





# SKILL LAB

ON

## Software Tools and Techniques For 3rd Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science And Engineering

#### Overview:

This 36-hour hands-on course immerses students in essential software tools, covering fundamental concepts, development environments, and practical applications. It dives into the basics of software development, including version control, debugging, and deployment, and gives students practical experience with widely used tools such as Git, Docker, Jenkins, and various IDEs. Students learn to apply theoretical knowledge in real-world scenarios, understanding the interaction and support these tools provide throughout the development lifecycle.



#### Mode of Conduction of each Module:

Theory:	10 Hours
Demo:	10 Hours
Lab sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	3 Hours

#### Module 1: Microsoft Word

Exploring various word options and creating word documents

#### Module 2: PowerPoint Presentations

Various presentation techniques

#### Module 3: Microsoft Excel

Exploring excel with different formulas and creating sheets

Module 4: introduction to LinkedIn, Google Drive, Google Classroom, GitHub.

#### 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 Dr Arati Shahapurkar  
Dept. Of CSE  
Phone: 7975865161  
E-mail: asshahapurkar@git.edu

#### Outcomes

Enhanced Skills  
Problem Solving Abilities  
Industry Relevance

#### Career prospects

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



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## **SKILL LABS**



### **Schedule of Skill labs offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE	4 <sup>th</sup> November 2024	9 <sup>th</sup> November 2024	Computer Hardware and Networking

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	Computer Hardware and Networking	3 <sup>rd</sup>	IT BLOCK	4- 9 <sup>th</sup> November 2024	Dr.R.S.Patil, / Dr.P.N.Kunchur	9845954052  8095958867	<a href="mailto:rspatil@git.edu">rspatil@git.edu</a>  <a href="mailto:pnkunchur@git.edu">pnkunchur@git.edu</a>



# KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI



## SKILL LAB ON

### Computer Hardware and Networking

#### Department of Computer Science & Engineering

##### Overview

A Computer Hardware and Networking Skill Lab is an essential facility for students and professionals to gain hands-on experience with the foundational components of computing and communication systems. The lab focuses on training individuals in the assembly, maintenance, troubleshooting, and networking of computers and related devices.



##### Mode of Conduction: Offline

Theory: 10 Hours,  
Demo: 10 Hours,  
Lab Sessions: 16 Hours  
Total duration: 36 Hours  
Certification exam: 01 Hour

##### Module 1: Introduction to basic computer hardware

Name and identify various PC hardware components: USB, Mouse, PS/2 Mouse, Keyboard, LCD/LED Monitor, VGA, HDMI, CAT5, CAT6, server, routers, fiber cable, Hard disk, RAM, CMOS battery, SMPS, cache, ROM,



##### Module 3: To install different operating systems with dual boot

Controlling actuators, Basic Communication Interfaces, Projects.

##### Module 2: To assemble and disassemble computer hardware

Assembling and disassemble of computer with various parts of computer hardware

##### Module 4: Introduction to computer networks and its components

Network Hubs (4/8 Ports), CAT6 network toolkit, connect 2-4 computers using network to create LAN.

##### 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

##### Acceptance

In order to be accepted 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

Name: Dr.R.S.Patil,  
Associate Professor  
Department of Computer Science and Engineering  
+91 98459 54052  
[rspatil@git.edu](mailto:rspatil@git.edu)

Name: Dr.P.N.Kunchur  
Associate Professor  
Department of Computer Science and Engineering  
+91 8095958867  
[pnkunchur@git.edu](mailto:pnkunchur@git.edu)

##### Outcomes

Ability to identify, assemble, and troubleshoot key computer components effectively.

Mastery in installing, configuring, and optimizing various operating systems while resolving related issues.

Hands-on experience in network design and troubleshooting, preparing for roles in IT and networking.

