

Refrigeration & Air Conditioning (RAC)

Duration: 3 Years (6 Semesters)

Program Type: Bachelor of Vocation

Subject codes vary by university. The following is a standard industry-aligned syllabus with sample subject codes.

Semester I

Subject Code	Subject Name
RAC101	Fundamentals of Refrigeration
RAC102	Basic Electrical Engineering
RAC103	Engineering Mathematics
RAC104	Engineering Physics
RAC105	Workshop Practice
RAC106	Communication Skills
RAC107P	Refrigeration Lab-I

Semester II

Subject Code	Subject Name
RAC201	Air Conditioning Fundamentals
RAC202	Electrical Machines
RAC203	Thermodynamics
RAC204	Environmental Studies
RAC205	Computer Applications
RAC206	Employability Skills

Subject Code	Subject Name
RAC207P	Air Conditioning Lab-I

Semester III

Subject Code	Subject Name
RAC301	Refrigeration System Components
RAC302	Heat Transfer
RAC303	Refrigerants and Lubricants
RAC304	HVAC Basics
RAC305	Safety and Industrial Practices
RAC306	Entrepreneurship Development
RAC307P	Refrigeration & AC Lab-II

Semester IV

Subject Code	Subject Name
RAC401	Commercial Refrigeration Systems
RAC402	HVAC Design Principles
RAC403	Electrical Control Systems
RAC404	Energy Management
RAC405	Industrial Training
RAC406	Quality Management
RAC407P	HVAC Laboratory

Semester V

Subject Code	Subject Name
RAC501	Central Air Conditioning Systems
RAC502	Cold Storage Technology
RAC503	Building Services Engineering
RAC504	Green Refrigeration Technology
RAC505	Project Management
RAC506	Industrial Internship
RAC507P	Advanced HVAC Lab

Semester VI

Subject Code	Subject Name
RAC601	Advanced Refrigeration Technology
RAC602	HVAC Automation & Controls
RAC603	Energy Audit & Conservation
RAC604	Maintenance Management
RAC605	Major Project
RAC606	Internship Report & Viva
RAC607P	Project Laboratory