SKITM (Acropolis Technical Campus), Indore

NOTICE   January 28, 2020

(54 hours)

Event: A three weeks hands-on training program on "MATLAB and Simulink with Signal Processing, Communications, Antenna and Image Processing Toolboxes".

Commencement Date: February 03-22, 2020, 01:30pm-04:00pm (daily).

Speaker: Dr. Amit Udawat (Head, ECE).

Venue: Software Lab, ECE Department. *(Auditorium for more no. of participants)*

Audience/Participants: 2nd year, 3rd year and final year students *(1st year students can also attend)*

Program Coordinator: Prof. Anagha Chougaonkar (ECE)

Associate Coordinators: Prof. Sneha Nagar (ECE) and Prof. Abhishek Rawat (ECE).

All the faculty members not having engagements are requested to attend the programme.

28/1/2020

Dr. Amit Udawat
Head, ECE

Put up for approval.

permitted — *31·01·2020.*

Director
Shivajirao Kadam Institute of Technology &
Management - Technical Campus, INDORE

HEAD
Department of Electronics And Communication
Shivajirao Kadam Inst. of Tech. & MGMT - Technical Campus
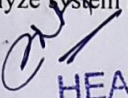Tillore Khurd, Ralamandal, INDORE (M.P.)

Content and Proposal of MATLAB Training Course

A. MATLAB Fundamentals (10 hours)

This module delivers a comprehensive introduction to the MATLAB technical computing environment. Themes of data analysis, visualization, modeling, and programming are explored throughout the course. Topic includes the following:

1. **Course Overview**: Familiarization with the course.
2. **Commands**: How to enter commands to perform calculations and create variables, *store data in variables, use of built in functions and constants.*
3. **Vectors and Matrices**: How to create MATLAB variables that contain multiple elements, *how to enter and make use of arrays, create evenly spaced vectors, functions to create array.*
4. **Importing Data**: How to bring data from external files into MATLAB, *saving and loading variables, how to import tool*
5. **Indexing into and Modifying Arrays**: Use indexing to extract and modify rows, columns, and elements of arrays, *extract multiple elements, change values in arrays*
6. **Array Calculations**: Perform calculations on arrays, vectors
7. **Calling Functions**: Use and Call functions to obtain multiple outputs.
8. **Obtaining Help**: Use the MATLAB documentation to discover information about MATLAB features.
9. **Plotting Data**: Use plotting functions, plotting vectors, annotating plots
10. **MATLAB Scripts**: Write and save MATLAB programs in MATLAB Editor
11. **Logical Arrays**: Use logical expressions to extract elements of interest from MATLAB arrays, *Logical Operations and Variables, Combining Logical Conditions, Logical Indexing*
12. **Programming**: Write programs that execute code based upon some condition, *Decision branching, Looping -operations.*

B. Signal Processing Toolbox (10 hours)

This module delivers aspects of analyzing signals and designing signal processing systems using MATLAB and Signal Processing Toolbox. Parts of the module also use DSP System Toolbox. Topic includes the following:

1. **Creating and analyzing signals**: Using Signal Analyzer App
   a. Visualize, measure, analyze, and compare signals in the time, frequency, and time-frequency domains.
   b. Extract voices from a song by duplicating and filtering signals.

2. **Preprocess Signals:** Synchronize data collected by different sensors at different instants.
   a. Determine if a signal matches a segment of a noisy longer stream of data.
   b. Locate the local maxima in a set of data and determine if those peaks occur periodically.
   c. Determine how often and how sharply a bi-level signal turns on and off.

3. **Perform Spectral and Time-Frequency Analysis:** Power spectrum, coherence, windows
   a. Find Periodicity Using Frequency Analysis: Spectral analysis helps characterize oscillatory behavior in data and measure the different cycles.
   b. Find and Track Ridges Using Reassigned Spectrogram: Use the reassigned spectrogram in Signal Analyzer to sharpen the time and frequency localization of spectrograms.
4. **Designing and analyzing filters**: How to design, observe and analyze filter characteristics (adaptive and multi-rate filters).
5. **Signal Generation and Preprocessing:** Create, resample, smooth, denoise, and detrend signals
6. **Measurements and Feature Extraction:** Locate Peaks, signal statistics, pulse and transition metrics, power, bandwidth, distortion
7. **Correlation and Convolution:** Performs Cross-correlation, autocorrelation, cross-covariance, auto-covariance, linear and circular convolution
8. **Digital and Analog Filters:** FIR and IIR, single-rate and multirate filter design, analysis, and implementation
9. **Transforms:** Fourier, chirp Z, DCT, Hilbert, cepstrum, Walsh-Hadamard
10. **Signal Modeling:** Linear prediction, autoregressive (AR) models, Yule-Walker, Levinson-Durbin

C. Communications Toolbox (10 hours)

This module provides algorithms and apps for the analysis, design, end-to-end simulation, and verification of communications systems. Algorithms include channel coding, modulation, MIMO, and OFDM to compose and simulate a physical layer model of wireless communications system. Topic includes the following.