Carrer Prospects: Network Engineer, System Administrator, IT Support Technician, Cybersecurity Analyst, Cloud Solutions Architect,



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## **SKILL LAB**



### **Schedule of Skill lab offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE	4 <sup>th</sup> November 2024	9 <sup>th</sup> November 2024	Introduction to Arduino UNO

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	Introduction to Arduino UNO	3 <sup>rd</sup>	IT BLOCK	4- 9 <sup>th</sup> November 2024	Dr. Sharada M. Kori	7026389654	<a href="mailto:smkori@git.edu">smkori@git.edu</a>



# SKILL LAB

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## Introduction to Arduino UNO For 3rd Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

The 36-hour hands-on course introduces students to embedded systems using Arduino UNO, covering fundamental hardware/software concepts, sensor interfacing, communication protocols, and IoT applications. Students gain practical experience through mini projects, bridging the gap between software and hardware by exploring their interaction in real-world devices. The course reinforces theoretical knowledge in electronics, control systems, and programming, developing problem-solving skills in design, testing, and troubleshooting. By introducing IoT applications and enabling sensor integration with internet connectivity, the course prepares students for careers in embedded systems, IoT development, and prototyping roles, with a focus on innovation in automation, smart agriculture, and Industry 4.0.



#### Mode of Conduction of each Module: Offline

Theory:	10 Hours,
Demo:	10 Hours,
Lab Sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	03 Hours

#### Module 1: Getting Started with Arduino UNO

Basics of embedded systems and microcontrollers. Digital I/O Fundamentals, basic programming concepts.



#### Module 3: Actuators and Communication

Controlling actuators, Basic Communication Interfaces, Projects.

#### Module 2: Sensor Integration and Data Acquisition

Working with sensors like DHT11, LDR, Ultrasonic sensor interfacing, data processing & visualization.

#### Module 4: IoT Basics and Real- World Project

Introduction to IoT, Connecting Arduino to the Internet, Real life 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

#### Coordinator:

Name: Dr. Sharada M. Kori  
Dept. of CSE  
Phone: 7026389654  
E-mail: [smkori@git.edu](mailto:smkori@git.edu)

#### Outcomes

- Enhanced understanding of microcontroller-based systems.
- Improved ability to prototype hardware projects.
- Exposure to IoT and smart systems.



**KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI**

## **SKILL LAB**



### **Schedule of Skill lab offered at KLSGIT**

Sl. No	Department	Start date	End date	Title of Skill lab
1	CSE	4 <sup>th</sup> November 2024	9 <sup>th</sup> November 2024	WebCraft: A Hands-on Web Development Lab

### **Skill lab (Detailed schedule)**

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	CSE	WebCraft: Hands-on Web Development Lab	3 <sup>rd</sup>	IT BLOCK	4- 9 <sup>th</sup> November 2024	Dr. Kuldeep S Prof. Seena Kalghatgi Prof. Veena Kangralkar Prof. Namitha Bhat	9900969887 9739525527 9980705350 9902920921	<a href="mailto:kuldeep@git.edu">kuldeep@git.edu</a> <a href="mailto:smkalghatgi@git.edu">smkalghatgi@git.edu</a> <a href="mailto:vvkangralkar@git.edu">vvkangralkar@git.edu</a> <a href="mailto:nsbhat@git.edu">nsbhat@git.edu</a>



# SKILL LAB

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## Web Craft: Hands-on Web Development Lab For 3rd Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

A 36-hour hands-on lab on web technology will provide students with a comprehensive, practical introduction to the core aspects of web development. The students will be able to structure and style websites. They will be able to create responsive designs to the web pages that will adapt to different devices (mobile, tablet, desktop). Students will understand how to add interactivity to web pages, handle events, validate forms, and manipulate the DOM (Document Object Model). Web development has a wide range of applications that power much of the digital world. These applications span across industries, improving communication, commerce, services, and entertainment.



#### Mode of Conduction of each Module: Offline

Theory:	10 Hours,
Demo:	10 Hours,
Lab Sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	03 Hours

#### Module 1: Web Development and Introduction to HTML5

Structure of HTML5, Elements and Attributes, Images, audio, and video embedding, Forms and Input Elements



#### Module 3: JavaScript(JS)

Introduction to JS and how it works with HTML, Events and Event Handling.

