Training and Skill Development

Disruptive Technologies – Training

Date(S):

- **Slot 1:** 13. 01.2020 to 21.01.2020
- **Slot 2:** 22.01.2020 to 28.01.2020

Time: 9:20 AM to 4:50 PM

No of hours per Day/Batch: 8 hrs

Training In charge(s)	Duration	Technologies
Ms Indrakumari	14hrs/Batch	Data Analytics using Tableau
Mr Pratyush Deka	14hrs/Batch	AI ML using Python
Mr Prabhu	14hrs/Batch	IoT using Arduino

List of Faculty Trainers

S.No	Data Analytics Faculty Members	S.No	AI ML Faculty Members	S.No	IoT Faculty Members
1.	Ms Indrakumari	1.	Mr Pratyush Deka	1.	Dr Rohit Tripati
2.	Mr Umesh Kumar Gupta	2.	Mr Anuj Kumar Bharti	2.	Ms Divya
3.	Ms Priyanka Shukla	3.	Dr John	3.	Dr Usha chauhan
4.	Ms Deepika Sherawat	4.	Mr Ravinder Ahuja	4.	Mr Saravanan
5.	Mr.Subhash Gupta	5.	Mr Karthic R	5.	Mr D Gnana Jeba Das
6.	Mr Soumya Ranjan Jena	6.	Dr Nitin Mishra	6.	Ms Indu

Slots wise Student, Faculty and Venue Mapping

Slot 1 – Detailed Plan (13. 01.2020 to 21.01.2020)

S. No	Skill	Venue	Faculty	13 Jan, 14 Jan	16 Jan, 17 Jan	20 Jan, 21 Jan
1.	AI & ML	A -109	Mr Pratyush Deka Mr Karthic R	Sec 14	Sec 10	Sec 1
2.	AI & ML	A -322	Mr Anuj Kumar Bharti Dr Nitin Mishra	Sec 11	Sec 7	Sec 2
3.	AI & ML	A-110	Dr John Mr Ravinder Ahuja	Sec 16	Sec 12	Sec 3
4.	DA	B-018	Ms Indrakumari Mr Soumya Ranjan Jena	Sec 1	Sec 14	Sec 10
5.	DA	B- 110	Mr Umesh Kumar Gupta Ms Deepika Sherawat	Sec 2	Sec 11	Sec 7
6.	DA	B-109	Ms Priyanka Shukla Mr.Subhash Gupta	Sec 3	Sec 16	Sec 12
7.	IoT	C-515	Dr Rohit Tripati Ms Indu	Sec 10	Sec 1	Sec 14
8.	IoT	C- 514	Ms Divya Dr Usha chauhan	Sec 7	Sec 2	Sec 11
9.	IoT	C - 516	Mr Saravanan Mr D Gnana Jeba Das	Sec 12	Sec 3	Sec 16

Slot 2 – Detailed Plan (22.01.2020 to 28.01.2020)

S. No	Skill	Venue	Faculty	22 Jan, 23 Jan	24 Jan, 25 Jan	27 Jan, 28 Jan
1.	AI & ML	A -109	Mr Pratyush Deka Mr Karthic R	Sec 4	Sec 15	Sec 8
2.	AI & ML	A -322	Mr Anuj Kumar Bharti Dr Nitin Mishra	Sec 5	Sec 17	Sec 9
3.	AI & ML	A-110	Dr John Mr Ravinder Ahuja	Sec 6		Sec 13
4.	DA	B-018	Ms Indrakumari Mr Soumya Ranjan Jena	Sec 8	Sec 4	Sec 15
5.	DA	B- 110	Mr Umesh Kumar Gupta Ms Deepika Sherawat	Sec 9	Sec 5	Sec 17
6.	DA	B-109	Ms Priyanka Shukla Mr.Subhash Gupta	Sec 13	Sec 6	
7.	IoT	C-515	Dr Rohit Tripati Ms Indu		Sec 8	Sec 4
8.	IoT	C- 514	Ms Divya Dr Usha chauhan	Sec 15	Sec 9	Sec 5
9.	IoT	C- 514	Mr Saravanan Mr D Gnana Jeba Das	Sec 17	Sec 13	Sec 6

If, in case, any day is declared as holiday, the training session shall be conducted immediately following Saturday or Sunday.