1. **Simulating a Communications Link:** Simulating a communications system using toolbox functions and blocks
2. **Waveform Generation:** Using Wireless Waveform Generator App-Create, impair, visualize, and export modulated waveforms.
3. **Visualization and Measurements:** Using Scatter Plot and Eye Diagram with MATLAB Functions
4. **PHY Subcomponents:** Physical layer subcomponents including waveform generation, modulation, error control coding, filtering, synchronization, equalization, MIMO.
5. **RF Modeling:** Model RF impairments and RF front end designs.
6. **Propagation Channel Models:** Model and visualize noisy SISO and MIMO channels having Rayleigh, Rician, fading profiles, and atmospheric impairments. Multiple Doppler spectrum shapes are analyzed.
7. **Measurements, Visualization, and Analysis:** Use graphical utilities such as constellation and eye diagrams to visualize the effects of various impairments and corrections for measuring system performance.
8. **End-to-End Simulation:** Simulate link-level models of communications systems using bit error rate simulations. Analyze system response to the noise and interference inherent

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in communication channels, and evaluate the tradeoffs between competing system architectures and parameters.

D. Antenna Toolbox (8 hours)

This module provides fundamentals on Design, analyze, and visualize antenna elements and antenna arrays. It provides functions and apps for the design, analysis, and visualization of antenna elements and arrays. One can design standalone antennas and build arrays of antennas using either predefined elements with parameterized geometry or arbitrary planar elements.
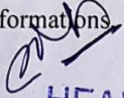
It uses the method of moments (MoM) to compute port properties such as impedance, surface properties such as current and charge distribution, and field properties such as the near-field and far-field radiation pattern. One can visualize antenna geometry and analysis results in 2D and 3D.
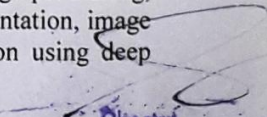
One can integrate antennas and arrays into wireless systems and use impedance analysis to design matching networks. It provides radiation patterns for simulating beam forming and beam steering algorithms. Gerber files can be generated from your design for manufacturing printed circuit board (PCB) antennas. One can install the antennas on large platforms such as cars or airplanes and analyze the effects of the structure on antenna performance. A site viewer enables one to visualize antenna coverage on a 3D terrain map using a variety of propagation models. Topic includes the following.

1. **Introduction to Antenna Toolbox**
2. **Antenna Catalog:** Antenna elements, backing structures, parameterized geometry visualization, antenna design, dielectrics
3. **Array Catalog:** Finite and infinite arrays, layout visualization
4. **PCB Fabrication and Custom Geometry:** Shapes and Boolean operations, custom mesh and geometry, PCB stack, Gerber file generation
5. **Analysis, Benchmarking, and Verification:** Antenna and array analysis, meshing, solvers, comparison of Antenna Toolbox simulations with measured results
6. **Import, Export, and Visualization:** Read, visualize, and write STL files and MSI planet antenna files, measure pattern data in 2D and 3D, create interactive polar plots
7. **Installed Antenna and Large Structures:** Antennas on platforms, infinite arrays, and infinite ground planes
8. **RF Propagation:** Site and terrain visualization, propagation model specification, communication links, signal strength, signal coverage maps.

E. Image Processing Toolbox (8 hours)

This module provides fundamentals on image processing, visualization, and analysis. It provides a comprehensive set of reference-standard algorithms and workflow apps for image processing, analysis, visualization, and algorithm development. One can perform image segmentation, image enhancement, noise reduction, geometric transformations, and image registration using deep

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learning and traditional image processing techniques. It supports processing of 2D, 3D, and arbitrarily large images.

It let you automate common image processing workflows. One can interactively segment image data, compare image registration techniques, and batch-process large datasets. Visualization functions and apps let you explore images, 3D volumes, and videos; adjust contrast; create histograms; and manipulate regions of interest (ROIs).

One can accelerate your algorithms by running them on multicore processors and GPUs. Many toolbox functions support C/C++ code generation for desktop prototyping and embedded vision system deployment. Topic includes the following.

1. **Introduction:** Learn the basics of Image Processing Toolbox
2. **Import, Export, and Conversion:** Image data import and export, conversion of image types and classes
3. **Display and Exploration:** Interactive tools for image display and exploration
4. **Geometric Transformation and Image Registration:** Scale, rotate, perform other N-D transformations, and align images using intensity correlation, feature matching, or control point mapping
5. **Image Filtering and Enhancement:** Contrast adjustment, morphological filtering, deblurring, ROI-based processing
6. **Image Segmentation and Analysis:** Region analysis, texture analysis, pixel and image statistics
7. **Deep Learning for Image Processing:** Perform image processing tasks, such as removing image noise and creating high-resolution images from low-resolutions images, using convolutional neural networks (requires Deep Learning Toolbox™)
8. **3-D Volumetric Image Processing:** Filter, segment, and perform other image processing operations on 3-D volumetric data
9. **Code Generation:** Generate C code and MEX functions for toolbox functions
10. **GPU Computing:** Run image processing code on a graphics processing unit (GPU)

F. Simulink (8 hours)

This module covers multi-domain simulation and Model-Based Design with support of system-level design, simulation, automatic code generation, and continuous test and verification of embedded systems. It provides a graphical editor, customizable block libraries, and solvers for modeling and simulating dynamic systems. Integrated with MATLAB with incorporation of MATLAB algorithms into models and export simulation results to MATLAB for further analysis.

