

**List of SDP Conducted in AY 2018-19:**

- Eduvance Summer Industrial Training
- Network Security & Industrial Training
- Ethical Hacking & Security
- Machine Learning with Python
- PLC programming From Scratch



Graduate School of  
Technology

RISE WITH EDUCATION

DATE : 5<sup>th</sup> MAY 2018

Notice

Department of electronics and telecommunication , is organizing one month summer industrial training program in collaboration with EDUVANCE from 19<sup>th</sup> June, 2018 to 19<sup>th</sup> July, 2018

Interested students kindly contact Prof. Shubhangi Kharche for registration and further details

Dr. Atul Kemkar

HOD EXTC



PRINCIPAL

S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

SIES GRADUATE SCHOOL OF TECHNOLOGY

Sri Chandrasekarendra Saraswathy Vidyapuram, Sector V, Nerul, Navi Mumbai - 400 706.

Tel: 6108 2400 / 6108 2402 • Fax : 2771 8779 • E-mail : principalgst@sies.edu.in / principal@siesgst.ac.in

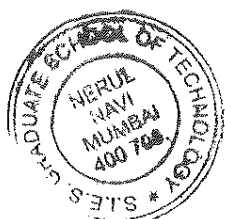
www.siesgst.edu.in

## Event Description

- Total of two quizzes were conducted during the full course.
- Class Labs and assignments is based on 74 labs done in class, homework, and junior instructor feedback about every student.
- Final Course Project was based on all the concepts taught and practical performed during the entire course.
- Extra Credit Projects like Wireless Air mouse and Shake it off were performed as a part of the course.

## GRADE DISTRIBUTION

Particulars	Weightage (%)
Attendance	5
Quizzes	15
Final Written Exam	25
Class Labs and Assignments	25
TA Variable	15
Final Course Project	15
<b>Total</b>	<b>100</b>
Extra Credit Projects Allotted (% worth)	2



**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

## GRADE CUT-OFF

% Range	Grade
80-100	A+
65-80	A
60-65	B+
50-60	B
Below 50	C

## LIST OF PROJECTS

- **Shake-it Off**

Detection of fast and abrupt motion of a device using a 3-Axis Freescale Semiconductors MMA8451Q accelerometer with FRDM KL25Z.

- **Wireless Airmouse**

Used the on board accelerometer (Freescale MMA8451Q) and capacitive sensor APIs of MBED and developed a wireless mouse that alters its sensitivity with respect to the input given by the transmitter using an nRF24L01P transceiver pair to give it a wireless capability.

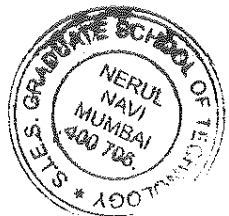
- **IOT On Request**

Uploading data on the Thingspeak server as a command from the user as well as downloading the required data from the Thingspeak server on the command from the user using serial communication and ESP8266 Wi-fi module.

- **Surface Level Indicator**

Detection of abrupt surface, either flat or extremely tilted using a 3-Axis on board accelerometer (Freescale Semiconductors MMA8451Q) with FRDM KL25Z.

- **Node-Red IBM**



**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

Up streaming and Down streaming of data through Thingspeak server on Node Red platform and controlling various on board components of FRDM KL25Z using ESP8266 Wi-fi Module.

- **Data Acquisition system**

A data acquisition and logging system using serial communication through UART and plotting the real time output.

- **Wireless Data Acquisition system**

A wireless data acquisition and logging system using serial communication by uploading data on Thingspeak server by ESP8266 Wi-fi Module and plotting the real time output.

## **COURSE OUTCOMES**

### **MBED**

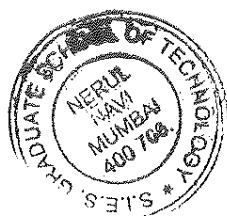
- 1) Students were introduced to ARM microcontrollers, the ARM MBED platform and the MBED online compiler.
- 2) Concepts of digital output and PWM understood using different APIs available on MBED platform.
- 3) Serial communication with computer using FRDM board and Terminal Application learnt.
- 4) Concepts of ADC learnt to interface an LDR and potentiometer with MBED board.
- 5) Students developed deeper understanding of basic C and Object oriented C++ coding.
- 6) Students built final project –A Wireless Data Acquisition System (DAS) using serial communication by uploading data to Thingspeak server through wifi -module via one-to-one communication from Transmitting Mbed board to Receiving Mbed board and plotting the real time output.


