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|-------------|------------------------------------|---|
| DMT 54      | Heavy-Duty Electricity             | 4 |
| DMT 55      | Heavy-Duty Diesel Tune-Up/Analysis | 4 |
| DMT 61      | Diesel Engine Rebuilding I         | 4 |
| DMT 62      | Diesel Engine Rebuilding II        | 4 |
| DMT 65      | Air Brake Systems                  | 4 |
| DMT 66      | Truck Transmission and Drive Lines | 4 |
| IT/WELD 108 | Technical Mathematics              | 3 |

**Electives (Select 6 units)**

|          |                                       |         |
|----------|---------------------------------------|---------|
| AT 105   | Automotive Electricity                | 2       |
| AT 125   | Automotive Machining                  | 3       |
| DMT 56   | Alternative Fuels                     | 4       |
| DMT 70   | Med-Duty Diesel Engine Tune-Up        | 4       |
| DMT 81   | Basic Hydraulics                      | 4       |
| DMT 96   | Special Problems in Diesel Technology | .5-3    |
| DMT 97   | Diesel Mechanics Tech Workshop        | .5-3    |
| WELD 100 | Welding I                             | 3       |
| CE 100   | Cooperative Education                 | 1,2,3,4 |

**TOTAL UNITS** **43**

**COURSE OFFERINGS**

Courses numbered under 100 are not intended for transfer credit.

**DMT 50 Introduction to Diesel Mechanics (4)**

3 hours lecture- 3 hours laboratory

Theory and practice of fundamental skills for the maintenance and operation of basic diesel engines. Topics for study include: basic theory of operation; engine applications; engine lubricating and cooling; intake, exhaust and fuel systems; and electronic control.

**DMT 54 Heavy-Duty Electricity (4)**

3 hours lecture- 3 hours laboratory

**Note:** May be taken 2 times

Heavy-duty electricity systems principles and service. Topics of study include electrical theory, batteries, wiring diagrams, 12V and 24V starters, alternators and electrical troubleshooting, and test equipment.

**DMT 55 Heavy-Duty Diesel Tune Up and Engine Analysis (4)**

3 hours lecture- 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in DMT 50

**Note:** May be taken 2 times

The use of software and diagnostic equipment in performing diesel tune-up. Topics include: theory of operation, tune-up procedures, fuel system function and repair, diagnostic equipment usage, electronic engine controls, mechanical and electronic engine system troubleshooting.

**DMT 56 Alternative Fuels (4)**

3 hours lecture- 3 hours laboratory

**Recommended preparation:** DMT 50

Theory and servicing of alternative fueled engines. Topics for study include various types of fuels, fuel handling and safety procedures, basic principles, regulators and mixers, all system components operation and service, electronic control systems, and emission testing.

**DMT 61 Diesel Engine Rebuilding I (4)**

3 hours lecture- 3 hours laboratory

**Recommended preparation:** DMT 50

**Note:** May be taken 2 times

Theory and practice in rebuilding diesel engines. Topics for study include disassembly, cleaning, inspection, and analysis of engine parts. Also included are cylinder head service, sleeve and piston service, advanced machining and measuring techniques.

**DMT 62 Diesel Engine Rebuilding II (4)**

3 hours lecture- 3 hours laboratory

**Recommended preparation:** DMT 61

Theory and practice in rebuilding diesel engines. Topics for study include final cleaning, inspection and reassembly of engine parts. Also included are assembly

measuring, torque procedures and torque-turn methods used on engine assembly, and engine testing upon completion of assembly.

**DMT 65 Air Brake Systems (4)**

3 hours lecture- 3 hours laboratory

The service and repair of heavy duty hydraulic and air brake systems and their components. Topics of study include brake troubleshooting, complete system repair, anti skid brake system, and related axle services.

**DMT 66 Truck Transmission and Drive Lines (4)**

3 hours lecture- 3 hours laboratory

Service and repair of heavy duty truck drive lines. Topics for study include the disassembly, inspection and reassembly of single and multiple disc clutches, four to fifteen speed transmissions, universal joints, and differentials.

**DMT 70 Medium Duty Diesel Engine Tune Up (4)**

3 hours lecture- 3 hours laboratory

**Note:** May be taken 2 times

The use of diesel tune up and diagnostic equipment. Topics include: fuel systems; compression testing; fuel pump and injection timing; troubleshooting procedures; alternators, regulators, and starting systems.

**DMT 81 Basic Hydraulics (4)**

3 hours lecture- 3 hours laboratory

**Note:** May be taken 2 times

Basic hydraulic system principles and service. Topics of study include hydraulic theory, safety requirements, hydraulic diagrams and ISO symbols, component operation, service and repair troubleshooting, and test equipment usage.

**DMT 96 Special Problems in Diesel Technology (.5-3)**

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or laboratory may be scheduled by the department. Refer to Class Schedule.

**Prerequisite:** A minimum grade of 'C' in DMT 50

**Note:** May be taken 4 times

A special study in topics in the area of interest to diesel mechanics, generally research in nature. The content to be determined by the need of the student under a signed contract with the instructor.

**DMT 97 Diesel Mechanics Technology Workshop (.5-3)**

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or laboratory may be scheduled by the department. Refer to Class Schedule.

**Note:** May be taken 4 times

A special selection of topics specific in nature. The contents will vary depending on specific needs of the students and community.

**Disability Resource (DR)**

Contact the Disability Resource Center for further information.

(760) 744-1150, ext. 2375

Office: DSPS

**COURSE OFFERINGS**

Courses numbered under 50 are non-degree courses.

Courses numbered under 100 are not intended for transfer credit.