1. **Model based design with Simulink:** Defining the system and Layout with modeling and validation
2. **Simulink Environment Fundamentals:** Building block diagrams interactively or programmatically by choosing blocks from block libraries. Connecting blocks using signal links to establish mathematical relationships between system components.
3. **Modeling:** Model-Based Design of dynamic systems, model algorithms and physical systems using block diagrams. Model linear and nonlinear systems, factoring in real-

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world phenomena such as friction, gear slippage, and hard stops. Build discrete components that reflect real-life system and simulate the interaction of those components.

4. **Simulation:** Interactively simulate system model, run models, review results, validate system behavior. Range of fixed-step and variable-step solvers are chosen for continuous, discrete, and mixed-signal systems. Solvers are integration algorithms that compute system dynamics over time.

5. **Project Management:** Create projects, manage shared model components, interact with source control

Dr. Amit Udawat
Head, ECE
28/1/2020

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Management - Technical Campus, INDORE

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SKITM, INNDORE
Department of Electronics & Communication Engineering
Workshop Attendance

S. No.	Name of the Candidate	3/2/2020	4/2/2020	5/2/2020	6/2/2020	7/2/2020
1	ARYAN SHARMA	*signature*	*signature*	*signature*	A	*signature*
2	DEVENDAR YADAV	A	*signature*	A	A	*signature*
3	HONEY HARDASANI	*signature*	*signature*	*signature*	A	*signature*
4	MITENDRA YADAV	*signature*	*signature*	*signature*		*signature*
5	SARTHAK RAWAT	*signature*	*signature*	*signature*	A	*signature*
6	SHASHIKANT	*signature*	*signature*	*signature*	A	*signature*
7	ADITI SHARMA	*signature*	*signature*	*signature*	*signature*	*signature*
8	ANKUR JOSHI	*signature*	*signature*	*signature*	*signature*	*signature*
9	ASHWIN DUSANE	*signature*	*signature*	*signature*	A	A
10	HARSHAL SHROUTI	*signature*	*signature*	*signature*	*signature*	A
11	JHANVI CHATUR	A	A	A	A	A
12	KHANDELWAL SHREEYANSHI	*signature*	*signature*	A	*signature*	A
13	KRITI JAIN	A	A	A	*signature*	A
14	PINKESH Sen	*signature*	*signature*	*signature*	*signature*	*signature*
15	PRAVEEN CHOUHAN	*signature*	*signature*	*signature*	*signature*	*signature*
16	PRIYESH GARHWAL	*signature*	*signature*	*signature*	*signature*	*signature*
17	RIMJHIM RAGHUWANSHI	*signature*	*signature*	*signature*	*signature*	*signature*
18	SAKSHAM TRIVEDI	*signature*	*signature*	*signature*	*signature*	*signature*
19	SANJEEV PANDEY	A	A	A	A	A
20	SHEENAM QURESHI	*signature*	*signature*	A	*signature*	A
21	SHREYA SATLE	*signature*	*signature*	A	A	A
22	VEDANSH SAINI	*signature*	*signature*	*signature*	A	*signature*
23	VISHAL KUMAR SINGH	*signature*	*signature*	*signature*	A	A
24.	Divya Saravanam	*signature*	A	*signature*	A	A
25.	Divya Rathore	*signature*	A	*signature*	A	A
26.	Apeksha Agrawal	*signature*	A	*signature*	A	*signature*

SKITM, INNDORE
Department of Electronics & Communication Engineering
Workshop Attendance