### **PSoC 4200 BLE and Internet of Things**

- 1) Concept of Universal Digital Blocks (UDBs) learnt.
- 2) Using the PSoC Creator software for programming PSoC 4200 BLE.
- 2) Configuring various components like PWM and UART on the PSoC Creator software learnt.
- 3) Concepts of serial communication using UART and ADC of PSoC 4200 BLE and Terminal software learnt.
- 4) Internet of Things concepts learnt for different applications like monitoring using online data Stream.
- 5) Creation of an online data stream on Thingspeak and controlling the stream data.

### **Arduino UNO**

- 1) Basics of Arduino and fundamental interfaces with Arduino learnt.
- 2) Using the IDE software for programming Arduino UNO.
- 3) Interfacing of various components like UART and PWM on the IDE software learnt.
- 4) Serial Communications with computer using Arduino UNO and Serial Monitor learnt.
- 5) Basics of other Arduino Platforms learnt.



  
**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

9th  
Legend



## **SIES Graduate School of Technology Center of Excellence: e-Security**

Organizing  
Student Development Program and Internship

5 days Hands on Training on

**Network Security and Ethical Hacking**  
**Dec 18-22, 2018, 10.00 AM to 5.00 PM**

The design and implementation of energy efficient future generation communication and networking technologies also require the clever research. Advances in Computer Communications and Networks: from Green, Mobile, Pervasive Networking to Big Data Computing require strong base in the area of networking. Emerging threats emphasize the need for real-world assessment of an organization's security posture. To bring awareness to our students about this most sought field in the engineering domain we are providing the platform by arranging a student's development program on Network Security and Ethical Hacking.

### **Objectives:**

- Learn about network concept and designing of network for organization.
- Hands-on experience of Ethical Hacking tools using Kali Linux.
- Practical real time demonstration of the latest Hacking Techniques, methodologies, tools.

### **Course Contents:**

- Introduction to Computer Network and Security
- Routing and Switching protocol.
- Introduction to Ethical hacking, Network sniffing and spoofing tools.
- Exploitation tools- Metasploit, Google hacking, Malware and Steganography.



**PRINCIPAL**  
**S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY**  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

Who Should Attend: Any student from SE and TE (all branches)

Course Fees: SIES GST student Rs.500 / Others Rs.1000

Certification: in collaboration with 9<sup>th</sup> Legend Inc.

**Internship:** At the end of 5 days program participants will undergo 15 days internship covering developing secure web applications, identification of security threats and developing the security solution for various organizations (For ex: Bank Sector/Medical Sector/Insurance/IT Sector).

**Outcome:** This SDP is designed to provide solution of organizations Network structure.

- This SDP will give insight on various routing and switching technology.
- This SDP will provide base for certificated ethical hacker, certified penetration tester.

**Contact for Registration:**

Prof. Aparna Bannore: [bannore.aparna@siesgst.ac.in](mailto:bannore.aparna@siesgst.ac.in),

9920809635 Prof.Suvarna Chaure: [suvarna.kendre@siesgst.ac.in](mailto:suvarna.kendre@siesgst.ac.in),

9769455405



A handwritten signature in black ink, appearing to be "dh" or similar, written over the printed name of the Principal.

**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706



# Day wise schedule

Day	Session1 9:30-11.00	Session2 11:30-1.00	Session3 1.45 - 3:30	Session 4 4:00-500	feedback
Day 1 18/ 12/ 201 8	Introduction to Computer Network (OSI model/TCP Model/Devic es at each layer KNP	/IP addressing/ Subnetting ) KNP	CISCO topology built up  SKP	Static routing SKP	quiz
Day 2 19/ 12/ 201 8	Routing Dynamic routing(RIP/ OSPF/EIGR P) PPK	Routing PPK	Switching <i>Basic configurat ion of Layer 2 manageab le switch UNR</i>	Switching UNR	Quiz
Day 3 20/ 12/ 201 8	Port Security UNR	Spanning tree UNR	ACL AMB		
Day 4 21/ 12/ 201	Introduction to security Ethical hacking Aparna	Initial Commands demonstati on and handson	Sniffing using wireshark Tcpdump +Assignm	Assignment on sniffing SVC	



*[Signature]*

**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706



8	Bannore	1)Dig 2)who is 3)traceroute 4)ifconfig  AMB+SV C	ent on sniffing Suvarna VChaire		
Day 5 22/ 12/ 2018	Installation of kali linux	Hacking windows system using Kali linux Metasploit /backtrack AMB	Virus, Steganography, Key logger KNP	Lab work	

