

**K.R.C.C.**  
**MFG. 38B SPECIAL MACHINING PROBLEMS**

INSTRUCTOR:        MR. EVANS

PHONE:            638-0313

OFFICE :            IT 16

OFFICE HOURS:    TUESDAY, 1:00 - 3:00 P.M., THURSDAY 1:00 - 2:00 P.M.

DESCRIPTION:    SPECIAL MACHINING PROBLEMS, 5 UNITS, 10 HOURS WEEKLY

C.N.C. TURNING, C.A.M. PROGRAMMING, PRODUCTION MACHINING, MULTI PART SET-UP, TOOLING SELECTION - SPEEDS AND FEEDS, MACHINING, TOOL AND DIE MAKING, MACHINE MAINTENANCE AND REPAIR.

EXPECTED OUTCOMES:

1.    THE STUDENT WILL BE ABLE TO PROGRAM, SELECT PROPER TOOLING, SET-UP, AND OPERATE C.N.C. TURNING MACHINES.
2.    THE STUDENT WILL BE ABLE TO MANUALLY WRITE PROGRAMS FOR THE TURNING MACHINES.
3.    THE STUDENT WILL BE ABLE TO GENERATE C.N.C. PROGRAMS USING COMPUTER AIDED MANUFACTURING (C.A.M.) SOFTWARE.
4.    THE STUDENT WILL BE ABLE TO PERFORM PREVENTATIVE MAINTENANCE AND MACHINE REPAIRS, INCLUDING GEAR TOOTH REPAIR AND FLAME METAL SPRAYING.
5.    THE STUDENT WILL BE ABLE TO DESIGN, SELECT THE PROPER MATERIALS AND MACHINE BASIC MACHINE TOOLING.

RECOMMENDED BACKGROUND:    MFG 37A-B OR MACHINE SHOP EQUIVALENT

MINIMUM STUDENT MATERIALS:

1.    SAFETY GLASSES
2.    POCKET CALCULATOR WITH TRIG. FUNCTIONS
4.    RECOMMENDED MACHINERY'S HANDBOOK
5.    RECOMMENDED STARTING MACHINIST TOOL BOX

HOW CLASS WILL BE CONDUCTED:

1.    LECTURE
2.    SHOP WORK
3.    FIELD TRIPS
4.    QUIZZES

MFG 38B COURSE OUTLINE

WEEK	TEXT	AGENDA
1-2		SAFETY REVIEW - TEST PRECESSION MEASUREMENT REVIEW - QUIZ
3-5	CHAPTER 3	CNC CODES - PREPARING PROGRAMS - CANNED CYCLES - TOOLING - FEED RATES - SPINDLE SPEEDS - CUTTING FLUIDS
6	CHAPTER 4	PROGRAMMING SOFTWARE
7-9	CHAPTER 5	CNC TURNING G CODES - M CODES - LETTER ADDRESSES - PROGRAMMING

MARCH 10 FINAL DAY TO DROP CLASS WITHOUT ASSIGNED GRADE

WESTEC LOS ANGELES March 20-22

10-12	HANDOUTS	C.A.M. PROGRAMMING
13	DEMONSTRATIONS	MACHINE REPAIR
14-16	HANDOUTS	TOOL AND DIE MAKING
17	FINAL EXAM	<u>May 16 8:00 to 10:00 A.M.</u>

GRADING:

SHOP WORK :

WEEKLY SHOP WORK GRADED OFF TIME CARDS	160 POINTS
REQUIRED PROJECT WORK	600 POINTS
PROJECT WORK COMPLETED DURING SEMESTER	400 POINTS
QUIZZES AND EXAMS	700 POINTS
FINAL EXAM PRACTICAL APPLICATION	200 POINTS
ATTITUDE ( ABILITY TO WORK WITH OTHERS, BEING ABLE TO WORK WITHOUT CONSTANT SUPERVISION, ABILITY TO FOLLOW INSTRUCTIONS.)	400 POINTS
TOTAL	<u>2460 POINTS</u>

2460 TO 2200 = A  
2459 TO 1900 = B  
1899 TO 1700 = C  
1699 TO 1400 = D

DATE \_\_\_\_\_ NAME \_\_\_\_\_

**KRCC MACHINE SHOP  
MFG 38B SPECIAL MACHINING PROBLEMS  
LIST WORK COMPLETED IN REQUIRED AREAS (600 POINTS)**

1. CNC TURNING PROGRAM (150 POINTS) \_\_\_\_\_
2. CNC TURNING SET-UP AND OPERATION (150 POINTS) \_\_\_\_\_
3. CAM LATHE PROGRAMMING (200 POINTS) \_\_\_\_\_
4. FLAME METAL SPRAYING ( 100 POINTS) \_\_\_\_\_
5. GEAR TOOTH REPAIR (100 POINTS) \_\_\_\_\_
6. TOOLING AND DIE MANUFACTURING (100 POINTS) \_\_\_\_\_

**LIST WORK DONE ON PROJECTS THIS SEMESTER (400 POINTS)**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_