Course Syllabus
TEC 180 Problem Solving Using Technology

Course Title: TEC 180 Problem Solving Using Technology
Course Credit: 4 Credits
Prerequisite: None
General Education: No
Course Description: TEC-180 Problem Solving Using Technology is a "hands-on" course, using computers and graphing calculators to solve problems related to various industrial and engineering technologies.
Text: Applications - Software Manuals
Specific Objectives:
1. To develop a direct approach to technical problem solving using computers and graphing calculators.
2. To provide students with an understanding of the hardware and software tools that can be applied to problems that arise in the various technological curricula.
3. To provide experience with the team approach to problem solving which is becoming widespread as our technical environment grows in complexity.
4. The laboratory will include direct data collection using sensors, manipulation of the data using information management software, and real problem solving using applications software appropriate to the students' technological areas of study.
5. To foster a learning community in the technologies whereby this course environment becomes a resource for faculty and students needing support on assigned projects.

6. To develop supporting technical skills through a contextual problem solving approach.

Means of Assessment/Student Evaluation will be provided by your instructor.
Sample:
4 written tests (lowest grade of the 4 tests dropped) 20 points for each of the three highest tests.
2 note book evaluations (10 points each),
1 written project including paper and presentation (10 points),
Instructor’s evaluation (10 points)

UNIT 1 Basic concepts of problem solving
Using technology to solve problems
Increased productivity using technology

UNIT 2 Case studies in industry and engineering technologies
Selecting a problem or set of problems
Data input

UNIT 3 Human Interface:
Command driven graphing calculator
Graphical user interface of the computer

UNIT 4 Current software and hardware tools

UNIT 5 Applications/Group Projects
Problems in:
Surveying Land Use
Manufacturing Fluid Dynamics
Electronics Areas of Group Interest

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