Internship project for SDp on Network Sec and Ethical Hacking

Please write your name against selected project

Sr.No	Title of Project	Mentor Name	List of Students	Signature
01	Title: Internet usage control using access control techniques.  Report Contents  1. Problem	prof.Sunil K.Panjabi  Mail: sunil.punjabi@siesgst .ac.in	Shubham Ambavne  Devanshi Mehta  Kirti Thakur	



  
**PRINCIPAL**  
 S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
 Sri Chandrasekarendra Saraswathy Vidyapuram  
 Sector-V, Nerul, Navi Mumbai-400706

## **SIES Graduate School of Technology Center of Excellence: e-Security**

Organizing  
Student Development Program and Internship

6 days Hands on Training on

**Ethical Hacking and Security**

**June 10-15, 2019, 9.30 AM to 5.00**

**PM**

Ethical hacking is an emerging tools used by most of the organizations for testing network security. Emerging Threats Emphasize the Need for real-world assessment of an organization's security posture. Ethical hackers perform security measure on behalf of the organization owners. To bring awareness to students about this most sought field in the security domain we are providing the platform by arranging a student's development program on Ethical Hacking and Network.

### **Objectives:**

- Learn about System and Network security
- Hands-on experience of Ethical Hacking tools using Kali Linux.
- Practical real time demonstration of the latest Hacking Techniques, methodologies, tools, and security measures.

### **Course Contents:**

- Introduction to Ethical hacking
- Network sniffing and spoofing tools
- Server Side Hacking Tools, Client Side Hacking Tools: BACKTRACK, BEEF
- Web application Exploitation tools- Metasploit, Google hacking
- Virus and Steganography.
- Use of Block chain Technology in Security

Who Should Attend: FE/SE/Diploma Students interested in pursuing career in security.



**PRINCIPAL**  
**S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY**  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706

Course Fee: **No Charges**

Certificate: In collaboration with 9<sup>th</sup> Legend Inc.

Internship: At the end of 5 days program participants will undergo 15 days internship covering identification of security threats and developing the security solution.

Outcomes:

- This SDP will give insight to organizations security parameters, threats and Solutions.
- This SDP will provide base for certificated ethical hacker, certified penetration

tester. Contact for Registration: Aparna Bannore: [bannore.aparna@siesgst.ac.in](mailto:bannore.aparna@siesgst.ac.in),

9920809635 Prof.Suvarna Chaure: [suvarna.kendre@siesgst.ac.in](mailto:suvarna.kendre@siesgst.ac.in), 9769455405

## **Six Days Students Development Program on Ethical Hacking and Security**

**(10-15 June, 2019)**

Day wise schedule

Day	Session1 9:30-10.00	Session2 10:00-1.00	Session3 1.45 - 3:30	Session 4 4:00-500	feedba ck
Day 1 10/06/20 19	Inauguration	Introductio n to computer network Fundament als KNP	Introduction to security Ethical hacking Aparna Bannore	Initial Commands demonstratio n and hands on 1)Dig 2)whois 3)tracroute 4)ifconfig Nslookup,ho st AMB	
Day 2 11/06/20 19	Sniffing using wireshark Tcpdump +Assignment	Assignmen t on Sniffing SVC	Network Spoofing using nmap, Amb	Zenmap Amb  Password	



**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706



	on sniffing Suvarna VChahre			cracking John the ripper SVC	
Day 3 12/06/20 19	Kali linux installation Backtrack Metasploit AMB	Exploiting winxp system	Virus, steganograph y KNP	Key logger Lab work KNP	
Day 4 13/06/20 19	SQL injection UNR	SQL map UNR	Vulnerability assessment using Nesses  UNR	Quiz	
Day 5 14/06/20 19	Introduction to Blockchain tech Dr.Rizwana Shaikh	Continued	Wireshark challenges/	network miner	
Day 6 15/06/20 19	Browser Exploitation framework Dr.Vijay Katkar	BeEF continued	BeEF continued	Internship project distribution	Feedb ack

- 1) Quiz will be conducted at the end of each day to know the students understanding in the topic covered. All the resources are requested to prepare accordingly.
- 2) All the resource person are requested to prepare and keep ready mini projects topics related to the contents covered in te SDP which will be given to the participants. Three students per group, based on the students response , total number of groups will be decided.



