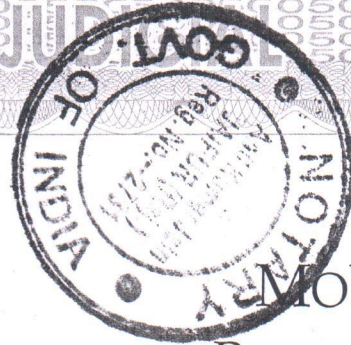




राजस्थान RAJASTHAN

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MOU FOR
INDUSTRY ACADEMIA PARTNERSHIP

MANIPAL UNIVERSITY JAIPUR

&

FORSK TECHNOLOGIES

M5, STARTUP OASIS

SITAPURA, JAIPUR

Introduction

This MoU is for industry and academia partnership for skill enhancement and improved industry engagement through studio and flip classroom concept.

The objective of this MoU is to bring industry approach of solution development and product engineering to engineering candidates as part of their academic curriculum through project based learning backed by data and technology.

To start with, the track of the course would be IoT (Internet of Things).

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Anil Kumar Jain
ANIL KUMAR JAIN
Notary (Govt. of India)

A team of project managers and technical leads would be designing the contents. A team of real IoT solution developers would be working with the candidates at ground level during the lab.



Certificate will be issued after end of the lab.

Why This Collaboration Is Needed

Currently there is no or limited exposure to industry practices during academic programs. Below are some of the highlights of the current scenario in academics.

- Course Composition: 60% Theory, 40% Practical
 - Theory is well handled, Lab part is poorly executed: **students doing toy programs, no debugging skills and no industry practices are inculcated.**
- NASSCOM says only 10 – 20% of engineering graduates are employable.
- Lack of High Order Thinking Skills in Problem Solving.
- No/Less placements in core companies.
- Graduates need training after passing out to get a job.
- Lack of this exposure results into a job but not career.
- Bring new edge technologies and skills to candidates during their studies.

Forsk Technologies: Past Experience

As a startup Edtech company, Forsk has achieved below milestones:

- Forsk founders have already worked with Samsung, Nokia, Wipro, Philips, TCS, Qualcomm, and Infosys to provide corporate training in the field of mobile and emerging technologies.
- Forsk already has 350+ students from Manipal, MNIT and IIIT Kota going through project based learning.
- Forsk recently conducted an IoT bootcamp in Manipal University Jaipur and had overwhelming response from students and faculty.
- Last month, Forsk conducted an Android bootcamp in MNIT, Jaipur and was a huge success.
- Last summer, Forsk conducted an Android bootcamp in IIIT Kota and was a huge success.
- Forsk as an industry partner to universities sets up "**Forsk Labs**" in campus to impart project-based learning and works as one stop shop for all industry related interfacing needed by universities.

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Pre-requisite Skills for Beginner's IoT Lab



The candidate should have engineering major in CSE/IT/ECE. The candidate should have knowledge in C/C++ coding. Beginner's welcome!

Collaboration Details

Forsk Technologies would execute the IoT Lab.

Much of candidate's learning at the IoT lab will happen through hands-on working and building project modules.

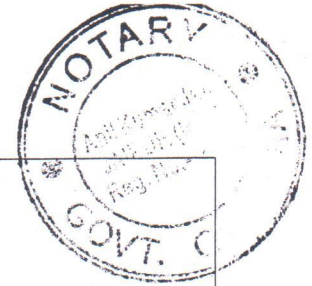
Skills	Details
C Programming	C programming revision.
Electronics Basics	The candidates will know about how to read data sheet, analog and digital signals, serial communication, RF and sensors.
JSON/XML	The candidates would be able to write JSON/XML code based on the project requirements.
Database Basics	The candidates would know how to create database, tables and write SQL queries.
Programming on Development Boards	Understanding of the board, tool chain and development environment setup.
Sensors and Actuators	Understanding and using analog, digital, SPI, UART and I2C
Nodes and Gateways	Understanding usage of nodes and gateways for sensor communication and external communication
Communication Protocols	RF, Zigbee, BT, WIFI and GSM
IoT Cloud Platform	Using Forsk IoT Platform, Python Script
Big Data Analytics	Mongo DB, Map Reduce, Using cloud APIs for analytics
Visualization	NVD3, Mobile Interfacing

Roles and Responsibilities

Following are the roles and responsibilities for the lab execution.

