

**California North Bay Chapter of the NTMA
APPRENTICESHIP PROGRAM
THIRD YEAR SYLLABUS**

**Thursday / 6:00 – 10:00
Petaluma High School Room A6**

**Instructor: Mike Drayton
Richard Vera**

**Phone: 996-2134
E-mail – dansunia@sbcglobal.net**

COURSE DESCRIPTION: The third year program consists of classroom and computer lab instruction for 4 hours once a week for two semesters (36 meetings). The material to be covered shall facilitate both in transition sequential material and as advance subject matter pertaining to the advancement of the program. The subject matter and schedule is provided for the entire year. Please note the weekly schedule of assignments for any corrections and changes. All apprentices are responsible to maintain currency on the assignments and on schedule.

PREREQUISITES: Successful completion of the second year, number of hours required, and satisfactory evaluations from the employers and the NTMA apprenticeship committee.

COURSE CONTENT: Class lectures are to consist of the text readings and outside sources as assigned per week. Laboratory exercises and experiments will be conducted when appropriate, speakers and class field trips, attendance are requirements of the course.

REQUIRED TEXTS: Purchase ALL text on-line: <http://www.amazon.com> or others source.

Computer Numerical Control

Curran & Stenerson / Prentice Hall; Publisher / ISBN 0-13-348962-0

Metallurgy Fundamentals

Daniel A. Brant and J.C. Warner / Goodheart-Wilcox; Publisher/ ISBN 156637-543-6

SUPPLEMENTARY TEXT:

Materials handbook, Brady
ASME, ASTM; resource to be assigned.
Metrology
Machinery Handbook Current Editions
GD&T Reference Books
SPC: Documentations and Standards.

ATTENDANCE: Attendance is a critical element of this program. Missed classes should be avoided to the maximum possible extend. Students who MUST miss a class should notify the teacher in advance. Students MUST make up all work. When a student misses 2 classes or 8 hours of instruction the teacher will notify the student's employer and the NTMA board for appropriate action(s).

EVALUATION:

- A. Attendance:** **100 points**
No missed classes = 100, 2 hr. missed = 86, 4 = 78, 8 = 70, More than 8 = 0
Missing more than 8 hours per semester can result in removal from program!
- B. Reading, Assignments, Quizzes & Mid-Term.** **100 points**
50 points each semester
- C. Outside Assignments, projects, Library, Using Resources** **100 points**
50 points each semester
- D. Lab Experiments and Reports** **100 points**
50 points each semester
- E. Final Exam** **100 points**

Grade Calculation

$$\frac{\text{Attendance} + \text{Math} + \text{BPR} + \text{MT/MT} + \text{Shop Prof.}}{5} = \text{Grade Point Avg.}$$

100 – 90 points = A

89 – 80 points = B

79 – 70 points = C

69 – 60 points = D

Below 60 = F

METHOD OF INSTRUCTION: Apprentices will be provided with weekly assignments to be completed prior to the class meeting (6 – 10 PM.) At each meeting the instructor will also provide the apprentices with nightly assignments which will outline the subject matter to be covered and will serve as added class notes for the apprentice. Prior to the beginning of the semester, the instructor will provide a complete syllabus of the third year curriculum, which he or she will be responsible to refer to for class lecture activity.

CLASS LECTURE ACTIVITY AND TIME FRAME: The class activity will be conducted within the 4-hour time schedule. Included in the time frame will include a brief administrative discussion pertaining to apprentice and NTMA business related matters.

CLASSROOM SUBJECT ACTIVITY AND FOCUS: The revised curriculum for the third year is to be focused on the following discipline areas on a weekly basis, particular attention will be addressing current needs surrounding these disciplines: Lecture and discussion will be conducted on not less than two subjects for each night, as per schedule. It is the intent of each class meeting to cover the subject matter to the best comprehensive understanding of the apprentice. The responsibility of the instructor will be to deliver the information in a professional manner that reflects industry standards and the knowledge of the instructor.

MAJOR DISCIPLINE AREAS AND FOCUS OF THE THIRD YEAR:

- | | |
|---|--------------------------------------|
| A. Canned Cycles | H. Measurement |
| B. CMM | I. Plastics variety of materials |
| C. CNC Programming and Machine Principals | J. Quality |
| D. Material Science | K. Sanduich K Text Series |
| E. Metallurgy, Ferrous and Nonferrous | L. Statistical Process control (SPC) |
| F. Metrology: G.D. & T. Principals | M. Tool & Die / Grinding |
| G. Math: Review Trigonometry / Review Geometry / calculator | |