KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

SKILL LABS

Schedule of Skill labs offered at KLSGIT

Sl No	Department	Start date	End date	Title of Skill lab
1	Electronics & Communication Engineering	04-11-2024	09-11-2024	Multi-Domain Knowledge Based Modeling using MATLAB
2				
3				

Skill lab (Detailed schedule)

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	ECE	Multi-Domain Knowledge Based Modeling using MATLAB	III	VLSI Lab	04-11-2024 to 09-11-2024	Prof. Aashish A. Gadgil Prof. Praveen Kalkundri	9449292671 9035072685	aagadgil@git.edu, pukalkundri@git.edu
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SKILL LAB

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Multi-Domain Knowledge Based Modeling using MATLAB

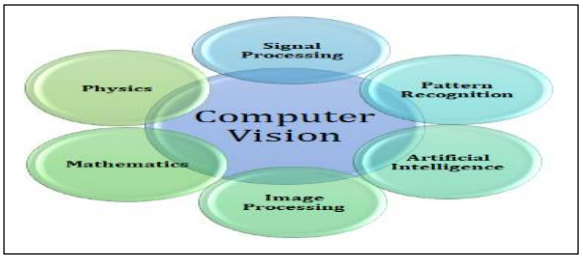
For III Semester Students

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

Department of Electronics & Communication Engineering

Overview:

In MATLAB, a **toolbox** is a collection of specialized functions, algorithms, and tools that extend the capabilities of the base MATLAB environment. Toolboxes are designed for specific areas of application, such as signal processing, image processing, statistics, machine learning, control systems, and more.



Mode of Conduction of each Module:

Theory: 12 Hours,
Demo: 12 Hours,
Lab Sessions: 12 Hours
Total duration: 36 Hour
Certification exam: 3 Hours

Module 1: Basics &GUI

Module describes about the basics of MATLAB in short and teaches the student about GUI development which will be helpful in projects.

Module 3: IP & CV toolbox

Students are taught about image processing & computer vision

Module 2:Comm & Processing toolbox

Here students are taught about communication and signal processing concepts with GUI

Module 4: Fuzzy Logic toolbox

Students will learn fuzzy logic tool and case studies for projects.

Terms and Conditions

Students who have paid a skill lab fee to the institution are eligible for training.
The students must maintain 90% attendance for obtaining the skill lab certificate.

Students must attend training as per scheduled time.

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No, Email id

Coordinators:

Name: Prof. Aashish A. Gadgil
Dept. of E&C
Phone:9449292671
E-mail: aagadgil@git.edu

Name: Prof. Praveen Kalkundri
Dept. of E&C
Phone:9035072685
E-mail: pukalkundri@git.edu

Outcomes

Learners can gain proficiency in areas like data manipulation, visualization, programming and solving mathematical problems.

Career prospects

MATLAB proficiency is valuable in many industries. Completing this course can demonstrate foundational knowledge to potential employers and enhance career prospects, especially in technical fields.

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

SKILLLABS

Schedule of Skill labs offered at KLSGIT

Sl No	Department	Start date	End date	Title of Skill lab
1	ECE	04-11-2024	09-11-2024	IoT System Design using Arduino
2				
3				

Skill lab (Detailed schedule)

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	ECE	IoT System Design using Arduino	III	VLSI Lab	04-11-2024 to 09-11-2024	Dr. Uttam Deshpande Dr. Manjunath Managuli Dr. Ramesh Koti Prof. Nikhil Inamdar	9880167092 9743205320 9743176144 9148847257	uudeshpande@git.edu manjunathm@git.edu rbkoti@git.edu njinamdar@git.edu
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SKILLLAB

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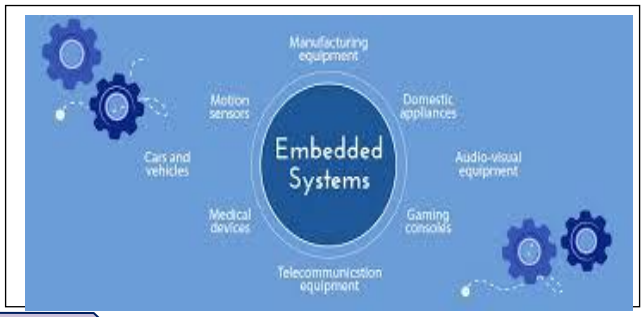
For___Semester Students

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

Department of_ECE_

Overview:

The Embedded Systems - A Practical Approach is an intensive 36-hour course tailored for 3rd semester B.E. students. This course delves into the essential role embedded systems play in contemporary technology. It provides a thorough grounding in the fundamentals, along with practical, hands-on experience using industry-standard tools for development and testing. Students will engage with various types of embedded systems.



