



University of Southern Maine

Department of Engineering

Senior Capstone Design Guidelines

This document describes the design experience for engineering students starting with the 2022-2023 catalog year. All design project courses count for 3 credits. EGN 401 and EGN 402 together satisfy the capstone experience for graduation. EGN 403 may be a supplemental course which serves as a technical elective in your degree program.

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EGN 401 Senior Design Project I and the Engineering Profession

Engineering students must enroll in EGN 401 with permission from their advisor, based on a reasonable expectation they will graduate within 2 semesters. Students learn about the engineering design process – from ideation to prototyping. Students are exposed to multiple aspects of the engineering profession, such as ethics, project management, and career planning. They will engage in group projects, incorporating appropriate engineering standards and multiple realistic constraints. An outcome of the course is the selection of a project for EGN 402, based on student interests and

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EGN 402 Senior Design Project II

Students register for EGN 402 after completing a project form with a project supervisor. Collaboratively, the course instructor and the project supervisor will assess the student's performance. Students design and implement a device or system to perform a useful function. The project may be carried out individually or in small groups, but the contribution is assessed on an individual basis. The student will meet regularly with the project supervisor to complete project objectives. The course instructor ensures project milestones are timely met and are complete. Project outcomes include an oral presentation, a poster, and a final report. The final report must contain a description of the engineering standards that were investigated and/or applied and how the realistic constraints were satisfied.