#### Module 2: Cascading Style Sheets

What is CSS and how does it work with HTML?, CSS syntax, selectors, and properties. Fonts, colors, and backgrounds. Introduction to Tailwind CSS.

#### Module 4: Real world Website building Projects , AWS static website hosting.

Brainstorming sessions to pitch ideas to develop websites and host static websites

#### 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

#### Coordinator:

Name: Prof. Seena Kalghatgi  
Dept. of CSE  
Phone: 9739525527  
E-mail: [smkalghatgi@git.edu](mailto:smkalghatgi@git.edu)

#### Outcomes

Foundational Knowledge of Web Technologies.

Hands-On Project Experience.

Build a functional web project showcasing their skills.

Career Prospects: Web Designer, Front -end and Back-end Developers, Full Stack Developers.





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## **SKILL LABS**



### **Schedule of Skill labs offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE	November 2024	November 2024	Advanced Design and Modern Automation Tools

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	Advanced Design and Modern Automation Tools	5 <sup>th</sup>	IT BLOCK	November 2024	Dr Vijay S Rajpurohit Prof.Girish Deshpande	8105692785 9743311528	<a href="mailto:vsrajpurohit@git.edu">vsrajpurohit@git.edu</a> <a href="mailto:grdeshpande@git.edu">grdeshpande@git.edu</a>



# SKILL LAB

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## Software Design and Modern Automation Tools For 5<sup>th</sup> Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

The 36-hour hands-on course on "Software Design and Automation Tools" introduces students to Figma and JIRA, covering essential design and project management concepts. Students will create interactive prototypes for various devices, including phones, tablets, desktops, and wearables, while mastering Figma's features such as frames, layers, and components. Through FigJam, workflows. In the second part, students learn to use JIRA for agile project management, handling tasks, sprints, and workflows. This course bridges design and automation, preparing students for careers in UI/UX design, agile development, and project management.



#### Mode of Conduction of each Module: Offline

Theory:	12 Hours,
Demo:	10 Hours,
Lab Sessions:	14 Hours
Total duration:	36 Hours
Certification exam:	03 Hours

#### Module: Getting started with Figma and FigJam

Introduction to Design Tools and user Interface. Working with frames, shapes and Layers. Creating Wireframe and Layouts for multiple devices.



#### Module 3: Introduction to JIRA and Project Management

Overview of JIRA. Creating Epic, Story and Task and TestCards.

#### Module 2: Advanced Figma Features and Prototyping

Designing reusable components and UI design. Using layout constraints for responsive Design.

#### Module 4: Project Automation

Automating Projects/ JIRA

#### 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:** Dr. Vijay S Rajpurohit  
Dept. of CSE  
Phone: 8105692785  
E-mail: [vsrajpurohit@git.edu](mailto:vsrajpurohit@git.edu)

**Name:** Prof.G.R. Deshpande  
Dept. of CSE  
Phone:  
E-mail: [grdeshpande@git.edu](mailto:grdeshpande@git.edu)

#### Outcomes

- Enhanced understanding of UI/UX design and Prototyping.
- Practical Experience in Project Management and Tracking
- Exposure to Agile method automation.



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## **SKILL LAB**



### **Schedule of Skill lab offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE	--	--	<b>ESP32 Beginner Booster</b>

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	<b>ESP32 Beginner Booster</b>	5 <sup>th</sup>			<b>Dr. Sharada M. Kori</b>	<b>7026389654</b>	<a href="mailto:smkori@git.edu">smkori@git.edu</a>