**PRINCIPAL**  
**S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY**  
 Sri Chandrasekarendra Saraswathy Vidyapuram  
 Sector-V, Nerul, Navi Mumbai-400706

### 5 days Student Development Program on "Machine Learning with Python"

**Status : Ongoing, Internship will start in the month of Dec 2018**

**Date:** August 04, August 11, August 17, August 25, September 21, 2018

**Trainers:** Prof. Shyamala Mathi, Prof. Rupal M, Prof. Vaishali Bhujade, Prof. Varsha Mali , Dr. Vijay K(SIESGST)

**Duration:** 5 days workshop followed by one month internship

#### **OBJECTIVE AND GOALS:**

This student development program aims at providing participants with the latest and general-purpose machine learning algorithms. At the same time, the training aims to deliver some common threads, or a common knowledge base, which can be used in the future for learning a wide range of algorithms.

#### **SESSION :**

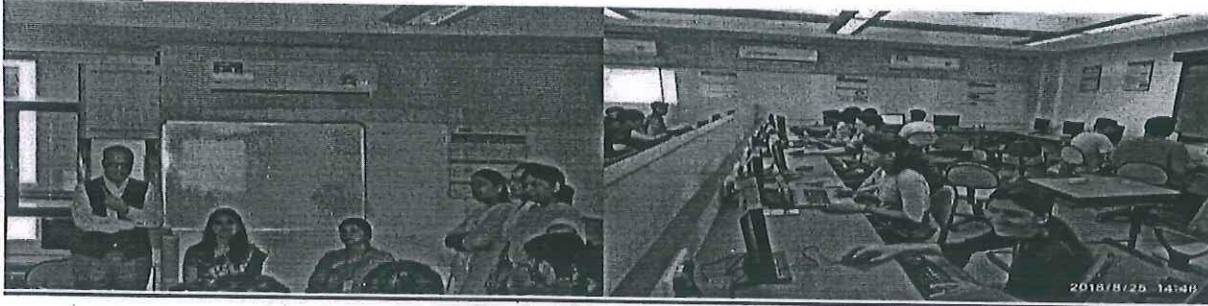
CoE-DSDP faculties have conducted five days student development program on "Machine Learning with R" with following content,

- Module 1:** What is Machine Learning?
- Module 2:** Performance measures
- Module 3:** Classification, Regression – Linear and logistics
- Module 4:** Clustering
- Module 5:** Prediction, Support Vector Machines, PCA
- Project Implementation**

#### **ATTENDANCE & INFRASTRUCTURE:**

Around 30 students registered for the SDP. Out which 28 students attended this SDP. During this SDP daily Assignments were given and day wise feedback has collected. Students are also assigned Machine Learning Projects

#### **PHOTOS:**



#### **FEEDBACK:**

Feedback was collected and overall feedback shows students were satisfied with content and requested to conduct future SDPs on Big data Analytics and Machine Learning.

**HEAD**  
Department of Information Technology  
S.I.E.S. Graduate School of Technology  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Plot-1-C & E, Sector-V, Nerul, Navi Mumbai-400706



**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapuram  
Sector-V, Nerul, Navi Mumbai-400706



**Organize a  
5 days Hands on Training on  
PLC Programming From Scratch  
24-29 DEC 2018**

Now a days, programmable logic controllers(PLC) are an elementary component of state-of-the-art automation solutions. Intelligent solutions are not based on a conflict between these systems, but on unity. With important advantages like, robustness and easy handling, the PLC continues to guarantee its success. Further development will be dependent on more & more steadfast integration of information & communication technology. For the engineering processes, the integrated workflow will covers all engineering tools for production. This require transparency of the data flow between a company's production processes and its business processes.

This training program is meant to be a hands-on type course, giving students opportunity to work on Allen Bradley PLC and Learn various methods of PLC programming. This course is designed to equip the novice with no prior PLC programming experience with the basic tools necessary to create a complete PLC program.

**OBJECTIVES**

- To provide knowledge levels needed for PLC programming and its operating.
- To train the students to create ladder diagrams from process control descriptions.

