation minor
- Biomedical Engineering
- Engineering Management
- Cyber Security
- 2 Upper Level courses outside of major and outside of College of Engineering
- CpE majors - an automatic minor in CS is built into their program – no additional CS courses are required
Writing Proficiency Requirements

- University Writing Proficiency requirements:
  - Pass ENGL 110C with grade of “C” or better, and
  - Pass 2nd composition course, ENGL 211C or ENGL 231C with grade of “C” or better, and
  - Pass program “W” writing-intensive course, ECE 484W or ECE 485W, with a grade of “C” or better.

*Prerequisites for “W” course: a grade of “C” or better in both writing courses.
Requirements for Major Declaration in EE or CpE

- *ECE Department will officially declare your major once the following requirements are met.*
- Completion of 30 credit hours applicable to your major
- Grade of “C” or above in MATH 211 & 212
The Senior Design Sequences

- ECE Senior Design II is split into two segments, a 2-credit preparatory course followed by a 2-credit design course
  - ECE 486 Prep for ECE Senior Design II, 2 cr – to be taken prior to ECE 487 and as a co-requisite of Senior Design I (ECE 484W or ECE 485W)
  - ECE 487 ECE Senior Design II (2 cr)
Senior Design Sequences (cont.)

- ECE 484W CpE Senior Design I OR ECE 485W EE Senior Design I
- ECE 486 Prep for ECE Senior Design II
  - Co-requisite with ECE 484W
- ECE 487 ECE Senior Design II
- ECE 488 ECE Senior Design III (optional) - can be taken as a Technical Elective if student wishes to do a three-semester-long project which began in ECE 486/487. This is helpful for students who wish to continue into the Master’s program.
Points of Interest

- ECE 241, 287, and 313 all have the labs incorporated. You must register for the lab section when you register for the lecture/recitation section.

- EE only
  - Non-major engineering elective can be a course at any level, in CEE, MAE, MSIM, ENMA (useful for students doing a minor in ENMA), or CS (useful for students doing a minor in CS).
Points of Interest (contd.)

- 1 credit FE review course (ENGN 401) is no longer required.
- FE Exam is not required but is highly recommended for EE students.
Electrical Engineering
Technical Electives

- **Systems & Automation Engineering**
  - Digital Signal Processing I (ECE 381)
  - Communication Systems (ECE 451)
  - Network Engineering and Design (ECE 455)
  - Instrumentation (ECE 458)
  - Automatic control Systems (ECE 461)

- **Physical Electronics**
  - Power Electronics (ECE 403)
  - Intro to Bioelectrics (ECE 454)
  - Bio Medical applications of Low Temp Plasmas (ECE 464)
  - Solar Cells (ECE 471)
  - Plasma Processing at Nano Scale (ECE 472)
  - Solid State Electronics (ECE 473)
  - Optical Communications (ECE 474)
Electrical Engineering
Technical Electives (cont.)

- **Computer Hardware Systems**
  - Digital System Design (ECE 341)
  - Microcontrollers (ECE 346)
  - Computer Architecture (ECE 443)
  - Advanced Digital Design and Field Programmable Gate Arrays (ECE 441)
  - Embedded Systems (ECE 483)

- **Power and Renewable Energy**
  - Introduction to Electric Power – ECE 303
  - Electric Drives – ECE 404
  - Power Electronics – ECE 403
  - Power Systems Analysis – ECE 405
  - Solar Cells – ECE 471
  - Automatic Control Systems – ECE 461
  - Electric Vehicles – ECE 497
Computer Engineering
Technical Electives

- **Computer Hardware Systems**
  - Digital System Design (ECE 341)
  - Microcontrollers (ECE 346)
  - Computer Architecture (ECE 443)
  - Advanced Digital Design and Field Programmable Gate Arrays (ECE 441)
  - Embedded Systems (ECE 483)

- **Computer Networks**
  - Introduction to Networks and Data Communications (ECE 355)
  - Network Engineering and Design (ECE 455)
  - Communication Systems (ECE 451)
  - Introduction to Wireless Communication Networks (ECE 452)
  - Network Systems Security (CS 472)
Computer Engineering Technical Electives (cont.)