# SKILL LAB



## ON ESP32 Beginner Booster For 5<sup>th</sup> Semester Students

### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

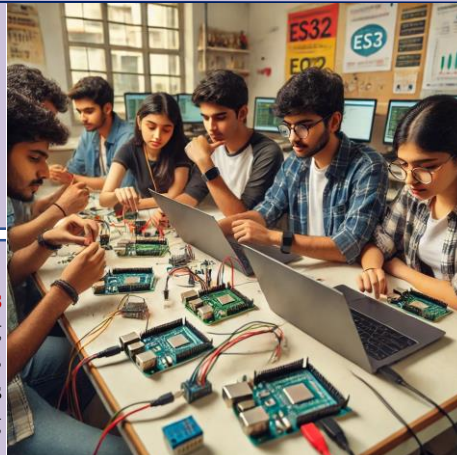
The ESP32 Beginner Booster Skill Lab is a 36-hour course designed for 3rd-year BE students to introduce them to the powerful ESP32 microcontroller. The course covers fundamental topics such as GPIO control, sensor interfacing, and actuator management, along with wireless communication via Wi-Fi, Bluetooth, and MQTT. Students will gain hands-on experience in building IoT applications and real-time data systems, culminating in a final project where they implement and showcase an IoT solution. This lab equips students with essential skills for IoT development and embedded systems.



#### Mode of Conduction of each Module: Offline

theory:	10 Hours,
Demo:	10 Hours,
Lab Sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	03 Hours

**Module 1: Introduction to ESP32 & Setup :** Covers ESP32 architecture, GPIO control, and setting up programming environments, with basic LED and button interfacing for hands-on practice.



#### Module 3: Wireless Communication & Networking

Teaches Wi-Fi, Bluetooth, and MQTT protocols, enabling students to build web servers and cloud-connected IoT systems using ESP32.

**Module 2: Sensors & Actuators Interface:** Focuses on interfacing sensors (DHT11, LDR) and actuators (motors, relays), with hands-on projects on reading sensor data and controlling devices.

#### Module 4: Mini Projects & Final Assessment:

Students apply their skills to develop IoT projects, integrating sensors, wireless communication, and presenting their final implementations.

#### 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

#### Coordinator:

**Name:** Dr. Sharada M. Kori  
Dept. of CSE  
Phone: 7026389654  
E-mail: [smkori@git.edu](mailto:smkori@git.edu)

#### Outcomes

- Enhanced understanding of microcontroller-based systems.
- Improved ability to prototype hardware projects.
- Exposure to IoT and smart system



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# SKILL LAB



## Schedule of Skill lab offered at KLSGIT

Sl. No	Department	Start date	End date	Title of Skill lab
1	CSE			<b>Hands-on Mobile Application Development Lab</b>

## Skill lab (Detailed schedule)

SI No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	CSE	Hands-on Mobile Application Development Lab	5 <sup>th</sup> / 6 <sup>th</sup> semester students	IT BLOCK		Dr. Kuldeep S	9900969887	<a href="mailto:kuldeep@git.edu">kuldeep@git.edu</a>
						Dr. Prasad P	9739525527	<a href="mailto:pmpujar@git.edu">pmpujar@git.edu</a>
						Dr. Prashant N	9980705350	<a href="mailto:pyniranjana@git.edu">pyniranjana@git.edu</a>
						Dr. Ravi K	9902920921	<a href="mailto:rukalkundri@git.edu">rukalkundri@git.edu</a>



# SKILL LAB

ON

## Mobile Application Development Lab

For 3<sup>rd</sup> Year Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

#### Department of Computer Science & Engineering

#### Overview:

A 36-hour hands-on lab on Mobile Application Development Technology will provide students with a comprehensive, practical introduction to the core aspects of Mobile App development. The students will be able to design and build applications that meet user needs, provide value, and align with business goals. Below are the key objectives, categorized from both business and technical perspectives. These applications span across industries, improving communication, commerce, services, and entertainment.



#### Mode of Conduction of each Module: Offline

Theory:	10 Hours,
Demo:	10 Hours,
Lab Sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	03 Hours

#### Module 1: Introduction to Android

The Android Platform, Android SDK, Eclipse Installation, Android Installation, Building you First Android application, Understanding Android Application.

