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POORNIMA GROUP

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Training & Placement Office

Guidelines for Summer Internships for B.Tech. Batch 2017-21

Amidst of the ongoing circumstances of lockdown and restricted mobility, students of Batch 2017-21 are advised to pursue online summer Internships from their homes. Training & Placement Office, Poornima Group is hereby recommending quality online-learning platforms, as well as the training areas for students to take up. **Students must understand that this time is the most optimum time to upgrade one's skill set and strengthen technical skills to establish a strong foundation for a prosperous career ahead**. **These trainings must be taken with utmost sincerity, and one must ensure the quality of training and its platform to make it more valuable and at par with industry standards.**

Training & Placement Office at Poornima Group strongly advise each student of B.Tech. Batch 2017-21 to opt from the options given below. Please note the following:

1. **Selection of Course:**
   a. Student is expected to take up any course / software from the recommended list of both online learning platform as well as the course.
   b. In case student wishes to opt for any other course apart from those mentioned in this list, he/she must take approval from the undersigned.
2. **Monitoring:**
   a. To keep an account of the learnings, student must maintain a log of training in format provided by its department. Training monitoring guidelines will also be issued by respective departments.
   b. Student will be monitored by the respective Department.
3. **Duration of Training:**
   a. The official duration of training will be considered after **Monday, April 20, 2020** for a period of minimum 45 days and maximum 60 days (subject to change as per RTU directives from time to time)
   b. For an hourly calculation, a student is advised to take up one / two / three online courses which accounts for minimum **120-150 hours** of training and learning.
   c. It is also advised that student take an additional personality development / communication enhancement program along with these technical courses to better prepare for the upcoming placement drives.
4. **Evaluation:**
   a. The certificate of completion and duration of the undertaken course shall hold a strong weightage in training evaluation in 7th Semester.
   b. The said online training will be equivalent to the summer internship and will be evaluated upon the following components:
      i. Log sheet (i.e. regularity & punctuality)
      ii. Course Completion Certificate (i.e. outcome)
      iii. Submission of hard copy of Report (documentation submitted)
      iv. Seminar presentation (presentation)
   c. Necessary and detailed instructions and dates shall be circulated by the respective department.

If you have any questions or need any additional information, please contact undersigned.

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ANNEXURE # 1: RECOMMENDED MOOC PLATFORMS

S.No.	Name of Service Provider	Website Link	Nature of Courses
1.	Harvard University	https://online-learning.harvard.edu/	Some Free Courses; paid Certificates
2.	Edx	https://www.edx.org/	Some Free Courses; paid Certificates
3.	Coursera	https://www.coursera.org/	Free Courses
4.	Udemy	https://www.udemy.com/	Paid Courses
5.	MIT – Open Courseware	https://ocw.mit.edu/	Some Free Courses; paid Certificates
6.	Upgrad	https://www.upgrad.com/	Paid Courses
7.	Webtek	https://www.webteklabs.com/	Paid Courses
8.	Coding Ninja	https://www.codingninjas.com/	Paid Courses
9.	Yantra Byte	www.yantrabyte.com	Paid Courses
10.	Edureka	https://www.edureka.co/	Paid Courses
11.	Inventateq	https://www.inventateq.com/	Paid Courses
12.	Microsoft Technology Associate	https://www.mtaindia.org/online-training	Paid Courses
13.	CMC	http://cmcindustrialtraining.com/	Paid Courses
14.	SWAYAM	https://swayam.gov.in/	Many Free Courses; paid Certificates
15.	AICTE	http://free.aicte-india.org/	Many Free Courses; paid certificates
16.	NPTEL	https://nptel.ac.in/	Some Free Courses; paid Certificates
17.	Academic earth	https://academicearth.org/	Many Free Courses; paid Certificates
18.	Class central	https://www.classcentral.com/	Many Free Courses; paid Certificates
19.	Future Learn	https://www.futurelearn.com/	Many Free Courses; paid Certificates
20.	Civil simplified (For Civil Engineering students only)	https://www.civilsimplified.com/online-courses/	Paid Courses
21.	Skifi Labs	https://www.skyfilabs.com/online-courses	Paid Courses

