

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Advanced Technology Industrial Manufacturing</u>
COURSE RUBRIC AND NUMBER	<u>RBTC 1305</u>
COURSE TITLE	<u>Robotic Fundamentals</u>
COURSE CREDIT HOURS	<u>3 2 : 2</u> Credits Lec Lab

I. Catalog Description

Studies an introduction to flexible automation. Includes topics on installation, repair, maintenance, and development of flexible robotic manufacturing systems. **Prerequisites: RBTC 1401 or CETT 1407. (2:2). Lab fee.**

II. Course Objectives

- A. Identify types of automation
- B. Discuss the impact of flexible automation on production and labor.
- C. Identify opportunities for automation
- D. Describe general characteristics of flexible robotic manufacturing systems.
- E. Use different teaching pendants.
- F. Describe different control systems.
- G. Develop different applications of robots.
- H. Calibrate automated equipment
- I. Test automated equipment
- J. Manipulate automated equipment
- K. Update automated equipment
- L. Fabricate parts of automated equipment
- M. Maintain automated equipment

III. THECB Learning Outcomes (WECM)

- 1. Describe the history of robotics and its impact on production and the labor force.
- 2. Define the term "robot" and describe general characteristics.
- 3. Explain the physics of robot motion and use different teaching pendants.
- 4. Describe the characteristics of different types of robot control systems, applications of robots, and end-of-arm tooling.

IV. Evaluation

The knowledge and skills stated in the objective must be demonstrated by the students in the form of tests and assignments in order to complete the course. Tests (50%) and lab assignments (50%) will be averaged, and latter grades will be assigned as follows:

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 (Americans 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.