



**2009-2010
Career and Technical
Programs**

**Advanced
Technology Division
(541) 463-5380**

**Two-Year Associate
of Applied Science
Degree**

**One-Year Certificate
of Completion**

Drafting

Purpose To prepare students for careers in architectural and mechanical drafting. The profession requires attention to detail and the ability to learn mathematical, visual, and communication skills.

Architectural Drafters may work for a residential designer, a structural engineer, an architect, a cabinet shop, or a construction firm.

Mechanical Drafters may work in the manufacture of electronics, precision sheet metal, heavy equipment, steel fabrication, process piping, and plastics.

Learning Outcomes The graduate of the one-year program will:

- demonstrate basic competence in the use of at least one CAD software program. (Setup a drawing, create and modify text and geometry, use associative dimensioning correctly, create, store, and use blocks or symbols, manage object properties including linetype and layer, create objects in three dimensions, and print or plot drawings using a correct scale.)
- demonstrate basic graphical literacy.
- explain basic standard practices in architectural and mechanical drafting.
- interpret the concepts of a problem-solving task and translate them into mathematical language, and solve using mathematical operations.

In addition to the above outcomes, the graduate of the two-year program will:

- use graphic principles in the solution of problems relating to drafting and/or design.
- access information from public libraries, research libraries, online sources, appropriate codes and standards, professional organizations, and vendor catalogs.
- produce drawings in accordance with industry standards, e.g., ANSI/ASME, AIA, building codes.

Employment Trends Statewide, 267 annual openings for drafters are projected in Oregon and 23 openings are projected annually in Lane County.

Those with an associate degree have a competitive advantage in this labor market.

Wages Statewide average, \$22 hourly (one-year certificate, \$9-12, hourly), \$42,000 annually. Lane County average, \$19 hourly, \$39,000 annually. Typical entry-level wages are between \$9-15 hourly. (This information is based on published data from the Oregon Department of Labor, 2008.)

Costs in Addition to Tuition and Registration Fees (estimates)*

| | |
|-------------|---------|
| Books | \$1,250 |
| Tools..... | \$ 25 |
| Total | \$1,275 |

* Subject to change without notice.

Prerequisites Minimum placement score- of 68 in Reading OR completion of RD 080 OR prior college. A high school diploma or equivalent is recommended for all applicants to this program. Basic computer literacy skills are a prerequisite to any CAD course.

Criteria Used for Admission Normal program entry is fall term. A program orientation is held for new students for fall term (dates available in Counseling or Enrollment and Student Financial Services). Contact advisor/counselor for assistance for winter and spring term entry.

Cooperative Education (Co-op) Co-op offers drafting students college credit and a grade for on-the-job work experience related to their educational and career goals. Through Co-op students connect theory and practice, develop skills, expand career knowledge, and make contacts for the future. Work schedules and work sites vary. Contact Tamara Pinkas, Drafting Co-op Coordinator, Bldg. 19, Rm. 231D, (541) 463-5011, pinkast@lanecc.edu.

Drafting

Program Advisor Betty Svarverud, Bldg. 12, Rm. 203,
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Program Counselor Carolyn Litty, Bldg. 12, Rm. 202,
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Two-Year Associate of Applied Science Degree

| First Year | Fall |
|---|-----------|
| DRF 142 Graphic Concepts ^{*,D,G} | 2 |
| DRF 167 CAD 1 ^{*,D,G} | 4 |
| CS 120 Concepts of Computing: Information Processing or higher computer science ^S | 4 |
| MTH 076 Applied Geometry for Technicians ^{*,D,G,M} or higher mathematics | 4 |
| Total Credits | 14 |

| | Winter |
|--|-----------|
| CST 122 Construction Codes ^{D,G} | 2 |
| DRF 168 CAD 2 ^{*,D,G} | 4 |
| DRF 208 Residential Buildings ^{*,D,G} | 4 |
| Human Relations Requirement ^R | 3 |
| MTH 086 Applied Algebra for Technicians ^{*,S} or higher | 4 |
| Total Credits | 17 |

| | Spring |
|---|-----------|
| DRF 121 Mechanical Drafting ^{*,D,G} | 4 |
| DRF 137 Architectural Drafting - Plans ^{*,D,G} | 4 |
| DRF 206 Co-op Ed: Drafting Seminar ^D | 2 |
| DRF 245 Solid Modeling ^{*,D,G} | 3 |
| WR 121 English Composition: Exposition and Introduction to Argument ^{*,D,W} | 4 |
| Total Credits | 17 |

| Second Year | Fall |
|--|-----------|
| DRF 205 Drafting: Structures ^{*,D,G} | 4 |
| DRF 210 Commercial Buildings ^{*,D,G} | 4 |
| DRF 232 Mechanical Design ^{*,D,G} | 4 |
| DS 155 Heavy Equipment Hydraulics ^{*,D,G} | 1 |
| PE/Health requirement ^{D,R} | 3 |
| Total Credits | 16 |

| | Winter |
|--|-----------|
| DRF 207 Drafting: Strength of Materials ^{*,D,G} | 4 |
| DRF 220 Building Information Modelling ^{*,D,G} | 4 |
| DRF 233 Geometric Tolerancing ^{*,D,G} | 4 |
| WR 227 Technical Writing ^{*,A} | 4 |
| Total Credits | 16 |

| | Spring |
|---|-----------|
| DRF 211 Mechanical Systems and Environmental Design ^{*,D,G} | 4 |
| DRF 234 Power Trains ^{*,D,G} | 4 |
| ET 121 Shop Practices ^{*,D,G} | 2 |
| ENGR 280D Co-op Ed: Drafting ^{D,G} | 3 |
| Total Credits | 13 |

One-Year Certificate of Completion

| | Fall |
|--|--------------|
| DRF 142 Graphic Concepts ^{*,D,G} | 2 |
| DRF 167 CAD 1 ^{*,D,G} | 4 |
| Choice of:..... | 3-4 |
| CIS 101 Computer Fundamentals | |
| CS 120 Concepts of Computing: Information Processing | |
| MTH 076 Applied Geometry for Technicians ^{*,D,G,M} or higher mathematics | 4 |
| Total Credits | 13-14 |

| | Winter |
|--|-----------|
| CST 122 Construction Codes ^{D,G} | 2 |
| DRF 168 CAD 2 ^{*,D,G} | 4 |
| DRF 208 Residential Buildings ^{*,D,G} | 4 |
| Human Relations Requirement ^{D,H} | 3 |
| MTH 086 Applied Algebra for Technicians [*] or higher mathematics [*] | 4 |
| Total Credits | 17 |

| | Spring |
|---|-----------|
| DRF 121 Mechanical Drafting ^{*,D,G} | 4 |
| DRF 137 Architectural Drafting-Plans ^{*,D,G} | 4 |
| DRF 206 Co-op Ed: Drafting Seminar ^D | 2 |
| DRF 245 Solid Modeling ^{*,D,G} | 3 |
| WR 121 English Composition: Exposition and Introduction to Argument ^{*,D,W} or higher writing | 4 |
| Total Credits | 17 |

Standard footnotes:

- * Prerequisite required
- A Meets Arts/Letters requirement
- B Must be passed with grade of "B-" or better to use as a prerequisite
- D Degree or certificate requirement; must be passed with grade of "C-" or better
- G Must be taken for a grade, not P/NP; major requirement

- H Meets Human Relations/Social Science requirement
- M Meets Mathematics requirement
- P Meets PE/Health requirement
- R Required for AAS degree
- S Meets Science/Math/Computer Science requirement
- W Meets Written Communications or English Composition requirement