ANNEXURE # 2: RECOMMENDED CERTIFICATE PROGRAMS

Department of Civil Engineering

A. SOFTWARES

S.No.	Software	Basic Introduction
1	AUTO CAD.	computer-aided design and drafting software application
2	Sketch Up.	3D modeling computer program
3	Primavera P6.	enterprise project portfolio management software.
4	Autodesk 3ds Max.	3D computer graphics program for making 3D animations, models, games, and images
5	Autodesk Maya.	3D computer graphics application that runs on Windows, macOS, and Linux,
6	AutoCAD Civil 3d.	Design and documentation solution for civil engineering that supports building information modeling (BIM) workflows.
7	STAAD Pro	structural analysis and design software
8	SAP2000	general-purpose civil-engineering software
9	ETABS	caters to multi-story building analysis and design.
10	REVIT Structure	BIM software solution for structural engineering companies and structural engineers

B. TRAINING AREAS

S.No.	Trg Areas	Average Duration
1	GIS (Q-GIS & gvSig)	4-6 weeks
2	Structural and Foundation Analysis	6-8 weeks
3	Tall Building Design	4-6 weeks
4	Construction Technology	6-8 weeks
5	Foundation Design	4-6 weeks
6	CPM: Construction Project Management	4-6 weeks
7	BIM : Building Information Modeling	4-6 weeks

8	Seismic Design	4-6 weeks
9	Quantity Surveying	4-6 weeks
10	ETABS	6-8 weeks
11	Environmental Engineering	4-6 weeks
12	Water gems / Water CAD – Pipe / Sewer Line Designing and Planning	4-6 weeks
13	Material Testing	4-6 weeks
14	Water Resources Engineering	4-6 weeks
15	Artificial Intelligence and Automation	6-8 weeks
16	Transportation Engineering	6-8 weeks
17	Bridges, Road and Dams – Design amd Planning	4-6 weeks

Department of Computer Engineering & Department of Information Technology

S.No	Training Technology / Area	Sub topics	Average Duration
1	Block chain		6 weeks
2	Software Testing		4-6 Weeks
3	Big Data Hadoop		4-6 weeks
4	IOT		4-6 weeks
5	Mobile Application Development	React Native	4-6 weeks
		Android	
		iOS	
		Flutter	
6	Web Programming Languages	Core/ Cake PHP/ MySQL	6- 8 weeks each
		Laravel PHP	
		WordPress	
		C/C++	
		Java	
		Asp .Net ,.NET	
		AngularJS	
		ReactJS	
		NodeJS	
7	Web Designing	Web Designing	4-6 weeks each
		Graphic Designing	
		Animation & Multimedia	
8	Data Science	R Programming	6- 8 weeks each
		Python	
		Data Analytics	
9	Cloud Computing	AWS	4-6 Weeks each
		Microsoft Azure	
10	Hardware & Networking	Redhat Linux	6-8 weeks each
		CCNA	
		CCNP	
		Cyber Security	
		Ethical Hacking	
11	Digital Marketing	SEO	4-6 weeks
		SMO	
12	Artificial Intelligence & Automation	Neural Network	4-6 weeks
		Deep Learning	
		Machine Learning	
		Weka / Scikit tools	
13	DEVOPS		4-6 weeks
14	Salesforce		4-6 weeks
15	AR/VR and 5 G		4-6 weeks

Department of Electrical Engineering

A. SOFTWARES

S.No.	Software
1	MATLAB
2	PLC / SCADA (Automation)
3	SAP
4	Electrical AutoCad-2D, 3D.
5	Computer Programming Language (C/C++ , JAVA , PYTHON)

