

Regional Occupational Program (ROP)

Palomar College, under contract with the San Diego County Office of Education, offers vocational and technical training through the Regional Occupational Program.

Courses provided through ROP are available to college and high school students, out-of-school youths, and adults residing in San Diego County. Courses can be used for basic job skills, upgrading of existing skills, or changing occupations. Units earned may be used for high school or college credit. ROP courses taken for college credit may be applied toward Palomar College Certificates/Degrees.

Contact the ROP Office for further information.
(760) 744-1150 ext. 2293
Office: AA-136

Air Conditioning, Heating and Refrigeration (RACR)

Certificates of Proficiency -

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

- Air Conditioning, Heating and Refrigeration

PROGRAM OF STUDY

Air Conditioning, Heating and Refrigeration

Prepares students for entry-level positions as air conditioning, heating, and refrigeration technicians. Also provides retraining and upgrading of skills for maintenance technicians, including EPA certification.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirements	Units
RARC 50 AC, Heating, and Refrigeration: Electrical	4
RACR 55 AC, Heating, and Refrigeration: Mechanical	4
RACR 56 Adv AC/Heating/Refrigeration	4
RARC 58 Refrigerant Recovery	1
TOTAL UNITS	13

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

RACR 50	Air Conditioning, Heating and Refrigeration: Electrical	(4)
8 hours lecture/laboratory		
Note: Graded only; may be taken 2 times		
Introduction to the fundamentals and application of electrical theory as related to air conditioning, heating and refrigeration. Study of basic electrical theory, alternating current, electrical controls, motors, schematics, and electrical meters.		

RACR 55	Air Conditioning, Heating and Refrigeration: Mechanical	(4)
8 hours lecture/laboratory		
Note: Graded only; may be taken 2 times		
Introduction to basic mechanical theory of air conditioning, heating and refrigeration. Application of principles and techniques to include system components and their interrelated functions, safety procedures, tools, and equipment.		

RACR 56	Advanced Air Conditioning, Heating and Refrigeration	(4)
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8 hours lecture/laboratory
Prerequisite: RACR 50 and 55
Note: Graded only; may be taken 2 times
Advanced principles and techniques of air conditioning, heating and refrigeration. EPA regulations and safety requirements; complex control systems; gas furnace combustion and air requirements; and the installation, troubleshooting, repair, and maintenance of residential and small commercial units.

RACR 58	Refrigerant Recovery	(1)
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2 hours lecture/laboratory
Note: Graded only; may be taken 2 times
Basic understanding of the United States Environmental Protection Agency regulations as set forth under Section 608 of the Clean Air Act of 1990, which described requirements for recycling ozone-depleting refrigerants. Preparation to take the EPA certification exam, which is administered at the conclusion of the course.

RACR 97	Air Conditioning, Heating, and Refrigeration Topics	(.5-4)
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Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: Graded only; may be taken 4 times
Topics in Air Conditioning, Heating, and Refrigeration. See Class Schedule for specific topic offered. Course title will designate subject covered.

Automotive Technology (RAT)

Associate in Arts Degrees -

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

- Auto Body Work

Certificates of Achievement -

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

- Auto Body Work

PROGRAM OF STUDY

Auto Body Work

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
RAT 50 Auto Body Repair I	4
RAT 51 Auto Body Repair II	4
RAT 55 Auto Refinishing I	4
RAT 56 Auto Refinishing II	4
Elective Courses (Select 6 Units)	
AT 100 Auto Maintenance and Minor Repair	3
AT 105 Automotive Electricity	2
IT 100 Technical Mathematics	3
WELD 100 Welding I	2
CE 100 Cooperative Education	1,2,3,4
TOTAL UNITS	22

Auto Body Work A.A. Degree or Certificate of Achievement is also listed under Automotive Technology.

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.