- **Cyber Security**
  - Introduction to Networks and Data Communications (ECE 355)
  - Microcontrollers (ECE 346)
  - Cyber Defense Fundamentals (ECE 416)
  - Cyber Physical System Security (ECE 419)
  - Network Engineering and Design (ECE 455)
  - Foundations of Cyber Security (ECE 470)
  - Embedded Systems (ECE 483)

- **Signal Processing & Computer Vision**
  - Digital Signal Processing I (ECE 381)
  - Fundamentals of Digital Image Processing (New ECE 481)
  - Computer Vision (CS 461)
  - Introduction to Imaging Technologies for Homeland Security (ECE/MSIM 480)
  - Introduction to Medical Image Analysis (ECE 462)
Additional CS Technical Electives for CpE Students

- CS 355 Principles of Programming Languages
- CS 390 Introduction to Theoretical Computer Science
- CS 454 Network Management
- CS 476 Systems Programming
- CS 487 Applied Parallel Computing
- CS 488 Principles of Compiler Construction
Concentrations in EE and CPE

- Beginning fall 2018, students will be able to declare a concentration within their major.
- Concentrations may be obtained by choosing at least four courses within the selected concentration.
- By choosing carefully, the courses within the concentrations can also count as Technical Electives within the major.
Concentrations Areas in Computer Engineering

- Computer Engineering Concentration Areas
  - Computer Hardware Systems (CHS)
  - Computer Networks (CNW)
  - Cyber Security (CYSC)
  - Signal Processing and Computer Vision (SPCV)
Concentration Areas in Electrical Engineering

- Electrical Engineering Concentration Areas
  - Systems and Automation Engineering (SYAM)
  - Physical Electronics (PHEL)
  - Computer Hardware Systems (CHS)
  - Power and Renewable Energy (PRE)
Technical Electives for Fall 2018

- ECE 341 Digital System Design (for EE majors only)
- ECE 355 Intro to Networks/Data Communications
- ECE 404 Electric Drives
- ECE 406 Introduction to Visualization
- ECE 416 Cyber Defense Fundamentals
- ECE 443 Computer Architecture
- ECE 452 Intro to Wireless Communication Networks
- ECE 454 Intro to Bioelectrics
- ECE 461 Automatic Control Systems
- ECE 470 Foundations of Cyber Security
- ECE 471 Introduction to Solar Cells
- ECE 472 Plasma Processing at the Nanoscale
- ECE 473 Solid State Electronics
- ECE 495 Topics: BME Principles I
- ECE 495 Topics: Power System Design and Analysis
- ECE 495 Topics: Drone Technology
ECE Summer 2018 Courses

- ECE 201 Circuit Analysis I
- ECE 202 Circuit Analysis II
- ECE 287 Fundamental Circuits Lab
- ECE 302 Linear System Analysis
- ECE 303 Introduction to Electric Power
- ECE 304 Probability, Statistics and Reliability
- ECE 313 Electronic Circuits
- ECE 346 Microcontrollers
- ECE 458 Instrumentation
Additional Technical Electives

- One Technical Elective may be substituted from other engineering disciplines, mathematics, and science courses.
- These courses must be pre-approved by the Chief Departmental Advisor (CDA) in order to be used as substitutes.
- 3 credits of ECE 368 Internship may be substituted for a Technical Elective.
Computer Science Courses For Summer 2018

- All required CS courses are offered summer 2018
- CS 150, 250, 252, 350, 361, 381 and 471
- Contact CS department for up-dates.
ECE Schedule of Classes

- The ECE office continuously updates our course schedules as changes are made.
- Check for schedule changes:
  - On the ODU website: Leo Online
  - On the counter in the ECE office
  - On our ECE website: http://www.odu.edu/ece/students/undergraduate/schedules
Required Courses with Limited Offerings

- **EE required course**
  - ECE 303, fall and summer only, not spring

- **CpE required courses**
  - ECE 346, spring only, not fall, occasionally in summer
  - ECE 443, fall only, not in spring or summer
Departmental Policies on Academic Continuance

- A minimum grade of “C” or better is required for all Sophomore-level ECE classes - ECE 201, ECE 202, ECE 241, ECE 287.
- Grades of “C” or better are required in Math 211, Math 212, Phys 231N, CS 150, CHEM 121N and CHEM 122N.
- CS department requires a minimum grade of “C” or better in all the major courses i.e., CS 150, CS 250, CS 361, CS 350, CS 471.
- A grade of “C-” does **not** satisfy the requirement for “C”.
Withdrawal Policy