S. No.	Name of the Candidate	10/2/2020	11/2/020	12/2/2020	13/02/2020	17/2/2020
1	ARYAN SHARMA	A	A	*(sign)*	A	A
2	DEVENDAR YADAV	*(sign)*	*(sign)*	*(sign)*	*(sign)*	P
3	HONEY HARDASANI	*(sign)*	*(sign)*	*(sign)*	A	P
4	MITENDRA YADAV	A	*(sign)*	*(sign)*	A	P
5	SARTHAK RAWAT	*(sign)*	*(sign)*	*(sign)*	A	P
6	SHASHIKANT	*(sign)*	*(sign)*	*(sign)*	A	P
7	ADITI SHARMA	*(sign)*	*(sign)*	A	*(sign)*	*(sign)*
8	ANKUR JOSHI	*(sign)* 10·02·2020	A	*(sign)*	A	A
9	ASHWIN DUSANE	*(sign)*	A	*(sign)*	A	A
10	HARSHAL SHROUTI	A	A	A	A	P
11	JHANVI CHATUR	A	A	A	*(sign)*	P
12	KHANDELWAL SHREEYANSHI	A	*(sign)*	A	*(sign)*	P
13	KRITI JAIN	A	*(sign)*	A	*(sign)*	P
14	PINKESH Sen	*(sign)*	A	*(sign)*	*(sign)*	P
15	PRAVEEN CHOUHAN	*(sign)*	*(sign)*	A	*(sign)*	*(sign)*
16	PRIYESH GARHWAL	*(sign)*	*(sign)*	A	*(sign)*	P
17	RIMJHIM RAGHUWANSHI	*(sign)*	*(sign)*	A	*(sign)*	P
18	SAKSHAM TRIVEDI	*(sign)*	*(sign)*	A	*(sign)*	P
19	SANJEEV PANDEY	A	A	A	*(sign)*	A
20	SHEENAM QURESHI	A	*(sign)*	A	*(sign)*	P
21	SHREYA SATLE	*(sign)*	*(sign)*	A	*(sign)*	A
22	VEDANSH SAINI	*(sign)*	A	*(sign)*	A	A
23	VISHAL KUMAR SINGH	*(sign)*	A	*(sign)*	*(sign)*	P
	Alecksha Agrawal					P
	Shantanu Punjabi					P

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SKITM, INNDORE
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S. No.	Name of the Candidate	18/02/2020	20/2/2020	24/2/2020	25/02/200	
1	ARYAN SHARMA	Aryan	A	A	A	
2	DEVENDAR YADAV	Devendre	Devendr	Devendr	Devendr	
3	HONEY HARDASANI	Boney	Boney	Boney	Honey	
4	MITENDRA YADAV	Mitendra	A	A	A	
5	SARTHAK RAWAT	Sarthak	Sarthak	Sarthak	Sarthak	
6	SHASHIKANT	Shashikant	Shashiky	Shishky	Shashikut	
7	ADITI SHARMA	Sharma	Sharma	Sharma	Sharma	
8	ANKUR JOSHI	A	A 24/2/20	Joshi 24/2/20	Joshi 25/2/20	
9	ASHWIN DUSANE	A	Asni	Asni	A	
10	HARSHAL SHROUTI	Harshu	Harshu	harshl	Harsh	
11	JHANVI CHATUR	Jain	Jain	Jain	A	
12	KHANDELWAL SHREEYANSHI	Shreya	A	A	A	
13	KRITI JAIN	Kjain	A	A	A	
14	PINKESH Sen	Pinkesh	Pinkesh	Pinkesh	Pinkesh	
15	PRAVEEN CHOUHAN	Pr	Pr	Pr	Pr	
16	PRIYESH GARHWAL	Priyesh	Priyesh	Pr	Pr	
17	RIMJHIM RAGHUWANSHI	Rimjhm	Rimjhm	Rimjhm	Rimjhm	
18	SAKSHAM TRIVEDI	A	Sakh	A	A	
19	SANJEEV PANDEY	A	A	A	A	
20	SHEENAM QURESHI	Sheenam	A	Sheenam	A	
21	SHREYA SATLE	A	A	Shreya	A	
22	VEDANSH SAINI	A	Saini	Saini	A	
23	VISHAL KUMAR SINGH	Vishal	Vishal	Vishal	Vishal	
24	Shantanu Punjabi	Shantanu	Shantanu	Shantanu	A	

HEAD
Department of Electronics And Communication
Shivajirao Kadam Inst. of Tech. & MGMT- Technical Campus
Tillore Khur.l, Ralamandal, INDORE (M.P.)

Director
Shivajirao Kadam Institute of Technology &
Management - Technical Campus, IND

SI

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA

(State Technological University of Madhya Pradesh)

[Accredited with 'A' grade by NAAC]

Office of TEQIP-III

Airport Road, Gandhi Nagar, Bhopal – 462033

Ph.No:0755-2678805, 9425125401

E-Mail – rgpvteqip@rgtu.net, website: www.rgpv.ac.in

ASM

Ref. No: RGPV/TEQIP-III /2019/04/755   Date: 30/09/2019

ORDER

Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), is organizing Short Term Training Program (STTP) on **"Recent Trends in Internet of things (IOT)"** for the Students and Research Scholars of RGPV affiliated institutions at **Acropolis Technical Campus, Indore** During 14th – 16th October 2019 under TEQIP-III. An approval of **Rs. 94,000/- (Rupees Ninety Four Thousands only)** has been accorded for organizing the STTP as per TEQIP-III norms. Prof Rashmi Yadav, will be the coordinator for the event. The Coordinator will submit all the bills and vouchers within a week after the completion of the event.
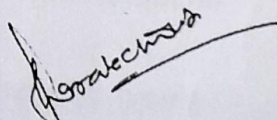
Approved by Hon'ble Vice Chancellor