B. TRAINING AREAS

S.No.	Trg Areas	Duration
1.	Industrial Automation (PLC/SCADA)	4-6 Weeks
2.	Artificial Intelligence and Automation	4-6 Weeks
3.	Telecom	4-6 Weeks
4.	IoT Training	4-6 Weeks
5.	Solar Power / Renewable Energy	4-6 Weeks
6.	PDMS (Plant Design Management System)	4-6 Weeks
7.	Control Panel Designing.	4-6 Weeks
8.	Electrical wiring designing	4-6 Weeks
9.	HVAC Designing	4-6 Weeks
10.	Switch gears, power transformers and circuit breakers	4-6 Weeks
11.	Hybrid Vehicles	4-6 Weeks
12.	Electric Cars	4-6 Weeks
13.	Robotics	4-6 Weeks
14.	Smart Energy Meters (1Phase, 3Phase)	4-6 Weeks
15.	Electrical wiring designing	4-6 Weeks
16.	Practical Engineering for Energy Efficiency	4-6 Weeks
17.	Troubleshooting, Designing and Installing digital and analog TV System	4-6 Weeks
18.	Cybersecurity for Automation, Control and SCADA	4-6 Weeks
19.	Real Time Distributed Systems	4-6 Weeks
20.	Competency in Power Distribution	4-6 Weeks
21.	Substation Design	4-6 Weeks
22.	Power Electronics and Variable Frequency Drives	4-6 Weeks
23.	Micro Grid Technologies and Photovoltaic Materials	4-6 Weeks
24.	Computer / IT related Training Areas (Refer the list of Computer / IT Department)	4-6 Weeks

Department of Electronics and Communication Engineering

A. SOFTWARES

S.No.	Software
1	MATLAB
2	PLC / SCADA (Automation)
3	SAP
4	Electrical AutoCad-2D , 3D.
5	Computer Programming Language (C/C++ , JAVA , PYTHON)

B. TRAINING AREAS

S.No.	Trg Areas	Duration
1.	Industrial Automation (PLC/SCADA)	4-6 Weeks
2.	Artificial Intelligence and Automation	4-6 Weeks
3.	Wireless Networks / Telecom	4-6 Weeks
4.	IoT Training	4-6 Weeks
5.	Solar Power / Renewable Energy	4-6 Weeks
6.	PDMS (Plant Design Management System)	4-6 Weeks
7.	Embedded Systems	4-6 Weeks
8.	Digital and Analog VLSI Designing	4-6 Weeks
9.	PCB and Circuit Designing	4-6 Weeks
10.	Image Processing	4-6 Weeks
11.	Hybrid Vehicles	4-6 Weeks
12.	Robotics	4-6 Weeks
13.	Smart Energy Meters (1Phase, 3Phase)	4-6 Weeks
14.	Computer Networks	4-6 Weeks
15.	Cyber security for Automation, Control and SCADA	4-6 Weeks
16.	Antenna Designing	4-6 Weeks
17.	Real Time Distributed Systems	4-6 Weeks
18.	Nanoscience / Nanotechnology	4-6 Weeks
19.	VLSI Designing	4-6 Weeks
20.	Computer / IT related Training Areas:(Refer the list of Computer / IT Department).	4-6 Weeks

A. SOFTWARES

1	Designing & Modelling Software Computer Aided Design Software
1.1	AutoCAD
1.2	Unigraphics NX
1.3	Solid Works
1.4	CATIA
1.5	Autodesk Inventor
1.6	ProE/Creo
1.7	Alibre

NOTE: Pro-E/Creo, CATIA, SolidWorks and Autodesk Inventor are very similar software. Knowing one of them is sufficient to work on all the other software.

2	Analysis and Simulation	
2.1	ANSYS	Finite Element Analysis (FEM) , Computational fluid dynamics (CFD) Analysis
2.2	MATLAB	Mathematical modeling in all Aerospace, Automobile, Control system domain it is an industry standard.
2.3	COMSOL	
2.4	Hyper Mesh	
2.5	eQuest	Energy Simulation Software
3	**Programming Language**	
3.1	PYTHON	
3.2	JAVA	
3.3	C++	

B. TRAINING AREAS

S.No.	Courses	Duration
1	Piping Design Training	6-8 Weeks/6 Months
2	HVAC Design Training	6-8 Weeks/6 Months
3	CFD Training	6-8 Weeks/6 Months
4	3D Printing	4-6 Weeks
5	Robotics	4-6 Weeks
7	Industrial Fire and Safety	4-6 Weeks
8	CNC Programming	4/6/8 Weeks
9	Automobile	4/6/8 Weeks
10	PDMS (Plant Design Management System)	2 Months
11	Manufacturing Processes	4-6 Weeks
12	Basic Metallurgy	4-6 Weeks
13	IPR and Patents	4-6 Weeks
14	Energy Audit and Management	4-6 Weeks
15	Renewable Energy / Solar Energy and applications	4-6 Weeks
16	Green Building and its Rating System	4-6 Weeks
17	Artificial Intelligence and Automation	4-6 Weeks