

# Be Something...

## Environmental Control Technology

### What preparation will this program give me?

The Environmental Control Technology Department is a technical program offering the theoretical, technical, and problem-solving skills essential for employment in the heating, ventilation, air conditioning and refrigeration (HVAC & R) industry.

### What kind of job will I be qualified for when I finish?

Students completing the suggested curriculum can seek employment as refrigeration technicians, HVAC technicians, sales engineers, control system technicians, building managers, commissioning technicians, and operating engineers. Median starting hourly earnings of HVAC technicians was \$22 per hour in 2007.



### Job prospects for heating, air-conditioning, and refrigeration mechanics and installers are expected to be excellent.

Source: Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2008-09 Edition*

### What classes will I take?

#### Required Courses:

<b>Residential and Light Commercial HVAC and R</b>		<b>Units</b>
E/ET 202	Fundamentals of Electricity for ECT	2
ECT 11	Mechanical and Electrical Devices	2
ECT 12	Blueprint Reading and Interpretation for ECT	1.5
ECT 13	Fundamentals of Refrigeration	4
ECT 211	Mechanical and Electrical Codes	1.5
ECT 214	Technical Mathematics for ECT	3
WELD 215	Welding for ECT Technicians	1.5
E/ET 221	Motors and Drives	2
ECT 14	Advanced Refrigeration	2
ECT 15	Refrigeration Equipment Troubleshooting	2
ECT 16	Fundamentals of Heating and Air Conditioning	2
ECT 17	Heating and Air Conditioning Troubleshooting	1
ECT 18	HVAC Installation Practices	1
ECT 28	Energy Management and Efficiency in Building Systems	2

**Total Required Units 27.5**

<b>Commercial HVAC (27.5 units above plus advanced courses below)</b>		<b>Units</b>
ECT 22	Commercial HVAC Systems	2
ECT 24	Commercial HVAC Troubleshooting	2
ECT 25	Introduction to Building Commissioning	2
ECT 212	Testing, Adjusting and Balancing	2
E/ET 11	Commercial Electricity for HVAC Applications	2
ECT 19	Psychrometrics and Load Calculations	2
ECT 21	Introduction to Direct Digital Controls	2
ECT 27	Advanced DDC Controls	2
ECT 213	Indoor Air Quality and Building Envelope	1
ECT 23	HVAC Systems Design	2
ECT 29	Data Analysis for Performance Monitoring	2
ECT 26	Advanced Building Commissioning	3
ECT 30	Introduction to Control System Networking	1

**Total Required Units 51**

Our faculty members are all experienced HVACR professionals, with industry experience and academic credentials which they bring into the classroom with energy and enthusiasm.

### What degree will I receive and how many course credits will I need?

Students can obtain either a Certificate or an Associate Degree. A Certificate in Residential and Light Commercial HVAC/R is given after satisfactory completion of the 27.5 units of required coursework; a Certificate in Commercial HVAC is given after satisfactory completion of the 51 units of required coursework. An Associate Degree is given after satisfactory completion of the required coursework plus 19 units of general education courses.

### Where do I get more information?

Contact Laney College's Environmental Control Technology Department at (510) 464-3292x2