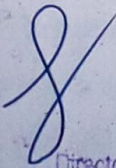**Coordinator, TEQIP-III**

RGPV - Bhopal

Ref. No: RGPV/TEQIP-III /2019/04/755   Date: 30 /09/2019

Copy to:

1. PA to Hon'ble Vice Chancellor, RGPV
2. Registrar, RGPV
3. Nodal Officer Accounts, TEQIP-III
4. Nodal Officer Academics, TEQIP-III
5. Nodal Officer Procurement, TEQIP-III
6. RGPV Event Portal
7. Prof Rashmi Yadav, ATC, Indore
   (Contact No. 9827014421)

Coordinator, TEQIP-III

RGPV - Bhopal

Director,

Shivajirao Kadam Institute of Technology &
Management - Technical Campus, INDORE

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Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

Accredited with 'A' grade by NAAC

Three Days SHORT TERM TRAINING PROGRAMME *on*

"Recent Trends in Internet of things (IOT)"

(14th - 16th October, 2019)

Organised by :

Rajiv Gandhi Proudyogiki Vishwavidyalaya

Under

TEQIP-III

at

ACROPOLIS
Enlightening wisdom

Department of Applied Sciences and Humanities
Acropolis Technical Campus, Indore

Director
Shivajirao Kadam Institute of Technology &
Management - Technical Campus,INDORE

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Brochure

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

Accredited with 'A' grade by NAAC

Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), accredited with 'A' grade by NAAC, established in the year 1998 is truly a picture of modernization offering learner-centric programmes in Engineering, Pharmacy, Architecture & Management. University is sprawled over a vast campus of 241.4 acres, marching towards development into a center of excellence in the arena of Technical Education, Research and Innovations. Under its umbrella there are 05 UTD's 188 affiliated Engineering Colleges, 69 Pharmacy Colleges, 25 MCA Colleges and 05 Architecture colleges imparting Graduate level instructions running 23 under graduate level courses & 84 post graduate level courses. Situated amidst an aesthetic and hilly surrounding, the University is also offering Ph.D. in eight faculties.

RGPV has been selected by Ministry of Human Resource Development (MHRD) as one of the Affiliating Technical Universities (ATUs) among ten across the country for receiving TEQIP-III grant. The main objective of short term training program to enhance the technical skills of the students though practical learnig and motivate to develop the tool for beneficial the society

Chief Patrons:
- **Prof. Sunil Kumar**
  Hon'ble Vice Chancellor, RGPV
- **Dr. Ashok Kumat**
  Vice Chairman, ATC, Indore

Patron:
- **Dr. Sunjay T. Purkar**
  Principal, ATC, Indore

Advisory Council:
- **Prof. S.C. Choube,**
  Coordinator, TEQIP, RGPV, Bhopal
- **Dr. Ravindra Patel,**
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- **Dr. R. K. Saxena,**
  Director, SGSITS, Indore
- **Prof. Prashant Lakkadwala,**
  HOD, CSE, ATC, Indore
- **Dr. Amit Udawat,**
  HOD, EC, ATC, Indore

Coordinators:
- **Prof. Rashmi Yadav,** Head ASH
- **Prof. Anagha Chougaonkar**
- **Prof. Abhishek Rawat**

Organizing Committee:
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- **Prof. Brajesh Chaturvedi**
- **Dr. Kailash C. Bandhu**
- **Prof. Vivek Gupta**
- **Prof. Deepak Singh Chouhan**
- **Prof. Uday Moghe**
- **Prof. Rinku Yadav**
- **Prof. Sneha Nagar**
- **Prof. Priyanka Kokate**

Address for Correspondence:
- **Prof. Abhishek Rawat**
  Email: abhishekrawat.atc@acropolis.in
  Mob. 7583890770
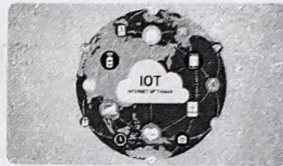- **Prof. Priyanka Kokate**
  Mob. 8269782047

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

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Three Days
SHORT TERM TRAINING PROGRAMME
on
"Recent Trends in Internet of things (IOT)"
(14th - 16th October, 2019)

Organised by :

Rajiv Gandhi Proudyogiki Vishwavidyalaya

Under

TEQIP - III

at

Department of Applied Sciences and Humanities

Acropolis Technical Campus, Indore

Ralamandal, Near Tillore Khurd, Indore – 453020 (MP)
Ph: 0731 2581000, 2581190, 2581191 • Email ashoffice.atc@acropolis.in
For more details visit www.acropolistechnicalcampus.com

Director
Shivajirao Kadam Insitute of Technology
Management - Technical Campus,

Course Objective

Internet of things (IOT) plays a key role in our day to day life It is connecting millions of devices that were previously isolated in IOT. A device become a smart device is called IOT which is used in diversity of application for smart homes, smart buildings, travel and transportation, education ,health and personal care, retail, agriculture, construction etc. IOT is todays dire need it can create tremendous social impact, we are going to organize a training on IOT which cover the fundamental of IOT and develop the skills to communicate efficiently between machine to machine, machine to people etc. This training will motivate the students to develop the smart device which will be beneficial for the society.

