COURSE PROSPECTUS

Name of the Division: *Smart Technology & Education Division (STED)*

Name of the Course: *Online PG Diploma in Embedded System Design*

Course Code: *ED 500–Online*

Starting Date: *28.12.2020*

Duration: *24 Weeks [120 days/ 840 hours]*

Course Fee: Rs. 39,228/- + All Taxes

Course Coordinator: *Shoukath Cherukat, +91 9447423306*

Preamble:
Embedded systems are normally built around Microcontrollers and ARM Processor based SOCs. This Embedded System Design course focuses on the architecture and programming of embedded processors, development of applications using Embedded/Real-Time Operating Systems and porting the applications on ARM based hardware platform. An overview of Cyber Physical Systems, Internet of Things (IoT) and Industrial Product Design is also included in the course. As part of Eight weeks project work, a proof-of-concept prototype design of an embedded system has to be undertaken by participants to make them industry ready.

The curriculum has been designed in consultation with industry and academic experts and our strategic partners, to map the skill sets and design methodologies, which is high in demand in Embedded Systems industries. Our students have been successfully placed in reputed product companies and we enjoy the trust of many reputed companies, who have entered into strategic alliances with us. Emphasis of the teaching curriculum is on design methodology and practical applications. The course contents have been designed keeping in view the emerging trends in needs for skilled manpower.

Objective of the Course: *Online PG Diploma in Embedded System Design Course is intended to impart skills essential for the design and implementation of embedded systems using appropriate hardware and software tools. This course offers a range of topics of immediate relevance to industry and makes the participants exactly suitable for Embedded and IoT Industry.*

Outcome of the Course:

- *Provide the participants in-depth knowledge and skills required by Embedded System Companies around the globe by imparting comprehensive understanding about the fundamental principles, methodologies and industry practices.*
- *Makes the successful participants readily employable in multiple roles available in Embedded and IoT Industry*
- *Enhances the skill sets and confidence for Embedded Startups*

- *Serves as a concrete platform for people involved in application research, consultancy and high end product development in both industry and academia.*

Expected Job Roles:

- *Embedded Design Engineer*
- *Embedded Software Engineer*
- *Embedded Hardware Engineer*
- *Embedded Trainee Engineer*
- *IoT Engineer*

Course Structure: The ED 500–Online course contains eight modules including project work. The participants are required to do a project work in any one of the modular areas, for a period of 8 weeks to be eligible for issue of Online PG Diploma in Embedded System Design.

The modules are as follows:

Module Code	Module Title	Duration		
		Weeks	Days	Hours
VE 501	Analog and Digital System Design	3	15	105
VE 502	Embedded C and ARM Cortex Microcontrollers	4	20	140
VE 503	Linux OS & Internals	2	10	70
ED 504	Embedded RTOS	2	10	70
ED 505	Cyber Physical Systems &IoT	2	10	70
VE 506	OS Porting on FPGA with ARM Core	1	5	35
VE 507	Industrial Product Design	2	10	70
VE 508	Project Work	8	40	280
	Total Duration	**24**	**120**	**840**

Other Contents

I. **Course Fees**: Course fee is Rs *39,228/-* + All taxes as applicable

Modular wise Course Fee: Not Applicable for this course

II. **Registration Fee:** An amount of Rs.1000/- (including all taxes as applicable) (nonrefundable) should be paid at the time of registering for the course.

This fee shall be considered as part of course fee, if the student joins the course. If a student register and pay for more than one course and join for any one course, all such amount will be adjusted against the course fee payable. If the candidate does not join or fails to complete the course the amount will be forfeited.
However above the registration fee shall be refunded on few special cases as given below.

- Course postponed and new date is not convenient for the student
- Course cancelled in advance, well before the admission date

III. **Course Fee Installment Structure**:

Students can pay the full fees of (Rs *39,228/-* + all taxes as applicable) in advance or as installments as given below

Fees	***Amount for General Candidates**	***Amount for SC/ST Candidates**	**# Due Date (on or before)**
Registration Fee	*Rs 1000/-*	*Rs 1000/-*	During Registration
1st Installment	*Rs 20,000/-*	*Rs 20,000/-*	***27.12.2020***
2nd Installment	*Rs18,228/-*	*Rs18,228/-*	***24.02.2021***
Total Fee	*Rs 39,228/-*	*Rs 39,228/-*	***24.02.2021***

*Taxes Extra (Currently GST @18% + KFC @1%), and revisions, if any by Government shall be applicable at the time of payment.

Fine will be applicable to late fee payment as given below

Sl. No.	Description	Fine
1	Late fee payment within two weeks after due date	18% (annually) of the outstanding dues
2	After second week of due date the candidate has to pay readmission fees along with the fine	Readmission fee Rs. 250/- plus fine of 18% (annually) of the outstanding dues
3	The candidate has to discontinue the course after third week from the due date	

IV. **Eligibility:** BE/B.Tech (ECE/EEE/AEI/CSE/IT/Biomedical/Medical Electronics, Mechatronics and allied branches) / M.Sc (Electronics/CS). Students undergoing BTech/ MSc are also eligible, however they will be issued course certificate only on production of their degree certificate.

For more details about the policy refer:http://nielit.gov.in/sites/default/files/course/NIELITCalicutPoliciesShortTermCourses.pdf

V. **Number of Seats :***40*

VI. **Selection of candidates:** Selection is based on the marks in the qualifying Degree

VII. **Test/Interview:** *Not Applicable*

VIII. **Counseling/Admission** : *28.12.2020*

IX. **Important Dates (if applicable) :**

***Last date** for receiving online application for the course with payment of Rs 1000/- for registration.* *Candidates applying after this date will be considered in spot admission against vacancy.*	***20.12.2020.***
*Publication of **selection list** in our Website.*	***21.12.2020***
*Last date for Payment of the **first installment fee of Rs 20,000/-***	***27.12.2020***
Date of Counseling & Commencement of Classes	***28.12.2020***

X. **Course Timings**: *The course is planned to be conducted with flexible timing by including recorded sessions of lectures and demonstrations through LMS. The candidates will be given prior notice about live lectures scheduled between 9.00 am to 5.30 pm. The hands-on session using Remote Hardware Lab shall be provided with pre-intimated schedule.*

Participants should have the following setup to attend this course

- *Computer system (Desktop/Laptop with Camera) and stable broadband internet connection.*
- *Computer System Configuration - Linux OS/ Dual boot, i3/i5, 64bit processor, Minimum 4GB RAM*

XI. **Placement** : *visit http://nielit.gov.in/content/placement-3*

XII. **Lab Facilities** *:http://nielit.gov.in/calicut/*

XIII. **Course Contents :** Course Syllabus

Click here for General Terms and Conditions – Applicable to all courses