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Creation of the lab contents consisting of sub modules and assignments.	Provide the lab infrastructure for the execution. This would include lab space, projector, Internet, power and cooling.

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Project Manager from Forsk would be managing the entire project execution and design the project framework/specs.	
Technical Lead from Forsk would be handling the design for sub modules/projects.	One faculty from MUJ would be deployed to work with Forsk team as a coordinator.
Software Engineer from Forsk would be deployed during lab sessions.	
Evaluate candidate's performance during lab sessions.	Faculty from Manipal may use these parameters for their academic grading.
Forsk Technologies will conduct the pre assessment and post assessment for the students enrolled in this lab.	
Forsk Technologies will generate a dossier post lab execution containing complete report of student's leanings and feedback.	

- All the rights of format and framework for this collaboration belong to Forsk Technologies.
- The content developed for this would be owned by Forsk Technologies and cannot be reused for future usage by MUJ.
- MUJ will also need to provide projector and Internet during lab sessions.
- MUJ will also provide high-speed Internet facility for Forsk team during lab.

Lab Execution

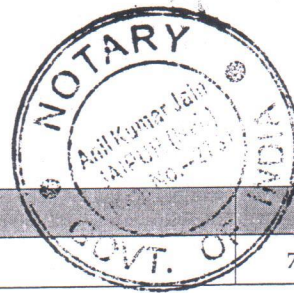
- MUJ shall provide a coordinating faculty for the execution of this lab, who will also work as a single point of contact from MUJ for Forsk team.
- 20:1 mapping for candidates to industry resource provided by Forsk.

Commercials

For the IoT Lab execution, we estimate to have following cost for the program, which includes content development and lab execution for candidates.

There will be a Program Manager for this from Forsk Technologies, which will be single point of contact with MUJ.

A team of project managers and technical leads would be designing the lab contents. A team of developers would be assisting the candidates at ground level in the labs.



Fee:

Sr. No.	Description	Cost
1.	Beginner's IoT Lab (45 Hours)	7500 INR

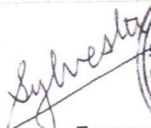
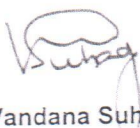
* Fee is inclusive of taxes.

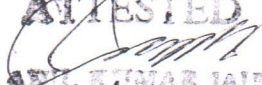
Revenue Share Between MUJ and Forsk

- Forsk will share the 15% revenue to Manipal against infrastructure usage (mentioned in roles and responsibilities section above) to run course/courses after deduction of the taxes.
 - Sample Calculation, Fee without taxes = 7500 – 1125 (ST) = 6375. So MUJ Share would be 15% x 6375 = 956 – 95.6(TDS) = 860 per student.
- This collaboration is for next 3 years. However, as per the market scenario/content updates the course Fees may be revised for upcoming/next batches.
- Along with same lines, Forsk may bring new courses in future based on industry requirements (Android, Data Science, Full stack Web Development). These would be conducted with same format under the ambit of this MoU by adding an annexure/addendum to existing MoU for each new courses with details of course content, fee and MUJ sharing.

Terms & Payment Schedule

- Forsk will collect the fee from the students and MUJ would raise an invoice based on the number of students registered X 860 INR per student share.

FOR AND ON BEHALF OF Forsk Technologies Private Ltd	FOR AND ON BEHALF OF Manipal University Jaipur
Signature  Name: Dr. Sylvester Fernandes Designation: <u>Director</u>	Signature  Name: Dr. Vandana Suhag Designation: <u>Registrar</u>

ATTESTED

ANIL KUMAR JAIN
Notary (Govt. of India)
JAIPUR (Raj.)

09 NOV 2016/