Mode of Conduction of each Module:

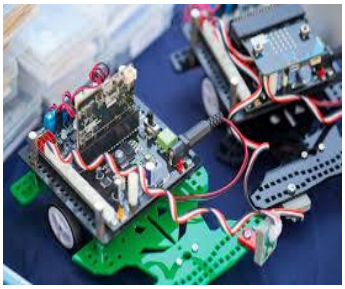
Theory: 12 Hours,
Demo: 12 Hours,
Lab Sessions: 12 Hours
Total duration: 36 Hour
Certification exam: 03 Hours

Module1: IoT

Iot System design using embedded system, IoT Technology and applications-overview of embedded development kits.

Module3: Sensor

Sensor-actuators, creating own web server.



Module2: Embedded System

Overview of H/W architecture, API

Module4: Communication Model

IoT, Robotics applications.

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Termsand Conditions

Studentswhohavepaidaskilllabfeetotheinstitution are eligible for training.
Thestudentsmustmaintain90%attendanceforobtaining the skill lab certificate.

Studentsmustattendtrainingasperscheduledtime.

Acceptance

In order to accept and start thetrainingprogram,studentsare required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No, Email id

Coordinators:

Name Dr. Manjunath Managuli
Dept. of ECE
Phone: 9743205320
E-mail:manjunathm@git.edu

Name Dr. Uttam Deshpande
Dept. of ECE
Phone: 9880167092
E-mail:uudeshpande@git.edu

Outcomes

Hands on experience with embedded system using arduino.

Career prospects

Mention briefly about the job opportunities students have after completing the course..

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

SKILL LABS

Schedule of Skill labs offered at KLSGIT

Sl No	Department	Start date	End date	Title of Skill lab
1	ECE	04/11/2024	09/11/2024	Introduction to Generative Artificial Intelligence (GenAI) using Python: From Basics to Applications

Skill lab (Detailed schedule)

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	ECE	Introduction to Generative Artificial Intelligence (GenAI) using Python: From Basics to Applications	3rd semester (All divisions)		04/11/2024 to 09/11/2024	Dr. Anil Gavade	9986471271	abgavade@git.edu
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SKILL LAB

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Introduction to Generative Artificial Intelligence (Gen AI) using Python: From Basics to Applications

For 3rd Semester Students

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

Department of Electronics & Communication Engineering

Overview:

This course provides a comprehensive introduction to Generative Artificial Intelligence (GenAI) utilizing Python, spanning essential theoretical concepts to practical applications. With a focus on core principles of machine learning and deep learning, participants will engage in hands-on projects to solidify their understanding of various architectures and methodologies, preparing them for real-world applications in AI.

Mode of Conduction of each Module:

Theory: 03 Hours,
Demo: 02 Hours,
Lab Sessions: 04 Hours
Total duration: 09 Hours
Certification exam: 1.5 Hours

Module 1: Foundations of AI and Essential Mathematics

This module lays the groundwork for understanding generative AI by introducing key concepts in machine learning and deep learning. Students will also explore the mathematical principles necessary for effective algorithm implementation.

Module 2: Artificial Neural Networks and Their Applications

Focusing on artificial neural networks, this module guides students through the architecture and functioning of ANNs. Participants will engage in hands-on projects to apply their knowledge in data classification tasks.

Module 3: Advancing to Deep Learning and Generative Models

This module transitions from basic ANNs to more complex deep learning structures. Students will delve into autoencoders, variational autoencoders, and generative adversarial networks, implementing projects to reinforce their understanding

Module 4: Transformative Techniques and Industry Insights

In the final module, students will explore cutting-edge techniques like transformers and attention mechanisms, and gain insights from industry experts. The module will conclude with an overview of advancements in GenAI and large language models.

Terms and Conditions

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The students must maintain 90% attendance for obtaining the skill lab certificate.

Students must attend training as per scheduled time.

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No, Email id

Coordinators:

Dr. Anil B. Gavade
Dept. of ECE
Phone: 9986471271
E-mail: abgavade@git.edu

Prof. Sneha Nargundkar
Dept. of ECE
Phone: 9422605808
E-mail: ssnargundkar@git.edu

Outcomes

1. Students will gain a comprehensive understanding of key concepts in machine learning, deep learning, and generative AI, including their applications across various industries.
2. Participants will develop hands-on experience in building and training neural networks, including autoencoders and GANs, enabling them to tackle real-world data challenges.
3. Students will gain valuable insights into current trends and potential career pathways in generative AI.

Career Prospects

Upon completing the course, students will be well-prepared for a variety of job opportunities in the rapidly growing field of artificial intelligence. Potential roles include **Machine Learning Engineer, Data Scientist, AI Research Scientist, Computer Vision Engineer, NLP Engineer.** Overall, the course provides students with the skills and knowledge needed to thrive in diverse roles across various industries, including tech, finance, healthcare, and more.