Training Contents and Plan

AI & ML using Python Training Plan Duration: 2 days X 8 Hrs = 16Hrs			
Day 1	Hour 1	What is AI & ML and why?	Introduction to AI & ML and why we need AI & ML
	Hour 2	Scope of AI & ML and applications	Discussion of applications in different domain
	Hour 3	Different types and Challenges	Types of AI & ML Challenges in AI & ML
	Hour 4	Learning algorithms and evaluation metrics	Discussion on different learning algorithms and how they can be evaluated
	Hour 5	Introduction to Python	Anaconda installation
			Data types and variables Conditional statements
			Local and Global variables
	Hour 6	Python List, Dictionary & Function	Discussion on Python List, Dictionary and function required to understand AI & ML
	Hour 7	NumPy, Pandas, Matplotlib	Installation of different tools and its usage
	Hour 8	Scikit-Learn	Introduction to scikit-learn and its usage
	Daily Assessment 1: Online		
Day 2	Hour 1	End-to-end AI & ML Project	Look at the big picture, Get the data, visualize to gain insights,

	Hour 2	**End-to-end AI & ML Project**	Prepare the data for ML algorithms, Select model, train and fine-tune, Present, launch, monitor, and maintain your system
	Hour 3	**AI & ML Project 1**	Iris species classification
	Hour 4	**AI & ML Project 1**	Iris species classification
	Hour 5	**AI & ML Project 2**	Recognizing hand-written digits
	Hour 6	**AI & ML Project 2**	Recognizing hand-written digits
	Hour 7	**AI & ML Project 3**	Iris species clustering
	Hour 8	**AI & ML Project 3**	Iris species clustering
	Daily Assessment 2: Online		

IoT Using Arduino **Training Plan** **Duration: 2 days X 8Hrs = 16Hrs**			
Day 1	**Hour 1**	**Introduction**	•Overview of Embedded Systems •Components of Embedded Systems
	Hour 2	**About arduino IDE**	•Micro-controller Architecture and Properties •Installing and Setting up the Arduino development environment and simulation software .
	Hour 3	**Arduino architecture and pin details**	•Arduino Sketches •Classes •Sketch Structure •Pins

			•Arduino Shields
	Hour 4	**Software simulation**	•Introduction about simulation software (proteus)
	Hour 5	**Hands on Exp-1 with simulation**	• Software simulation on LED blinking . • Getting Started with LED blink
	Hour 6	**Hands on Exp-2 with simulation**	Software simulation on switches and LEDs with MCUs. • Interfacing switches and LEDs with MCUs
	Hour 7	**Hands on Exp-3 with simulation**	Software simulation on IR sensor with controller . Interfacing IR (digital) sensors with Arduino .
	Hour 8	**Hands on Exp-4 with simulation**	.Software simulation on motor with driver .Interfacing motor and driver with MCUs
	Daily Assessment 1: Online		
Day 2	**Hour 1**	**Introduction to IOT & Protocols**	• Introduction about communication protocols and IoT.
	Hour 2	**IoT open source platform and sensors**	• Introduction about open source IoT platform . • Interfacing IoT sensors and Actuators
	Hour 3	**Hands on exp on analog sensor and protocols**	•Difference between analog and digital sensors . •Connecting analog sensors with controller . •Communication protocols – WiFi Wireless communication .Interfacing analog sensor (LDR) with MCUs.
	Hour 4	**Creating account in open source IoT platform**	• creating free account in open source IoT platform to upload the data.
	Hour 5	**Hand on Exp on WIFI module .**	Configuring WiFi ESP8266 module with arduino.

