

ASSOCIATE IN SCIENCE

Major Requirements for an A.S. Degree

The student shall complete a discipline-specific major which will require an approved program of study with a minimum of 18 units of course work as specified in the College Catalog.

The General Education Requirements

Students must complete one of the following General Education patterns:

Completion of San Joaquin Delta College Associate Degree General Education pattern with a minimum of twenty-four (24) semester units.

OR

Completion of California State University General Education pattern.

OR

Completion of the Intersegmental General Education Transfer Curriculum (IGETC/CSU) General Education pattern.

Students planning to transfer should see a counselor to choose the appropriate courses to complete the entire CSU or IGETC General Education pattern.

Unit Requirement

Completion of not less than sixty (60) associate degree applicable semester units of course work with not less than a 2.0 cumulative grade point average.

Competency Requirement

A minimum competency must be demonstrated by a grade of "C" or higher in courses offered in satisfaction of written communication, oral communication, and quantitative reasoning (IV Learning Skills). *

Residence Requirement

Of the minimum required sixty (60) semester units, the student must complete at San Joaquin Delta College:

The last twelve (12) semester units and attend during the semester of qualification for graduation.

OR

A total of at least twenty-four (24) units.

Units earned through Credit by Examination do not apply.

* "C-" grade is not acceptable.

A.S. Degree Majors:

- Accounting
- Agricultural Business
- Architecture Drafting
- Baking & Pastry
- Caterpillar Dealer Service Technician, Apprenticeship
- Communication: Speech & Language Pathology Assistant
- Computer Networking Technology
- Computer Science
- Correctional Science
- Culinary Arts
- Diesel Equipment Technician
- Engineering Technology (Civil, Electro-Mechanical, or Mechanical)
- Fire Science
- Fluid Power & Automation Technology
- Heating & Air Conditioning - Refrigeration
- Heavy Equipment Technician
- Law Enforcement
- Network Software
- Nursing, R.N.
- Office Management
- Ornamental Horticulture

Limitation on Enrollment

Limitation on enrollment is a condition of enrollment, which limits how students qualify for a particular program. Limitations apply to courses that include public performance or intercollegiate competition where a tryout or audition is necessary. Some courses require formal admission to a particular program in order to enroll (e.g. Associate Degree Nursing, Caterpillar Dealer Service Technician, Fire Academy, Peace Officer Academy, Psychiatric Technician, Radiologic Technology, and Speech-Language Pathology Assistant).

AS Degree - Major in HEATING & AIR CONDITIONING - REFRIGERATION

Applied Science & Technology Division

Upon successful completion of the Heating and Air Conditioning A.S. Degree, the student demonstrates the skills, knowledge, and training to service and repair heating and air conditioning equipment; ability to mechanically and electrically troubleshoot problems typically encountered in the industry; and completion of EPA refrigerant recovery exam for their certification.

Total Units Required: 64-72

Recommended Sequence:

| <u>First Semester</u> | | <u>Units</u> |
|----------------------------|--|--------------|
| MECH 030A | Refrigeration & Air Conditioning | 3 |
| MECH 031A | Basic Air Conditioning: Components & Circuits | 6 |
| ELEC 030 | Fundamentals of Electricity | 5 |
| GE CHOICE * | Learning Skills- Group B Course | 3-5 |
| <u>Second Semester</u> | | |
| MECH 030B | Intermediate Refrigeration | 3 |
| MECH 031B | Basic Air Conditioning: Troubleshooting | 6 |
| MECH 032A | Air Conditioning Control Circuit Analysis | 3 |
| GE CHOICE * | Natural Sciences Course | 3-5 |
| GE CHOICE * | Learning Skills- Group A Course | 3-6 |
| <u>Third Semester</u> | | |
| MECH 031C | Heat Pumps & Air Conditioning Systems | 6 |
| MECH 032B | Refrigeration Control Circuit Analysis | 3 |
| GE CHOICE * | Learning Skills- Group C Course | 3 |
| GE CHOICE * | Social Science- Group A Course | 3 |
| <u>Fourth Semester</u> | | |
| MECH 060 | Metal Trade Layout and Forming | 5 |
| GE CHOICE * | Humanities Course | 3-5 |
| GE CHOICE * | Contemporary Perspective Course | 3 |
| GE CHOICE * | Social Science - Group B Course | 3 |

*ELECTIVES

Courses must be selected from the appropriate area of the General Education requirements for the Associate degree.

A grade of "C" or better is required in each course.

AS Degree - Major in HEAVY EQUIPMENT TECHNICIAN

Applied Science & Technology

Upon successful completion of the Heavy Equipment Technician AS Degree, the student demonstrates skills, knowledge, and training for entry-level employment for the following positions: technician for heavy equipment dealerships, technician for heavy equipment repair facilities, technician for agricultural dealerships/repair shops, and technician for industrial engine dealers. The student demonstrates skills to receive state and national certification in two areas: Heavy Duty Diesel Engine Emissions Control by the state of California Air Resource Board (ARB); and Air Conditioning Certification by Society of Automotive Engineers (SAE).

Total Units Required: 63.5 - 72.5

Recommended Sequence:

| <u>First Semester</u> | | <u>Units</u> |
|----------------------------|---|--------------|
| AGEGR 030C | Industrial Equipment: Electrical and Electronics Systems | 5 |
| DIESL 044 | Diesel Engine Principles | 3 |
| DIESL 045 | Diesel Engine Repair | 4.5 |
| INDUS 035 | Mobile Hydraulics | 4 |
| <u>Second Semester</u> | | |
| AGEGR 030D | Industrial Equipment: Power Trains | 5 |
| DIESL 046 | Diesel Engine Fuel and Tune-up | 3 |
| DIESL 047 | Diesel Air Conditioning | 2 |
| GE CHOICE | Social Science, Group A Course | 3 |
| GE CHOICE | Learning Skills, Group C Course | 3 |
| <u>Third Semester</u> | | |
| AGEGR 033 | Equipment Maintenance and Operation | 2 |
| MECH 010 | Basic Welding for the Trades | 4 |
| GE CHOICE | Contemporary Perspectives Course | 3 |
| GE CHOICE | Social Science, Group B Course | 3 |
| GE CHOICE | Learning Skills, Group A Course | 3-6 |
| <u>Fourth Semester</u> | | |
| AGEGR 066 | Compact Diesel Engines | 2 |
| DIESL 049 | Computer Diagnosis and Troubleshooting | 2 |
| INDUS 043 | Electrohydraulics | 3 |
| GE CHOICE | Humanities Course | 3-5 |
| GE CHOICE | Natural Sciences Course | 3-5 |
| GE CHOICE | Learning Skills, Group B Course | 3-5 |

A grade of "C" or better is required in each course.