**DR 5 Personal Adjustment and Growth (2)**

1 1/2 hours lecture-1 1/2 hours laboratory

**Note:** May be taken 3 times

Non-degree Applicable

An individualized class which explores existing concepts, theories, and practices pertaining to self appraisal defense mechanisms and interpersonal relations, and how that relates to school management and to the student's particular disability. This course is designed to meet the needs of students with disabilities.

**DR 10 Educational Assessment/Guidance (.5)**

1/2 hour lecture

**Note:** Open entry/Open exit; Pass/No Pass grading only; may be taken 2 times

Non-degree Applicable

This individualized course is designed to assess, by means of diagnostic testing and the California Community College learning disability eligibility process, the student's need for academic accommodations in the community college setting. The student will be counseled in planning appropriate educational goals and in selecting and preparing for college classes.

**DR 15 English Essentials for Students with Disabilities (3)**  
3 hours lecture

**Note:** Pass/No Pass grading only; may be taken 4 times; Students must have the ability to learn in a group setting. Students must be able to produce computer generated work by using the keyboard or other assistive technology.  
Non-degree Applicable

Provides special assistance for students with disabilities to develop basic skills in written communication. Working with computers is part of the class format.

**DR 18 Phonics for Students with Disabilities (3)**  
3 hours lecture

**Note:** May be taken 3 times

Non-degree Applicable

This course is designed to meet the needs of students with disabilities. It teaches the use of phonics as a spelling and reading strategy.

**DR 20 Pre-Algebra Support (3)**  
3 hours lecture

**Note:** Pass/No Pass grading only; may be taken 4 times

Non-degree Applicable

Provides programmed instruction on an individual and/or small group basis to students with disabilities. Practice in understanding and performing basic arithmetic tasks necessary for successful functioning in society.

**DR 25 Algebra Support (1.5,3)**  
1 1/2 or 3 hours lecture

**Recommended preparation:** MATH 15 or eligibility for MATH 50

**Note:** Pass/No Pass grading only; may be taken 4 times

Non-degree Applicable

Provides personalized instruction in basic study management techniques for the support of students with disabilities in mainstream classes. The course will help students with disabilities to develop specialized study techniques and interpersonal skills needed for success in mainstream classes.

**DR 26 Composition Skills and Strategies for the Intermediate Writer (3)**  
3 hours lecture

**Recommended preparation:** ENG 10 or eligibility for ENG 50

**Note:** May be taken 2 times

Non-degree Applicable

This class is designed to help students with disabilities improve their intermediate composition skills through methods and strategies specific to their disabilities.

**DR 40 Adapted Computer Skills (3)**  
3 hours lecture

**Note:** May be taken 3 times

Non-degree Applicable

Provides computer training using specialized software and hardware adaptations to assist students with disabilities to develop skills in word processing and Internet research.

**DR 41 Advanced Adapted Computers for Students with Disabilities (3)**  
3 hours lecture

**Recommended preparation:** DR 40

**Note:** May be taken 3 times

Non-degree Applicable

Provides training in more advanced software for students with disabilities by using their prescribed access technology. Course work meets computer literacy competence for CSUSM.

**DR 42 Voice Recognition for Students with Disabilities (3)**  
3 hours lecture

**Note:** May be taken 3 times

Non-degree Applicable

Provides voice recognition computer training for students with disabilities.

**DR 43.1 Software for Students with Vision Loss I (3)**

3 hours lecture

**Recommended Preparation:** Keyboarding skills with a minimum of 15 words per minute

**Note:** May be taken 2 times

Non-degree Applicable

Provides training using specialized software and hardware adaptations to assist students with blindness/low vision to develop computer skills.

**DR 43.2 Software for Students with Vision Loss II (3)**

3 hours lecture

**Recommended Preparation:** Keyboarding skills with a minimum of 15 words per minute along with prior experience with a screen reading or magnification application

**Note:** May be taken 2 times

Non-degree Applicable

Provides training using specialized software and hardware adaptations in combination with Microsoft Office, Internet Explorer, and other academic applications.

**DR 45L Adapted Computer Laboratory (1)**

3 hours laboratory

**Note:** Pass/No Pass grading only; may be taken 4 times

Non-degree Applicable

Provides supervised hands on opportunities to acquire and reinforce skills on computer equipment adapted for students with disabilities.

**DR 47 Topics in Disability Resource (1.5-3)**

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or lecture/laboratory may be scheduled by the department.

**Note:** May be taken 3 times

Non-degree Applicable

Topics in disability resource. See Class Schedule for specific topic offered. Course title will designate subject covered.

## Drafting Technology (DT)

Contact the Design and Consumer Education Department for further information.

(760) 744-1150, ext. 2349

Office: ST-49

### Associate in Arts Degrees -

AA Degree requirements are listed in Section 6 (green pages).

- Architectural Drafting Technology
- Computer Assisted Drafting
- Drafting Technology - Multimedia
- Drafting Technology - Technical
- Electro-Mechanical Drafting and Design
- Interactive Media Design - Emphasis in 3D Modeling and Animation
- Interactive Media Design - Emphasis in Multimedia Design

### Certificates of Achievement -

Certificate of Achievement requirements are listed in Section 6 (green pages).

- Architectural Drafting Technology
- Computer Assisted Drafting
- Drafting Technology - Multimedia
- Drafting Technology - Technical
- Electro-Mechanical Drafting and Design
- Interactive Media Design - Emphasis in 3D Modeling and Animation
- Interactive Media Design - Emphasis in Multimedia Design

## PROGRAMS OF STUDY

### Architectural Drafting Technology

Prepares students for employment as a design/production drafter in the field of architecture.

Students concerned with transfer into an architectural program at a university should review specific course requirements with their architectural instructor and the Counseling Department.