			• Programming ESP8266 moduleArduino IDE to access/upload data on cloud.
	Hour 6	**Task-1**	**Line follower robot**
	Hour 7	**Task -2 -simulation**	**Uploading analog sensor values to cloud open source iot platform**
	Hour 8	**Task -2 –hands on**	**Uploading analog sensor values to cloud open source iot platform**
	Daily Assessment 2: Online		

Data Analytics using Tableau **Training Plan** **Duration: 2 days X 8 Hrs = 16Hrs**			
Day 1	**Hour 1**	Introduction to big data	Introduction to bigdata and Why Are Big Data Systems Different
	Hour 2	Big Data Life Cycle	• Business Case Evaluation • Data Identification • Data Acquisition and Filtering • Data Extraction • Data Validation and Cleansing • Data Aggregation and Representation • Data Analysis • Data Visualization • Utilization of Analysis Results

	Hour 3 & 4	Bigdata platform and data source	Discussion about various bigdata platforms
	Hour 5	Tableau Introduction	• Installation • Connecting to data
	Hour 6	Visual analytics	• Simple dashboard creation • Filter
	Hour 7 & 8	Visual analytics	Aggregate functions
	Daily Assessment1: Online		
Day 2	**Hour 1**	Bigdata analytics algorithms	Discussion on different learning algorithms and how they can be evaluated
	Hour 2	Bigdata challenges	Discussion on security issues and its remedies
	Hour 3	Bigdata applications	Discussion on real time applications
	Hour 4	Job Opportunities in data visualization	Deep discussion about the top companies who are hiring data analytics and their current projects
	Hour 5	Calculations	Sorting Grouping
	Hour 6	Creating Views and Analysis	Action Parameter
	Hour 7 & 8	Dashboard	Mini project to create dashboards.
	Daily Assessment 2: Online		

Training Process

1. On the first day of the training, Orientation will be given to students by **Faculty Trainers**. Students will get to know about the threshold of the Assessment, attendance and process of the training.
2. **Importance of attendance**- there should be 80% attendance. The trainer will take attendance regularly. Attendance coordinator will collect all attendance and share to higher authority. No student will be allowed to register in exam if attendance is lesser than 80%.
3. **Assignment Process**- Assignment is based on Quiz and project and questions will be uploaded in moodle by Assignment coordinators. Trainers help in solving assignment and ask viva questions on assignment.
4. **Assessment Process**- The assessment modes are MCQs and coding questions. Result Analysis will be shared with higher authorities as well with students by **Assessment** coordinator.
5. **Grand test**- After completion of the training, the grand test will be conducted for 3 hrs by Assessment coordinator. The toppers result will be displayed on notice board.

Roles and Responsibilities of Coordinators:

- Create Session Plan and prepare PPTs, assessment questions, Quizzes and other related material consulting all trainers selected for a particular training. The material shall be based on real world problems.
- Share daily attendance and assessment result analysis report to concerned authority.
- Monitor the training at respective venues and check the uniformity coverage.
- Get the feedback from students on faculty training and ensure the quality of training periodically.
- Conduct assessments strictly through moodle and online assessments platforms as per schedule.
- Create a WhatsApp group with best performer and make them to use for product development.

- Conduct a daily meeting with all trainers and share each other view.

Roles and Responsibilities of Trainer

- Prepare study material (PPTs, assessment, quizzes) on the topics assigned by the coordinator.
- Upload attendance and assessments.
- Take classes as per schedule.
- Report to the coordinators in case of any issue/grievance.
- Identify the students who are weak and focus more on them.
- Trainers prepare assessment questions with the help of experts.
- Trainers should give daily feedback on the weakness of understanding to students and should be shared with coordinators and higher officials.
- Students having less than 80% attendance should be counseled and their performance in assessment shall be monitored. An appropriate intimation shall be given to parents through the respective class coordinator.
- For each session, trainers will prepare at least ten substantial learning outcomes against which the performance of the students cab ne seen through assessment and evaluation.