- University Rules will be rigorously enforced.
  - Withdrawal from a class after the published last date, March 27th, is not allowed except for reasons of health or sickness.
  - When taking a class for Grade Forgiveness, withdraw from the class if you do not expect to obtain a better grade. Do not waste your Grade Forgiveness option!
    - Grade Forgiveness may be applied once to a course taken with only the second grade calculated in the GPA. Grades obtained for any additional retakes of the course will be included in the GPA calculation.
    - Grade Forgiveness can only be applied to 5 courses
Linked Programs

- **BS/Master’s programs**
  - For high-achieving students (GPA >3.0)
  - 6 credits (2 technical electives) can count towards both BS and MS/ME
  - Designed to allow students to complete both degrees in shorter period of time

- **BS/PhD program**
  - For very high-achieving students (GPA >3.5)
  - Some reduction in course requirements
  - Designed to speed up time to complete the PhD degree.
  - Intensive research required

- **Plan early for both programs**
  - See Dr. Chunsheng Xin, GPD, for more information
  - Preferably the application process should begin by junior year. However, applications **must** be submitted by **beginning of senior year**.
  - BS/Master’s - 400/500 level courses **must** be taken at the 500-level. Graduate tuition rates will apply to these courses.
Double Majors/
Double Degrees

- Double majors meet all requirements for each major but have less than 150 total credits. Double Degrees meet all requirements but have 150 total credits or more.
- EE/CpE - could be either depending on total credits at end of both programs
- CpE/CS - developed to yield Double Degree with 150 or more credits required
- EE/Physics – developed to yield Double Degree with 150 or more credits required
- CpE/Cyber Security – developed to yield Double Degree with 150 or more credits required (pending)
DegreeWorks

- Students are to follow their progress through DegreeWorks.
- Go to myODU to access DegreeWorks.
- Seniors should review their record on DegreeWorks with Ms. Kinney at advising time if any discrepancies are noticed.
- Freshmen and sophomores should have their Plans section completed for the following two semesters.
- Juniors and Seniors should have their Plans section completed for the duration of their program.
Graduation Information

- Students must submit an application for graduation. It is not an automatic process. You may now apply for graduation and commencement in Leo Online.
- Applications are to be submitted 6 months prior to graduation date.
- Review DegreeWorks for any discrepancies in your record. See Ms. Kinney for rectification, if needed.
- If your minor is outside of the ECE department, contact your **minor department** for information on certification for your minor. (*You must declare your minor with the advisor for the department of your minor.)*
- GPA requirements of 2.00 or better are required for your Overall GPA, your Major GPA and your Minor GPA
- If deferring your graduation, you must reapply for graduation.
Opportunities

- Undergraduate research assistants -- working with individual faculty
- Society of Women Engineers (SWE) Scholarship Competition website: [https://scholarships.swe.org/applications/login.asp](https://scholarships.swe.org/applications/login.asp) Deadline February 2019
- Virginia Space Grant Consortium (VSGC) scholarships website: [http://www.vsgc.odu.edu/](http://www.vsgc.odu.edu/)
  - Up to $8500 per student per year
  - Must “team” up with ECE advisor and submit application before February 2019.
- See BCET website ([http://www.odu.edu/eng](http://www.odu.edu/eng)) and ODU financial aid website ([http://www.odu.edu/finaidoffice](http://www.odu.edu/finaidoffice)) for more listings.
Other Reminders

- Foreign Language requirement must be met in order to graduate. This is considered met by second degree students and transfer students whose AS degree meets lower-level general education requirements. Transfer students without the AS degree should also submit high school transcript to Admissions Office if requirement was met in high school (three years of foreign language or two years each of two foreign languages).

- For rising seniors planning to take the FE exam, please contact DPOR, Toni Spencer, (804) 367-8506, apelscidla@dpor.virginia.gov
  - Currently, Total cost is $175
Microsoft Imagine

- Student accounts available
- Operating Systems: Windows Client, Windows Server
- Applications: Visio, Project, OneNote
- Email Deb Kinney, dkinney@odu.edu
UPCOMING EVENTS

- ECE 487 Senior Design Presentations: April 19. The poster session will be part of ODU’s BCET Senior Design Expo on April 24.
  Juniors should consider attending a few of the presentations
- FINALS BEGIN April 25!!!!!!!!!  GOOD LUCK
How can I find out more about Electrical and Computer Engineering Department?

- Join IEEE
- Take advantage of work/study room (K228)
- TUTORING AVAILABLE – K 228
- Make appointment with and meet your faculty advisor.
- Frequently visit the department home page for latest information: [http://www.odu.edu/ece](http://www.odu.edu/ece)