**COURSE CONTENT**

- Introduction to PLC and its types
- Learning PLC programming using Ladder Diagram using the Rockwell software RSLogix 500
  - Basic Inputs and Outputs
  - Fundamentals of the Scan Sequence
  - Understanding Bits and Instructions
  - Basic Instruction XIC, OTE and XIO
- Different Task will be given to students related to PLC Programming

**WHO SHOULD ATTEND**

Any student from SE/TE (EXTC/MECH/IT/CE/PPT) – Entry for only first 20 students

**Course Fees**

Free of charge

**Contact for Registration**

Prof. Abhishek Kadam  
Mobile: 9730032260  
Email ID: kadam.abhishek@siesgst.ac.in

Dr. Pradip P Patil  
Mobile: 9869829395  
Email ID: pradip.patil@siesgst.ac.in

  
**Head of Department**  
Mechanical Engineering Department  
S.I.E.S. Graduate School Of Technology  
Sector-V, Nerul, Navi Mumbai-400 706



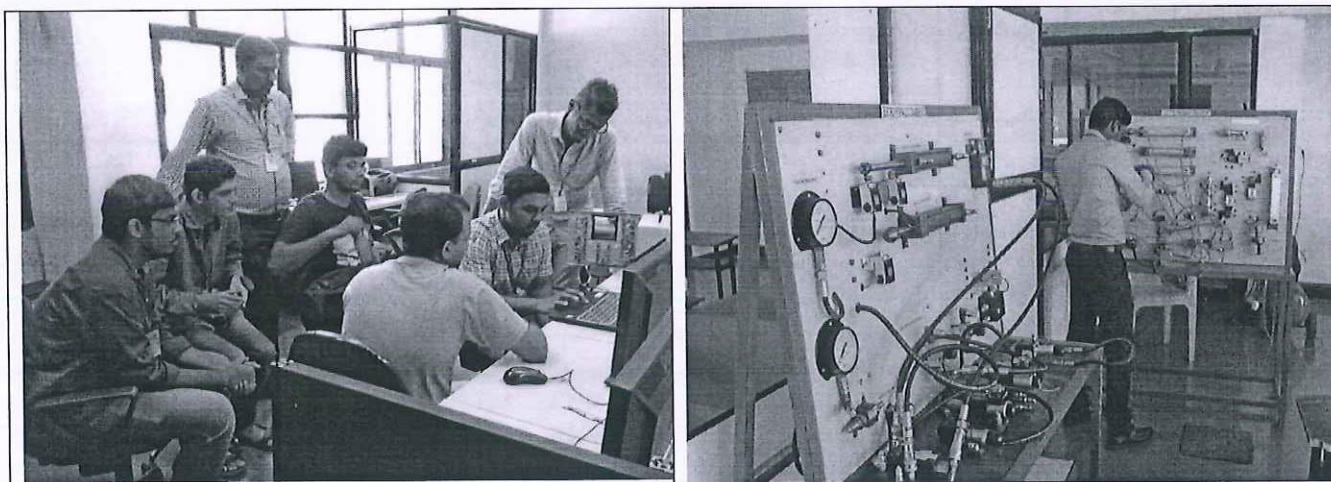
  
**PRINCIPAL**  
S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
Sri Chandrasekarendra Saraswathy Vidyapeetham  
Sector-V, Nerul, Navi Mumbai-400 706



## SCHEDULE


Date	Day 1	Day 2	Day 3	Day 4	Day 5
Resource person	Abhishek Kadam	Abhishek Kadam	Abhishek Kadam	Abhishek Kadam	Pradip P. Patil
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Morning	Learning PLC programming using Ladder Diagram using the Rockwell software RSLogix 500  Basic Inputs and Outputs	Fundamentals of the Scan Sequence	Understanding Bits and Instructions	Basic Instruction XIC, OTE and XIO	Interfacing with Hydraulics and Pneumatic Kit
	Assignment/ Activity				
Afternoon	Hands on practice on Rockwell software RSLogix 500	Hands on practice on Rockwell software RSLogix 500	Hands on practice on Rockwell software RSLogix 500	Hands on practice on Rockwell software RSLogix 500	Hands on practice on Rockwell software RSLogix 500 and Pneumatic Kit


## Photographs:



## Report:

A SDP was organized for the Mechanical Engineering student **from** 24 December 2018 to 29 December 2018. The SDP was conducted by Prof. Abhishek Kadam on the topic “PLC programming from scratch” in Mechatronics lab in Mechanical Engineering Department. Altogether 20 students were present for the workshop. The workshop consists of live problems of various domains such as Hydraulics and pneumatics. The detail analysis of the feedback is given below:

  
**Head of Department**  
 Mechanical Engineering Department  
 S.I.E.S. Graduate School Of Technology  
 Sector-V, Nerul, Navi Mumbai-400 706

  
**PRINCIPAL**  
 S.I.E.S. GRADUATE SCHOOL OF TECHNOLOGY  
 Sri Chandrasekarendra Saraswathy Vidyapeetham  
 Sector-V, Nerul, Navi Mumbai-400 706