

# **Siemens Centre of Excellence (SCoE)**

## **National Institute of Technology Kurukshetra**

Subject: Regarding full semester internship at SCoE

**Siemens Centre of Excellence (SCoE)** is a premier arm of National Institute of Technology, Kurukshetra (An Institution of National Importance) which aims for building capacity in Design and Manufacturing with the latest and highly robust technology driven solutions. The infrastructure available at Centre can take up real-time projects and consultancy in the field of design, manufacturing, automation etc. The Center team includes experienced professionals with practical exposure of dealing with industrial processes & troubleshoot and is well supported by highly experienced academia fraternity of NIT Kurukshetra.

SCoE, NIT Kurukshetra is offering one full Semester Internship to B. Tech. 5<sup>th</sup> semester students of all the branches. The students undergoing internship at SCoE will work on the latest industry-grade hardware/software tools/machineries. They will also get opportunities to work on real time problems related to Industry. The internship program will enable the students to keep up the pace with this fast-changing technological world.

Period of Internship: January 11<sup>th</sup>, 2022 to May 28<sup>th</sup>, 2022

*(The Internship may be offered in online/onsite/blended mode depending upon the prevailing conditions of COVID-19 & State/Central Govt. guidelines)*

Payment (Fee and O&M Charges):

- i. Internship / Project Work Fee\* (GST @18% inclusive) : Rs. 45,000/-
- ii. **Overhead & Maintenance (O&M) Charges (GST @ 18% inclusive):** Rs. 2,500/-

**\*There is 100% fee waiver for the students of NIT Kurukshetra. However, they are required to pay only O&M charges of Rs. 2,500/-.**

The students interested in internship program are requested to fill registration form in link given below **latest by 13.12.2021 (Monday)**.

[https://docs.google.com/forms/d/e/1FAIpQLScRDGA1HGoOFOaM8HK93njKTqNG-rGkSNAu27ku48IxpIA4Q/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScRDGA1HGoOFOaM8HK93njKTqNG-rGkSNAu27ku48IxpIA4Q/viewform?usp=sf_link)

List of projects offered at SCoE (Tentative) is attached as Annexure

Head, SCoE  
NIT Kurukshetra

**Siemens Centre of Excellence (SCoE)**  
**National Institute of Technology Kurukshetra**

Dated: 15.11.2021

**Subject:** One full semester internship at SCoE to B. Tech. 5th semester students of all the branches.

**Duration:** 11<sup>th</sup> January 2022 to 28<sup>th</sup> May 2022

**List of the Department-wise proposed Internship Projects**

S.No	Internship Project Title	Department-wise seats				SCOE Domain
		ME / PIE	EE	ECE/ Comp. /IT	CE	
1	Designing, simulating the process of Projector and its screen manufacturing industry by using Siemens Tecnomatix plant simulation software	4				Advance Manufacturing
2	Designing, simulating the process of the Bicycle (Cycle) manufacturing industry by using Siemens Tecnomatix plant simulation software	4				Advance Manufacturing
3	Designing, simulating the process of shoe manufacturing industry by using Siemens Tecnomatix Plant Simulation software	4				Advance Manufacturing
4	Designing, simulating the process of Food processing (e.g. potato chips) manufacturing industry by using Siemens Tecnomatix Plant Simulation software	4				Advance Manufacturing
5	Designing, simulating the process of sim card manufacturing industry by using Siemens Tecnomatix plant simulation software	4				Advance Manufacturing
6	Designing, simulating the process of Paper manufacturing industry by using Siemens Tecnomatix Plant Simulation software	4				Advance Manufacturing
7	Designing, simulating the process of Air conditioner manufacturing industry by using Siemens Tecnomatix Plant Simulation software	4				Advance Manufacturing
8	Designing, simulating the process of watch manufacturing industry by using Siemens Tecnomatix plant simulation software	4				Advance Manufacturing
9	Designing, simulating the process of Automobile part/accessories (2 wheelers) manufacturing industry by using Siemens Tecnomatix plant simulation software	4				Advance Manufacturing
10	PLC Based Beverage Industry Process Control and Monitoring System			4		Automation
11	PLC Based Sugar Manufacturing Process Control and Monitoring System			4		Automation
12	Bottling plant using recipe, monitored, controlled by HMI/SCADA.			4		Automation
13	PLC based tank filling system.			4		Automation
14	PLC based man less railway gate crossing			4		Automation
15	Moisture controlled Automated Irrigation system.			4		Automation
16	PLC based automatic Dam shutter control system.			4		Automation
17	PLC based Multi-Channel, Smart Fire Detection, Alarm System.			4		Automation
18	PLC based traffic, street light controlling system.			4		Automation
19	CNC Toolpath generation and simulation for manufacturing of Outer C.V. Joint of drive axle shaft	4				CNC Controller
20	CNC Toolpath programming simulation for milling table fixture plate and fixture locating pins	4				CNC Controller
21	Manufacturing programming and simulation of quick release coupling for CNC Turning Machine	4				CNC Controller
22	Manufacturing Programming and simulation of Stepped Gear Shaft for CNC Machines	4				CNC Controller
23	Sheet forming using different tools and analysis the shapes	4				CNC Machine
24	Perform the machining for different types of fittings	4				CNC Machine