Resource Persons :

Experts from IITs, NITs and renowned industries will deliver talks along with hands-on practice during the programme.

Major Topics Covered :

* Internet On Things Latest Trends and Technologies
* Drawing "Sense" from the acquitted Data.
* Microcontroller Basics with Rasberry Pi Peripherals & Components Interface
* Programming, Sensor Interface
* IoT Enabling Technologies and Protocols
* Block Chain for IOT
* Contiki OS and Cooja Simulator

About Acropolis Technical Campus

Acropolis Technical Campus was formed in September 2009 with the purpose of providing quality education. The institute believes in making students not only skilled professionals but also progressive and responsible citizens who can contribute to the economic development and create better quality of life for global society in dynamic cross-cultural environment. It provides the best training and facilities with highly experienced faculties, unique student welfare activities, quality infrastructure and several additional programmes for developing the skill set of students.

Applied Science Department

The Applied Sciences and Humanities department is an integral part of technical education. It plays a fundamental role in developing technical approach & promotes practical aspects of Applied Sciences & Humanities to build a solid foundation as part of the Engineering Education. It aims to advance knowledge through revising and learning basics and application of the already gained knowledge to solve the practical problems and engineering skills to add fundamental scientific investigations.

Registration & Accommodation

Students of B.Tech, MCA affiliated to Rajiv Gandhi proudyogiki Vishwavidyalaya Bhopal are eligible to attend. Registration can be done by sending dully filled scanned of the enclosed registration & iotacro@gmail.com or fill Google form bit.ly/iotregistration

Registration Form

Rajiv Gandhi Proudyogiki Vishwavidyalaya Bhopal

Three Days
Short Term Training Program for Student
on
"Recent Trends in Internet of things (IOT)"
(14th - 16th October, 2019)

1. Venue: Acropolis Technical Campus, Indore

2. Name:_____

3. B.Tech/MCA : _____

4. Student Branch/Semester : _____

5. Organization:_____

_____

* Phone No. _____

* Email id _____

* Accommodation required (Y/N): _____

_____
Signature of
Applicant with Date

Seal   _____
Signature
(Sponsoring Authority)

Director
Shivajirao Kadam Institute of Technology & Management - Technical Campus

Three DAYS

Short Term Training Program

On

"Rrecent Trends In Internet of Things"

(14-16 Oct 2019)

Sponsored by

RGPV
TEQIP-III

at

Acropolis Technical Campus, Indore

Organized by

ACROPOLIS
Enlightening Wisdom

The Department of Applied Science & Humanities,

Acropolis Technical Campus, Indore 452020

Objective

Internet of things (IOT) plays a key role in our day to day life It is connecting millions of devices that were previously isolated. A device become a smart device is called IOT which is used in diversity of application for smart homes, smart buildings, travel and transportation, education ,health and personal care, retail, agriculture, construction etc. IOT is todays dire need it can create tremendous social impact, we are going to organize a training on IOT which cover the fundamental of IOT and develop the skills that communicate efficiently between machine to machine, machine to people etc. This training will motivate the students to develop the smart device which will beneficial for the society

Resource Persons

Experts from IITs,NITs and renowned industries will deliver tasks along with hands-on practice during the programme.
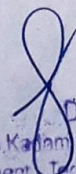
- Dr. Rakesh Saxsena Director SGSITS Indore(Chief Guest/ Guest Speaker)
- Dr. Sonali Chouhan IIT Guwahati(Speaker)
- Dr. Govind Gupta, NIT Raipur(Speaker)
- Mr. Aniket Kulkarni, Center for Innovation & Incubation, SGSITS Indore

Major Topics covered

- Internet On Things Latest Trends and Technologies
- Programming, Sensor Interface
- Hardware plateform for IOT
- IOT protocols and Security issues.
- Block chain for IOT
- CONTKI OS and UNJA simulators
- Project on IOT
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About Rajiv Gandhi Proudyogiki Vishwavidyalaya Bhopal

Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), accredited with 'A' grade by NAAC, established in the year 1998 is truly a picture of modernization offering learner-centric programmes in Engineering, Pharmacy, Architecture & Management. University is sprawled over a vast campus of 241.4 acres, marching towards development into a center of excellence in the arena of Technical Education, Research and Innovations. Under its umbrella there are 05 UTD's 188 affiliated Engineering Colleges, 69 Pharmacy Colleges, 25 MCA Colleges and 05 Architecture colleges imparting Graduate level instructions running 23 under graduate level courses & 84 post graduate level courses. Situated amidst an aesthetic and hilly surrounding, the University is also offering Ph.D. in eight faculties.

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RGPV has been selected by Ministry of Human Resource Development (MHRD) as one of the Affiliating Technical Universities (ATUs) among ten across the country for receiving TEQIP-III grant. The main objective of Faculty Development Programme (FDP) is to improve quality and equity in engineering teachers in order to up-grade the knowledge, enhancing research and teaching skills.

