Electrical and Computer Engineering Syllabi   Electrical and Computer Engineering

2023

EECE 4279: Professional Development (Syllabus)

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Recommended Citation
Balasubramanian, Madhusudhanan, "EECE 4279: Professional Development (Syllabus)" (2023). *Electrical and Computer Engineering Syllabi*. 10.
https://digitalcommons.memphis.edu/electrical-computer-engineering-syllabi/10

EECE 4279: Professional Development
Lectures: ES 220, Monday & Wednesday, 12.40 pm to 2.05 pm
Instructor: Madhu Balasubramanian
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Email: mblsbrmn@memphis.edu (*more reliable*)
Office hours: By appointment (flexible; email for appointment)

Textbook and Other Required Materials:
  a. Lecture slides, and notes.
  b. Ford, Ralph, and Chris Coulston. *Design for electrical and computer engineers: Theory, Concepts, and Practice*. McGraw-Hill, Inc., 2007.
     • In our library reserve: https://sierra.memphis.edu/record=b3556324~S16

Website: https://memphis.instructure.com/

Prerequisites: EECE 3201, 3211, 3270

Grades
  • Assignments: 35%
  • Oral competency: 15%
  • Participation: 10%
  • Final Dossier: 40%
  • Letter grade assignment (may change to match class average)

    A+: 98 to 100;   **A**: 92.5 to 97.9;   **A-**: 90.0 to 92.4
    B+: 87.5 to 89.9;   **B**: 82.5 to 87.4;   **B-**: 80.0 to 82.4
    C+: 77.5 to 79.9;   **C**: 72.5 to 77.4;   **C-**: 70.0 to 72.4
    D+: 67.5 to 69.9;   **D**: 62.5 to 67.4;   **D-**: 60.0 to 62.4
    F: 0.0 to 59.5

University Guidelines for Covid-19:

   https://www.memphis.edu/coronavirusupdates/

Important Dates:
   https://www.memphis.edu/registrar/calendars/academic/ay2324.php
  • First Day of Classes: **August 28, 2023 / Monday**
  • Labor Day: **September 4, 2023 / Monday**
  • Fall Break: **October 14-17, 2023/ Saturday-Tuesday**
  • Thanksgiving Holidays: **November 22-26, 2023 / Wednesday-Sunday**
  • Last Day of Classes: **December 6, 2023 / Wednesday**
  • Study Day: **December 7, 2023 / Thursday**
  • Exams: **December 8-14, 2023 / Friday-Thursday**

Catalog Title Abbreviation: Professional Development

Catalog Description: Design, ethics, standards, participation in professional organizations; preparation for licensing; preparation for senior design project; contemporary issues and the impact of engineering solutions in a global, economic, environmental, and societal context.

PREREQUISITE: EECE 3201, 3211, 3270.

Topics Covered:
1. The Engineering Design Process
2. Teams, Teaming & Design Process
3. Project Selection and Needs Identification
4. The Requirement Specification Constraints and Standards
5. Concept Generation and Evaluation
6. Project Management
7. Ethical and Legal Issues
8. Activities: Ethics case studies, ethics debates, oral and written presentation techniques, project management exercises, resume and interview exercises

Course Objectives:
1. Engineering design process (EDP): Ability to recommend <u>project needs</u>
2. EDP: Ability to develop <u>engineering requirements specification</u> from the identified project needs
3. EDP: Ability to generate and evaluate <u>design concept</u> from the developed engineering requirements specifications
4. EDP: Ability to derive a <u>functional decomposition</u> of the developed design
5. Ability to evaluate the <u>role of standards</u> in the engineering design process and in designs
6. Ability to identify and explain <u>constraints</u> involved in the development of engineering design and solutions
7. Ability to judge <u>ethical standards involved in engineering design, including ethical behavior, patents, and copyrights</u>
8. Ability to <u>form teams and monitor team interaction / dynamics</u> using modern concepts for <u>team formation</u>
9. Ability to effectively use <u>modern project management concepts and tools</u>
10. Ability to produce and deliver effective <u>oral communication</u>
11. Ability to generate effective <u>written communication</u>

Class Participation:

    a. I expect the students to <u>fully engage</u> in the learning activities, group activities and participate in class discussion.

    b. Students should feel at ease to <u>seek clarification at any stage in this course</u> during lecture, and after lecture through individual appointment (seek appointment by email).

I encourage students to <u>utilize the class discussion forum setup in *Canvas*</u> to seek additional clarification regarding lectures and course materials, share your thoughts on questions from other students in class. While using the group discussion forum, please following the following <u>etiquette</u>:

- Please use the discussion tool to seek clarification.
- Feel free to participate in discussion, and answer questions.
- Be respectful to others during discussion.
- For each topical question, open a new thread
- Answer any questions by responding to the question within the thread.

Academic Integrity:

Plagiarism, cheating and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class in addition to other possible disciplinary sanctions which may be imposed through the regular institutional disciplinary procedures. Expectations for academic integrity and student conduct are described in detail on the website of the [Office of Student Accountability](#). Please read in particular, the section about "[Academic Misconduct](#)". Also refer to https://www.memphis.edu/osa/pdfs/csrr.pdf

Resources:

    a. *Canvas* (learning management system) will be used to distribute lecture materials (slides, videos, notes), quizzes, and homework problems; submit assignments, and exam solutions; and for offline discussion including for seeking clarification and sharing your thoughts: https://www.memphis.edu/um3d/canvas/index.php

    b. Learning to use Canvas: https://www.memphis.edu/um3d/canvas/index.php

    c. Citrix has a comprehensive collection of engineering software such as Matlab, LabVIEW and AutoCAD. You can access Citrix online with the following URL: https://citrix.memphis.edu/vpn/index.html

Syllabus Changes

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both in class and in Canvas.

Students with Disabilities

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by disability services staff at the University of Memphis. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility for specific accommodations from the disability services staff. It is the student's responsibility to initiate contact with Disability Resources for Students (DRS) and to follow the established procedures for having the accommodation notice sent to the instructor.

Sexual Misconduct and Domestic Violence Policy

This policy specifically addresses sexual misconduct which includes dating violence, domestic violence, sexual assault, and stalking. The policy establishes procedures for responding to Title IX-related allegations of sexual misconduct. Complaints can be reported to the Office for Institutional Equity (OIE). You may contact OIE by phone at 901.678.2713 or by email at oie@memphis.edu. Complaints can be submitted online at File a Complaint. OIE's office is located at 156 Administration Building.

Non-Discrimination and Anti-Harassment Policy

University policy prohibiting discrimination and harassment based on protected characteristics and classes. Complaints of discrimination and harassment can be reported to the Office for Institutional Equity (OIE). You may contact OIE by phone at 901.678.2713 or by email at oie@memphis.edu. The full text of the policy can be found at GE2030 - Non-Discrimination and Antiharassment.