

El Paso Community College

Syllabus

Part II

Official Course Description

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| SUBJECT AREA | <u>Advanced Technology Industrial</u> <u>Manufacturing</u> |
| COURSE RUBRIC AND NUMBER | <u>PLTC 1343</u> |
| COURSE TITLE | <u>Mold Design and Maintenance</u> |
| COURSE CREDIT HOURS | <u>3 2 :</u> <u>Credits Lec Lab</u> |

I. Catalog Description

Studies the basic design parameters of plastic injection molds including mold flow, nominal walls projection, depressions, ejector systems, runners, gates, parting lines, and general mold configurations. Emphasizes maintenance techniques on in-house molds. Covers essential rules for designing molds for amorphous, crystalline and thermoset plastics. **(2:3). Lab fee.**

II. Course Objectives

Upon satisfactory completion of this course, the student will be able to:

- A. Identify various injection mold designs and mold types
- B. Define nominal wall
- C. Define the purpose of radii, draft angles, ribs, parting lines
- D. Identify and describe the purpose of depressions
- E. Identify and describe the purpose of projections
- F. Be able to evaluate plastic parts for improvements for better performance
- G. Select plastic materials per performance requirements such as strength and shrinkage

III. THECB Learning Outcomes (WECM)

- 1. Identify the different types of injection molds.
- 2. Describe basic mold design aspects.
- 3. Take apart and reconstruct molds.
- 4. Identify the purposes of different mold steels.
- 5. Use equipment for mold making to construct a cavity and core for an injection mold.
- 6. Use proper mold cleaners, mold releases, and rust preventatives for mold maintenance.

IV. Evaluation

The skills and knowledge for identification and demonstration as stated in the objectives will be evaluated by assignments and test. Grades will be based on written exams and laboratory activities. Letter grades will be assigned as follows:

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| 90 – 100 | A |
| 80 – 89 | B |
| 70 – 79 | C |
| 60 – 69 | D |
| 0 – 59 | F |

Students will be able to compute their grade average any time during the course. Missed assignments and make-up test will be given at the discretion of the instructor.

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024)

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.