

<insert course name here>

<insert course code number here>

- I. COURSE DESCRIPTION: A project will be assigned to a designated team. The project will require layout, machining, assembly and testing. Each member of the team will bear equal responsibility for the project. Progress of the project will be recorded daily in a shop journal by each member of the team.**

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Material selection
Potential Elements of the Performance:
using assigned project drawings, select proper materials
Identify: hydraulic tubing, packing glands and seals, chromed rod, brass retainers.
Recognize: machining finish requirements, mating fit requirements

2. Layout
Potential Elements of the Performance:
Layout dimensions as required, allowing for finished dimensions
Work to centerlines
Identify hole locations and angles

3. Setups and procedures (lathe)
Potential Elements of the Performance:
Using four jaw chuck set-up offset parts
Use counter weights to balance
Use collets chuck

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Use a steady rest
Use a bell center
Fabricate springs

4. Setups and procedures (drill press)
Potential Elements of the Performance:
Set-up angles on radial arm drill press
Drill holes to specified depth
Drill flat bottom holes
Grind drill bits for special applications

5. Setups and procedures (milling machines)
Potential Elements of the Performance:
Set-up and fasten parts to milling machine tables
Choose correct cutters
Calculate and set feed and speed
Verify cutter rotation
Practice climb and conventional milling
Use coolant appropriately
Properly align machine vise relative to machine travel

6. Project assembly and trouble shooting
Potential Elements of the Performance:
Assemble and inventory components
Check and verify dimensions
Assemble all parts as specified, making adjustments when necessary
Document adjustments and variations
Test project to insure proper operation
Document test results

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III. TOPICS:

1. Material selection
2. Layout
3. Lathe
4. Drill press
5. milling
6. Assemble and test

IV. REQUIRED RESOURCES/TEXTS **“Machining fundamentals”.**
Six inch scale, six inch vernier,
0-1 inch micrometer
Measuring tape
12 inch crescent wrench
Journal book

V. EVALUATION PROCESS/GRADING SYSTEM:**10% ATTENDANCE****10% SHOP JOURNAL****80% SHOP PROJECT- The assigned project is to be fabricated, assembled and tested for successful completion***<give breakdown of tests/assignments and their weights relative to calculating the final grade for the course>*

The following semester grades will be assigned to students in postsecondary courses:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00

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D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

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Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

<include any other special notes appropriate to your course>

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.