25	Manufacturing lever press model used for fitting in industrial operation	4				CNC Machine
26	Quality inspection of Lever press assembly parts.	4				CNC Machine
27	Turbojet Engine Deign in SIEMENS NX	4				Design & Validation
28	Furl and Unfurl condition of satellite antenna design in NX	4				Design & Validation
29	Design of Outer body of Supersonic Aircraft	4				Design & Validation
30	Modeling of steering system & braking system for four wheeler	4				Design & Validation
31	Design of Hydraulic jack for lifting automobile	4				Design & Validation
32	Mold wizard for injection molding-tool design	4				Design & Validation
33	Modeling of domestic wind mill, its blade optimization	4				Design & Validation
34	Modeling of the automobile engine, its optimization.	4				Design & Validation
35	100 KVA Transformer Design in NX CAD		4			Design & Validation
36	Induction Motor Design in NX CAD		4			Design & Validation
37	DC Motor Design in NX CAD		4			Design & Validation
38	Contactore Design in NX CAD		4			Design & Validation
39	Energy Saving Kit Design in NX CAD		4			Design & Validation
40	MCCB Design in NX CAD		4			Design & Validation
41	Elevator Design in NX		4			Design & Validation
42	Control, estimation and diagnostics of electric drives with multiphase induction motors and output filters of voltage inverters		4			Electrical Energy Saving
43	Smart Motor monitoring and management system		4			Electrical Energy Saving
44	Automation Integration with Drive		4			Electrical Energy Saving
45	CNC Controller with Drive		4			Electrical Energy Saving
46	Designing of Converter at Manufacturing Plant Using SIMOCODE		4			Electrical Energy Saving
47	Electrical Load Analysis & Energy Saving for Industries		5			Electrical Energy Saving
48	Controlling Industrial Robotics Arm using Drive		4			Electrical Energy Saving
49	Automated level, pressure and temperature control in industrial boilers.	4				Mechatronics
50	System simulation of intelligent irrigation system	4				Mechatronics
51	Develop ladder logic, simulate the product sorting station along with HMI, SCADA			6		Mechatronics
52	Automatic product inspection system, Monitored, controlled by HMI/SCADA.			6		Mechatronics
53	Maintenance, troubleshooting of feeder, inspection station	4				Mechatronics
54	Descriptive Analysis of feeder, Inspection station	4				Mechatronics
	3D scanning and Reverse engineering of automotive parts	4				Metrology
	Profile measurement of sheet forming	4				Metrology
	Layout inspection of engineering components	4				Metrology
56	Quality inspection, study of Statistical Process Control (SPC) of automobile components.	4				Metrology
59	Configuring Temperature Acquisition using SITRANS TH300 in PCS 7 using SITRANS Library			4		Process Instrumentation
60	Monitoring and Diagnostics of Control valves using "Vlv Mon" function block in SIMATIC PCS 7			4		Process Instrumentation
61	PCS based D.C motor Speed monitoring system.		4	4		Process Instrumentation
62	Parameterisation, characteristics analysis of different types of RTDs, TCs.			4		Process Instrumentation
63	Identification, sorting of different liquids, their levels in the beverages industry.			4		Process Instrumentation
64	Robotic Spot-Welding operation at automobile body frame.	6				Robotics
65	Manufacturing of a welding trolley using robotic TIG welding operation	6				Robotics
66	"Best out of Waste" with robotic MIG welding.	6				Robotics
67	Conveyor system installation for material handling with robot.			6		Robotics

68	Estimation of heat distribution on wheel tread surface, hub during braking of wheel in railways.	4				Test & Optimization
69	Estimation of crack growth in a rail-wheel under the effect of thermal, mechanical loading.	4				Test & Optimization
70	To reduce the weight of the conventional wagons in Indian Railways with the use of Composites.	4				Test & Optimization
71	Estimation of contact characteristics on rail due to rail-wheel contact.				8	Test & Optimization
72	Estimation of fatigue life of railway wheels.				8	Test & Optimization
		<b>162</b>	<b>61</b>	<b>74</b>	<b>16</b>	<b>313</b>

\*For any query regarding SCoE internship program

- Write to: [scoe@nitkkr.ac.in](mailto:scoe@nitkkr.ac.in)
- Contact: 8449518514/6366918513