About Acropolis Technical Campus

Acropolis Technical Campus was established in September 2009 with the purpose of providing quality education. The institute believes in making students not only skilled professionals but also progressive and responsible citizens who can contribute to the economic development and create better quality of life for global society in dynamic cross-cultural environment. It provides the best training and facilities with highly experienced faculties, unique student welfare activities, quality infrastructure and several additional programmes for developing the skill set of students.

About Applied Science Department

The Applied Sciences and Humanities department is an integral part of technical education. It plays a fundamental role in developing technical approach and promotes practical aspects of Applied Sciences and Humanities to build a solid foundation as part of the Engineering Education. It aims to advance knowledge through revising and learning basics and application of the already gained knowledge to solve the practical problems and engineering skills.

Pre-STTP initiative:

The FDP brochure was sent to various Engineering colleges in Indore, Bhopal Ujjain, Mandsaur and Burhanpur etc. through e-mails. The STTP invitation had been sent to all the registered delegates. 60 students registered and 42 students actively participated in this STTP. There was no registration fee and Kit (File, Pen, and Scribbling pad) was provided to all the registered students and special invites.

Inaugural Session:

The inaugural function was started at 10:00 a.m. Session begans with the "Saraswati Vandana" and then respected dignitaries are invited to the stage and honored to floral welcome. Dr.R.K.Saxena, was the Chief Guest of the inaugural ceremony. Prof Rashmi Yadav,coordinator

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of the program discussed various objectives of FDP. Dr Sanjay Purkar, Principal has delivered a welcome speech at the beginning of the event. Chief Guest Dr.R.K.Saxena of the program addressed the participant students from various colleges. According to him the objective of above STTP is to make the students aware about Latest trends in IOT. The session was followed by Dr. Sonali Jain, she delivered lecture on Intrduction of IOT and Hardware Platforms for IoT . Then the last session of Day 1 was taken by Mr.Aniket Kulkarni who shared his knowledge about Raspberry Pi.

Day 2:Dr.Govind Gupta form NIT,Raipur discussed about Internet of Things: Architectures, Enabling Technologies, Protocols, and Applications & Security issues.Followed by hands on practice on Raspberry pi by Prof.Aniket Kulkarni.
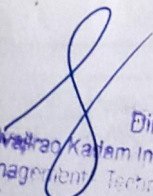
Day 3: Dr.Govind Gupta explained about Blockchain for the IoT.Followed by Hands on using Contiki OS and Cooja Simulator.In the last session students learn how to prepare small project on different tools.

Prof Rashmi Yadav proposed a vote to thanks to the speakers.Quiz was conducted in the last session In valedictory session, prizes were distributed to the participants,who succeeded in the quiz competition.

Focus of STTP :

This program aimed to give knowledge to the students about the latest trends in IOT.So they can Enhance and utilize their skills in future and in their project work.

Schedule

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Date	Forenoon session			Forenoon session	
	Slot -I (9:30 to 10:45)	Slot -II (11:15 to 12:30)		Slot -III (1:10 to 2:45)	Slot -IV (3.00 to 4.00)
14/11/2019	Registration & Inaugration by Dr.R.K.Saxena Venue:Auditorium	Session-1 Speaker: Dr.Sonali Chouhan Topic:Introduction of IOT Venue:Auditorium		Session-2 Speaker:Dr.SonaliChouhan Topic:Hardware Platforms for IoT Venue:Auditorium	Session-3 Speaker:Prof.Aniket Kulkarni Lab Sesssion:Introduction of Raspberry Pi Venue:Lab 206D
15/11/2019	Session-4 Speaker:Dr.Govind Gupta **Topic:** Internet of Things: Architectures, Enabling Technologies Venue:Auditorium	Session-5 Speaker:Dr.Govind Gupta **Topic:** Internet of Things: Protocols, and Applications & Security issues Venue:Auditorium		Session-6 Speaker:Prof.Aniket Kulkarni Lab Sesssion:Interfacing Temperature & Humidity Sensor Venue:Lab 206D	Session-7 Speaker:Prof.Aniket Kulkarni Lab Sesssion:Interfacing LDR,Flexsensor Venue:Lab 206D
16/11/2019	Session-8 Speaker:Dr.Govind Gupta **Topic: Blockchain for the IoT** Venue:Auditorium	Session-9 Speaker:Dr.Govind Gupta **Topic:** Lab Session using Contiki OS and Cooja Simulator Venue:Lab 218B		Session-10 Speaker:Prof.Aniket Kulkarni Lab Sesssion:DC motor and Motion Sensor Venue:Lab 206D	Session-11 Speaker:Prof.Aniket Kulkarni Lab Sesssion:Project On IoT Venue:Lab 206D

Tea Break

Lunch

Tea Break

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Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

Accredited with 'A' grade by NAAC

Three Days STTP - 14ᵗʰ - 16ᵗʰ October, 2019

under

TEQIP-III

at

Acropolis Technical Campus, Indore

Certificate

ACROPOLIS
Enlightening wisdom

This is to certify that Mr./Ms. ....

from.. has attended and successfully completed

the Short Term training programme on on **"Recent Trends in Internet of Things (IOT)"** during

October 14th-16th, 2019 conducted by Acropolis Technical Campus, Indore under TEQIP-III

Rajiv Gandhi Technical University Bopal (M.P.).

