1. **COURSE TITLE\*:** Introduction to Project Management and Product Design
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*:** ENDS 1143
3. **PREREQUISITE(S)\*:** ENDS 1140 **COREQUISITE(S)\*:** NONE
4. **COURSE TIME/LOCATION: (*Course Syllabus – Individual Instructor Specific*)**
5. **CREDIT HOURS\*:** 3 **LECTURE HOURS\*:** 3

**LABORATORY HOURS\*:** 0 **(contact hours) OBSERVATION HOURS\*:** 0

1. **FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***
2. **COURSE DESCRIPTION\*:**

This is an introductory course in the application of formal project management skills in conjunction with the engineering design process solving product design problems. The formal design solution is guided by the concepts of project management. The solution is presented in the form of a formal presentation that includes Power Point, demonstration, engineering working drawings, bill of material, estimates of time, material, and labor costs, with other reports as required.

1. **LEARNING OUTCOMES\*:**

At the completion of this course the student will be able to:

1. Understand the essential skills required in project management.
2. Understand the essential skills required in product design/redesign.
3. Maintain a design notebook detailing possible solutions, selecting an appropriate solution.
4. Learn to recognize and apply attributes and brainstorming techniques to solve problems.
5. Work in design teams to solve problems that result in the design of new products.
6. Complete a simulated market survey for product.
7. Specify manufacturing methods for product construction.
8. Draft a complete set of working detail and assembly drawings of the problem solution.
9. Estimate retail price of product from bill of material, estimated material costs labor costs, and assembly requirements.
10. Present information in the form of a formal presentation that includes a written report and a 5–7-minute oral presentation with a company’s senior management board of directors as the audience.
11. **ADOPTED TEXT(S)\*:**

None.

Instructor handouts and Canvas content.

**9a: SUPPLEMENTAL TEXTS APPROVED BY FULL TIME DEPARTMENTAL FACULTY (INSTRUCTOR MUST NOTIFY THE BOOKSTORE BEFORE THE TEXTBOOK ORDERING DEADLINE DATE PRIOR TO ADOPTION) \*\*\*.**

1. **OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)\*\***

Students will need a scientific calculator, graph paper, compass, protractor, and a graduated scale, typical drafting equipment that should have been used in ENDS 1140. Free software requirements including Microsoft Project, Excel, Word and AutoDesk AutoCAD current version. Other material and reference materials will be available from the classroom and college library.

1. **GRADING SCALE\*\*\*:**

Grading will follow the policy in the catalog. The scale is as follows:

A: 900 – 1000

B: 800 – 899

C: 700 – 799

D: 600 – 699

F: 0 – 599

1. **GRADING PROCEDURES OR ASSESSMENTS: (*Course Syllabus – Individual Instructor Specific)***

|  |  |  |  |
| --- | --- | --- | --- |
| Assessment method- | % Of Final Grade | Total Points | Grade scale based on points earned |
| Design Standard Report | 5 | 50 | A= 900+ |
| Design Log | 10 | 100 | B= 800-899 |
| Midterm Paper | 20 | 200 | C= 700-799 |
| Quizzes/group projects | 10 | 100 | D= 600-699 |
| Final Project Report | 30 | 300 | F= 0-599 |
| Written Final Exam | 10 | 100 |  |
| Presentation-Final Exam | 15 | 150 |  |
|  | 100% | 1000 |  |

1. **COURSE METHODOLOGY: *(Course Syllabus – Individual Instructor Specific)***

Course Methodology is at the discretion of the instructor. The course material will be primarily delivered through the lecture/discussion method. Special attention will be given to interactive problem solving. Lecture experiences are included as well as hands-on demonstrations and in-class design work.

1. **COURSE OUTLINE: *(Course Syllabus – Individual Instructor Specific)***

|  |  |  |
| --- | --- | --- |
| Week # | Topic | Learning objective |
| 1 | Introduction to the design process  Design Standard Report assignments | 2 |
| 2 | Introduction to project management  Design log (notebook) | 1,2,3 |
| 3 | Project assignments-declarations  Project management principles and practices | 1,2,3 |
| 4 | Project manager’s role  Design considerations  Project work | 1,2,3 |
| 5 | Project scheduling  Project work | 1,2,3 |
| 6 | Project and team monitoring and evaluation  Design Standard Report Due  Project work | 1,2,3,4,5 |
| 7 | Skills and strategies for effective project documentation  Project work | 1,2,3,4,5 |
| 8 | Tools of project management  MIDTERM Paper Due | 1,2,3,4,5 |
| 9 | Teamwork basics  Design review-1  Group project 1-house | 1,2,3,4,5,6,7 |
| 10 | Teamwork skills and problem solving  Attributes  Project work-group or individual | 1,2,3,4,5,6,7 |
| 11 | Time study  Design review-2  Group project 1 due  Group project 2- group trip (estimation) | 1,2,3,4,5,6,7 |
| 12 | Brainstorming  Project work group or individual | 1,2,3,4,5,6,7 |
| 13 | Group project 2 due  Project work | 1,2,3,4,5,6,7,8,9 |
| 14 | Project work | 1,2,3,4,5,6,7,8,9 |
| 15 | Project work  Final project package due-last scheduled class day of week 15 | 1,2,3,4,5,6,7,8,9,10 |
| 16 | Final formal presentations-first scheduled class meeting of wk. | 1,2,3,4,5,6,7,8,9,10 |
|  |  |  |

**15. SPECIFIC MANAGEMENT REQUIREMENTS\*\*\*:**

Class attendance and participation are strongly recommended. Students will be expected to exhibit the ability to meet deadlines with deliverables throughout the course. Student will start the semester with zero (0) points and earn points towards their final grade.

**16. FERPA:\***

Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**17. DISABILITIES:\***

Students with disabilities may contact the Disability Services Office, Central Campus, at 800-628-7722 or 937-393-3431.

**18. OTHER INFORMATION\*\*\*:**

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.