

# ADVANCED ENGINEERING DIPLOMA COURSE IN *REFRIGERATION & AIR CONDITIONING*



**ISHRAE**  
**INSTITUTE OF**  
**EXCELLENCE**

# ADVANCED ENGINEERING DIPLOMA COURSE IN

REFRIGERATION & AIR CONDITIONING



## ABOUT THE COURSE

IIE has developed an invaluable and practical course curriculum, suitable for fresh engineers, diploma holders and working professionals in the HVAC&R industry. Curriculum gives a taste of real world solutions and is designed in simple modules for effective & holistic implementation. This advanced diploma course is totally a job oriented program which equips the candidate with all the fundamental aspects of AC systems design, enabling to start off with a professional career in this field. The course, rolled out earlier by ISHRAE in some cities has met with success. There are almost more than 150 Diploma holders from the previous program placed in the HVAC industry today in various prestigious organizations. There are some candidates who are working outside India as well. The course has been appreciated and accepted by the industry professionals. It has met with a lot of interest & acclaim and rest assured, our trained students will have exciting prospects of working in the industry. The course combines 3 months of classroom training and 1 month of practical training in select industry sponsored/ connected organizations which gives a wholesome idea and a very good perspective of the industry practices to the candidates. To top it all, the course is being conducted by faculty who have an invaluable experience in the industry and drawn from the various fields like consulting, manufacturing and contracting companies.

This course is a stepping stone for those who wish to make a career in the HVAC&R industry.

## MODE OF STUDY AND ADMISSION

Candidates admitted under this course should be available in the IIE approved center during the entire duration of working hours (From Morning to Evening on Full-Time basis) as per the calendar. This is a non-residential program.

## ADMISSION REQUIREMENTS

Candidates for admission to the Programme shall be required to have passed an appropriate qualifying Degree Examination of any UGC recognized University / Institute

- B.E / B.Tech. in Mechanical / Electrical / EEE/ Chemical / Production / Energy/ equivalent
- DME / DEE With First class and two years of relevant work experience
- Working Professionals with 1 – 3 years working experience meeting any of the above mentioned qualification

## SELECTION

Based on the written test and/or Interview and Qualifying Exam Result (50:50).

The written test is of Multiple Choice Questions type in the subject area of Basic Electrical, Thermodynamics, Heat and Mass transfer, Fluid Mechanics and Refrigeration & Air - conditioning. The duration of this test is 60 minutes. The test will be conducted at the respective study center.

The required qualifying marks for the eligibility of admission is 50 %.

## **DURATION AND STRUCTURE OF THE COURSE**

The Diploma course is 4 Months program consisting of 5 Modules of theory & design related Courses, and one Module of on-site training at the HVAC&R Project site and/or design offices. 5 Module of theory will be of 360 hours spread over 3 months and 120 hours of on-site/in company training scheduled for 1 month.

## **EVALUATION**

The Student will be assessed based on his/her performance in the Internal assessment (continuous assessment after each module of Theory course) and one Final Examination. Out of 100 marks for the course, the maximum marks for Internal Assessment including theory course is fixed as 50, 20 Marks for Presentation & Viva Voce based on on-site training and 30 marks for the Final Examinations.

## **REQUIREMENTS FOR COMPLETION OF THE COURSE**

A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of the course and award of Diploma.

- Students are expected to have a minimum of 75% attendance.
- The examinations will be conducted after 5 working days of each course completion.
- There will be one Final examination of 3 hours duration.

## **PASSING REQUIREMENTS**

A Candidate who secures not less than 50% of total marks (Internal Assessment, Presentation and Viva Voce) and a minimum of 50% of the marks prescribed for final examination shall be declared to have passed in the examination.

A candidate is required to pass in all the modules and clear his final examination

## **ELIGIBILITY FOR THE AWARD OF THE DIPLOMA**

As per the current IIE guidelines, a student shall be declared to be eligible for the award of the DIPLOMA if he/she has:

Successfully acquired the required qualifying marks as specified within the stipulated time with passing requirements as mentioned above.

No disciplinary action is pending against him/her.

Successfully completed the field visit/ industrial training.

The award of the Diploma must be approved by the IIE Committee.

## **COURSE FEE**

Rs.65000/- (Rs.Sixty five thousand only)

The above is inclusive of examination fee

Service Tax will be extra as applicable.

## **DISTANCE LEARNING PROGRAMME**

Advanced Engineering Diploma Course is also offered as a distance learning Programme without formal class room training and with minimal contact programme followed by an examination to be passed, for the award of Diploma.

Course Fee: Rs. 20,000/- Service Tax extra as applicable

## **STUDENT PROGRAMME**

Advanced Engineering Diploma Course is also available exclusively for college students starting from 5th/6th Semester at their college campus /ISHRAE premises, followed by exam to be passed, for the award of Diploma

Course Fee: Rs. 45,000/- (at college premises) and Rs. 65,000/- at ISHRAE Premises.

Service Tax extra as applicable



## 2. CURRICULUM

Sl. No.	Code	Title	No. of Lecture Hours
1	RAC 001	Fundamentals of Refrigeration and Air conditioning	60
2	RAC 002	Psychrometry, Heat load Estimation for Air conditioning and Refrigeration Applications	70
3	RAC 003	Selection of Refrigeration and Air conditioning Systems	30
4	RAC 004	Auxiliary Systems and components for R&AC applications	140
5	RAC 005	Installation, Testing and commissioning and Management aspects of HVAC&R Projects	60
6	RAC 006 - PART A & B	On-site Training	120*
Total Lecture hour			480 h

Note : \* The Onsite Training has two slots.

RAC 006 – Part A : One week after RAC 001 - Visit to HVAC Project site to identify the equipment's, Nomenclature that are commonly used in the Industry.

RAC 006 – Part B – Three weeks after all the theory modules.

### To Register, please contact

#### ISHRAE HEAD QUARTERS

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