Prof. Sanjay Purkar	**Prof. Rashmi Yadav**	**Prof. S.C. Choube**	**Prof. Sunil Kumar**
Director, Acropolis Technical Campus	Coordinator, Acropolis Technical Campus	TEQIP-III, Coordinator	Vice Chancellor, RGPV

Director
Shivajirao Kadam Institute of Technology &
Management - Technical Campus M.P.

Day 1 Photo
Inauguration Session : Dr. R.K.Saxena (Chief Guest)
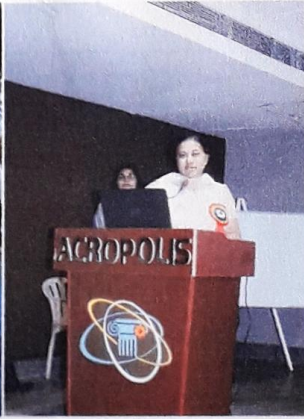
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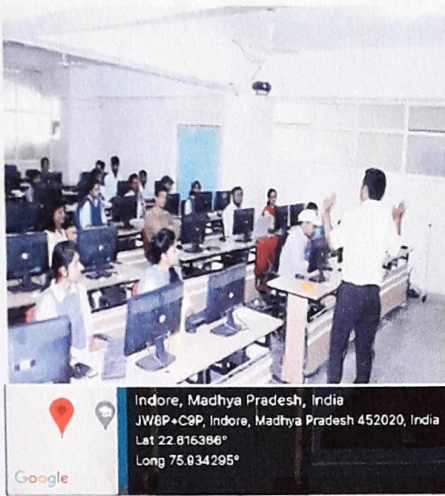
Chief Guest Interacting with students

Indore, Madhya Pradesh, India
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Long 75.936017°

HEAD
Department of Computer Science & Engineering
Shivajirao Kadam Inst. of Tech & MGMT. Technical Campus
Tillore Khurd, Rajendra Nagar, Indore (M.P.)

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Lab Sessions by Dr.Govind Gupta and Prof.Aniket Kulkarni

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ACROPOLIS

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HEAD
Department of Computer Science & Engineering
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Tillore Khurd,. Rajamandal, INDORE (M.P.)

Director
Shivajirao Kadam Institute of Technology &
Management - Technical Campus.INDORE

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Attendance Sheet

Name of I Event: RIOT
Date: 14-16 oct 2019

S.No.	Name of Student	Signature
1	Anas Shaikh	Anas Shaikh
2	Ankit Yadav	
3	Anmol Mehto	Anmol
4	Arpit Nigam	Arpit
5	Ashish Mishra	Ash
6	Atal Mishra	Atal mishra
7	Atharv Parmar	Arthur
8	Ayan Magardey	Ayan magardey
9	Ayush Dhote	Ayush
10	Chetan Lodhi	Chetane
11	Darshan Patidar	Chetan
12	Deepak Swami	Deepak
13	Deepanshu Sharma	Deepanshu sharma
14	Dev Pratap Singh Khalate	Dev Pr.
15	Dhanshree Choudhary	Dhanshree
16	Dhruv Verma	Dhruv
17	Disha Talreja	Disha
18	Goutam Niwal	Goutam Niwal
19	Harsh Bawniya	Harsh
20	Harsh Verma	Harssh
21	Jitendra Giri Goswami	Jiten
22	Kajal Gujar	kajal
23	Khushi Jaiswal	Khushi Jaiswal
24	Kuldeep Patidar	kuldeep
25	Manish Jaiswal	Manish
26	Mansi Sharma	Mansi
27	Neeraj Patel	Neeraj Patel
28	Nikhil Pal	Nikhil
29	Pawan Tiwari	Pawan
30	Praful Sonwane	Praful

31	Pranaya Choudhary	
32	Pritesh Parihar	
33	Priyanka Patel	
34	Akashat Singh Thakur	
35	Ankit Singh Bais	
36	Gourav Date	
37	Kunal Gome	
38	Mayank Patidar	
39	Rishabh Verma	
40	Shubham Rathore	
41	Aman Multani	
42	Ashutosh Kumar	
43	Mohd.Uzer Sheikh	
44	Mukul Rao Hande	
45	Sanjeevni Sharma	
46	Satyam Kumar	
47	Saurabh Verma	
48	Shivani Suryavanshi	
49	Siddhi Sahu	
50	Suraj Yadav	
51	Surendra Jatav	
52	Tanmay Suryvanshi	