Guidelines to Students:

1. Students must bring their Laptop with fully charged and prerequisite software installed.
2. Late comers are not allowed to attend the class.
3. Students who are failing to secure minimum of 80% attendance will not allowed attending the exam.
4. All Courseware are uploaded in LMS and same must be prepared by students before attending the class.
5. Securing Minimum Marks in the Assessment: Every student is required to secure minimum 80% Marks in the session-wise internal assessment as well as Final assessment. Students who are failing to secure at least 80% marks will not be allowed to attend campus recruitment.
6. All students who secure 100% attendance and scoring top mark will get "**e-Certificate**", from the School signed by higher official and same students will be recommended to product development cell.

Faculty Class Coordinator detail

- **Class coordinators have to communicate to respective class students to bring their laptop and they should take care of their wards presence.**

S. NO.	Section	Faculty Class Coordinator detail (Name, Dept, Mobile, Email)
1	Section 1	Kaushalendra Kumar Dubey 7836035559
2	Section 2	Prof. Anish Ahmad (Physics) 9891188456
3	Section 3	Abdul Gani 8439092347
4	Section 4	Vanita Garg 8791596204
5	Section 5	LAVEPREET SINGH (SOME) 8826873734
6	Section 6	Jyoti Singh 8581859774
7	Section 7	Arjun Kumar (SOME) 9718006468
8	Section 8	Dr. Anupama Singh (Mathematics) 8447850779
9	Section 9	Dr. Shafat Ahmad Khan 7042805636
10	Section 10	Dr. PINKI CHAKRABORTY

		9810994011
11	**Section 11**	**Prof. Brijesh Kumar Sinha** **9450776911**
12	**Section 12**	**Gitanjali Mehta** **9568029609**
13	**Section 13**	**Prof. Bhanu Pratap Singh** **9560337975**
14	**Section 14**	**Pratima Walde** **9411088372**
15	**Section 15**	**Prof. Aradhana Jauhari** **9711301327**
16	**Section 16**	**Dr. LEENA RANI** **9650125613**
17	**Section17**	**Dr. Ranjeet Kumar** **8826183340**

Coordinators List

Attendance coordinator	Mr A. Daniel – AI & ML Mr Arjun - DA Mr Dinesh Singh - IoT
Assessment Result & Analysis	Mr Anuj – AI & ML Ms Indrakumari– DA Mr Saravanan - IoT
Infra Coordinator	Mr Jenarthana– Ai & ML Mr Ajay Kaushik – DA Mr Lokesh varshney
Overall Coordinator (s)	Dr Dr A K Jain- Dean Dr SPS Chauhan

Outcome:

80% Students/batch must be cleared in all the daily and Grand assessments.

Action on Non-compliance

Result Analysis will be shared with higher authorities as well with students. If the students fail to qualify for daily and grand assessment, then there must be analysis resulting into concrete action with no more acceptable failures. Students scoring less than 80% will not be allowed to appear in examination.

If a faculty doesn't execute his duty such as monitoring of attendance, assessment, etc he might have to report to core committee for non-compliance, removed from his duty and in the worst case leading to severe action decided by the management.

Training In charge(s)	**Contact**	**Technologies**
Ms Indrakumari SCSE	indrakumari@galgotiasuniversity.edu.in 9789547978	Data Analytics using Tableau
Mr Pratyush Deka SCSE	pratyush.deka@galgotiasuniversity.edu.in 8755944998	AI ML using Python
Mr Prabhu-SEECE	k.prabu@galgotiasuniversity.edu.in 9442070621	IoT using Arduino

Single Point of Contact (SPOC)

Permission and Other Issues related Queries:

Dr A K jain Dean: Email – <arvind.jain@galgotiasuniversity.edu.in/ Mobile: +91-8588895415

Dr D Rajesh Kumar: Email – <d.rajeshkumar@galgotiasuniversity.edu.in> / Mobile: +91-9488668833