

TRISHUL Syllabus for School of Electronics

Program Name: TRISHUL-ECE/EIE-TRACK

Entry Criteria: Students belonging to

- Electronics and Communication Engineering (ECE)
- Electronics and Instrumentation Engineering (EIE)

The Electronics stream shall be offered the following training modules during the course, in addition to the regular academic curriculum. Each module will include lecture demos, seminars by field experts, technology workshops and industrial visits.

Course – 011

Starts in 1st Year

Module-1

Module Name: Introduction to basic technologies in Electronics

Duration: 50 Hrs

Description:

The program includes the following modules

- a) PCB fabrication techniques and CAD
- b) Introduction to various passive and active devices
- c) Soldering and assembly techniques
- d) Input sensing and processing modules such as pressure and temperature transmitters
- e) Output devices such as Relays, solenoids, servomotors etc.
- f) Environmental factors affecting equipment performance

Benefits:

Participants become conversant with the components and circuits used by the industry and understand the function of each component. This helps them in getting a proper insight of the theory they study in the classroom

Module-2

Module Name: Java Certification Program – SCJP (CX-310-055)

Duration: 60 Hrs

Description:

This module begins with training on Core Java which includes fundamentals of Java programming language, object-oriented theory, Java programming language syntax etc. Weekly mock tests are conducted that help participants to get acquainted with the format of the exam and its questions.

Benefits:

Companies prefer certified programmers over non-certified programmers. Java technology certification helps to ensure that you have the necessary skills to efficiently meet the challenges of IT organization. Earning a Java technology certification provides a clear demonstration of the technical skills, professional dedication and motivation for which employers are willing to pay a premium of minimum 20% above the average salary.

Module-3

Module Name: Entrepreneur Development Programme

Duration: 20 Hrs

Description:

Students review the biographies of Industry Leaders of different sectors and are asked to write essays summarizing those biographies.

Some of the Biographies to be given are:

- a) Who says Elephants cant Dance-Louis Gerstner.
- b) Every Street is Paved with Gold-Kim Woo Choong.
- c) Straight From the Gut-Jack Welch.

Benefits:

This program brings about an overall development, improve self-esteem and confidence level. Participants develop the skills to excel in a variety of writing formats including comparative passages, descriptive essays, outlines and Builds Intrinsic motivation among the participants engaging themselves in learning out of curiosity, interest in order to achieve their own intellectual and personal goals.

Course – 021	Starts in 2nd Year I Semester
Module-1	
<p>Module Name: Developing Web Applications with Microsoft’s Visual C#™ .NET & Visual Studio .NET</p> <p>Duration: 80 Hrs</p> <p>Description: This program provide training on Microsoft Technologies which include creating ASP.NET web applications using C# and conducts practice test to prepare Participants for the MCTS-70536 and MCTS-70528 exams.</p> <p>Benefits: Participants will get the complete .Net training in ASP.Net, C#, XML and Webservices. Companies prefer certified programmers over non-certified programmers. Employers are willing to pay a premium of minimum 20% above the average CTC.</p>	
Course – 022	Starts in 2nd Year II Semester
Module-2	
<p>Module Name: PL/SQL Developer OCA certification Program</p> <p>Duration: 30 Hrs</p> <p>Description: This program provides participants with the knowledge of Oracle SQL and PL/SQL with sample practice exams for the PL/SQL Developer OCA certification.</p> <p>Benefits: Being an Oracle as well as Java Certified Professional adds an immense potential and raises the student visibility and increase his/her access to the industry's most challenging opportunities.</p>	
Course – 031	Starts in 3rd Year I Semester
Module-1	
<p>Module Name: Embedded Systems</p> <p>Duration: 80 Hrs</p> <p>Description: Embedded Systems as applied to various areas such as :</p> <ol style="list-style-type: none"> 1. Biomedical equipment of various categories: <ol style="list-style-type: none"> a) diagnostic b) Life support c) Monitoring 2. Security Equipment such as : <ol style="list-style-type: none"> a) DVRs for detection and documentation b) Video Servers For real time Surveillance of protected sites <p>Benefits: The students will get exposure to the state-of-art applications and the advantages of using Embedded technology In dedicated systems.</p>	
Course – 032	Starts in 3rd Year II Semester
Module-1	
<p>Module Name: VLSI</p> <p>Duration: 50 Hrs</p> <p>Description: VLSI design with emphasis on FPGA and ASIC designs, products, software and development tools. Introduction to development products such as Virtex family of FPGAs, Design conversions and their applications.</p> <p>Benefits: The participants are introduced to the latest practices in design of application specific or customer specific integrated circuits and testing methods for the validation of designs.</p>	

Module-2	
Module Name: Introduction to the SCADA systems	
Duration: 30 Hrs	
Description: The program includes the following modules <ul style="list-style-type: none"> a) Monitoring and control of process parameters b) Hardware and software architecture. c) Communication and interfacing d) Access control and functionality e) Application development 	
Benefits: The students get to know how the SCADA system is employed in various process industries like cement plants, food processing units, petro-chemicals, refineries, steel plants, power transmission and distribution etc. As a result they become ready for the vast job market in this field.	
Course – 041	Starts in 4th Year I Semester
Module-1	
Module Name: Domain Knowledge	
Duration: 80 Hrs	
Description: The Participants are given open option to select and study a topic. Several topics are provided that belongs to various domains like Telecom, Wireless communications and Health Care. Faculty members are given topic wise responsibility to guide and monitor the students.	
Benefits: In the present scenario 70% of software jobs are in these domains. Each of these domains has their own standards and peculiarities. So it is always beneficial to know the thumb rules of the industry. Employers will also prefer people having their respective domain knowledge.	
Course – 042	Starts in 4th Year II Semester
Module-2	
Module Name: Live Project	
Description: This program gives an opportunity to the students in getting live experience of real time projects. These projects are mostly pilot projects which are part of various live R&D projects. While doing this project, the Participants will go through the entire Software Development Life Cycle (SDLC). They have to prepare various documents such as SRS, Design Specifications & Software Architecture, architectural document specifying common software components and common interactions among these components, satisfying key requirements in such areas as performance, reliability, portability, scalability and interoperability.	
Benefits: Helps the participants to get clear understanding of the phases involved in Software Development Life Cycle and also Practical knowledge of real time project execution.	

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