#### Module 2: Android Application Design Essentials

Anatomy of an Android applications, Android terminologies, Application Context, Services, Intents, Receiving and Broadcasting Intents, Android Manifest

### Mobile Application Development



#### Module 3: Android User Interface Design

User Interface Screen elements, Designing User Interfaces with Layouts, Drawing and Working with Animation.

#### Module 4: Using Common Android API

Using Android Data and Storage APIs, Managing data using Sqlite, Sharing Data between Applications with Content Providers, Using Android Web APIs. Deploying App to the World.

#### Terms and Conditions

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#### 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: Dr. Kuldeep Sambrekar**

Dept. of CSE  
Phone: 9900969887  
E-mail: [kuldeep@git.edu](mailto:kuldeep@git.edu)

**Name: Dr. Prasad Pujar**

Dept. of CSE  
Phone: 9739525527  
E-mail: [pmpujar@](mailto:pmpujar@)

#### Outcomes

Foundational Knowledge of Android Technologies.

Hands-On Project Experience.

Deploy applications to the Android marketplace for distribution

**Career Aspects:** Mobile App Developer, Cross-Platform Developer, Mobile UX/ UI Designer



**KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI**

## **SKILL LAB**



### **Schedule of Skill lab offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE			<b>Cyber Security &amp; Automation System</b>

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	<b>Cyber Security &amp; Automation System</b>	7 <sup>th</sup>	<b>IT BLOCK</b>		Prof. Sagar Pujar Prof. Pavan .Korlahalli	9902806192 9483625734	<a href="mailto:srpjar@git.edu">srpjar@git.edu</a> <a href="mailto:pkkorlahalli@git.edu">pkkorlahalli@git.edu</a>



# SKILL LAB

ON

## Cyber Security & Automation System For 7<sup>th</sup> Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

A Cyber Security & Automation Systems Lab is designed to provide participants with hands-on training in essential cybersecurity principles and how automation can be leveraged to enhance security operations. This lab focuses on equipping learners with the skills needed to identify, mitigate, and respond to cyber threats while utilizing automation tools to streamline and improve efficiency.



#### Mode of Conduction of each Module: Offline

Theory:	10 Hours,
Demo:	10 Hours,
Lab Sessions:	16 Hours
Total duration:	36 Hours
Certification exam:	01 Hours

#### Module 1: Introduction to Cyber Security

Cyber security threats and best practices, Types of Cyber Attack, Concept and types of Scanning Methodology, Penetration Tests.

#### Module 3: Cryptography and Firewalls

Introduction to cryptography, Cryptography and Cryptanalysis, Types of cryptography, Hash Cryptography, understanding digital certificates and signatures

#### Module 2: Introduction to Automation in Cybersecurity

What is security automation? Benefits of automating security processes (efficiency, speed, accuracy), Automation Use Cases in Cybersecurity

#### Module 4: Web Application Security and Pentesting

Understanding of various HTTP methods, Kali Linux , Wireshark.

#### Terms and Conditions

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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

#### Coordinator:

Name: Prof. Sagar Pujar  
Dept. of CSE  
Phone: 9902806192  
E-mail: [srupujar@git.edu](mailto:srupujar@git.edu)

Prof. Pavan K  
Dept. Of CSE  
9483625734  
[pkkorlahalli@git.edu](mailto:pkkorlahalli@git.edu)

#### Outcomes

- Practical Knowledge hands-on experience With cybersecurity.
- Threat Awareness cyber threats and security trends .
- Security Automation security processes incident detection and response.





**KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI**

## **SKILL LABS**



### **Schedule of Skill labs offered at KLSGIT**

<b>Sl. No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE			Network Simulation Tools

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	Network Simulation Tools	7 <sup>th</sup>	IT BLOCK		Dr. Prasad M. Pujar Dr. Arundhati Nelli Prof. Raghavendra Jadhav	9886447375 9008450807 9019374052	<a href="mailto:pmpujar@git.edu">pmpujar@git.edu</a> <a href="mailto:avnelli@git.edu">avnelli@git.edu</a> <a href="mailto:ryjadhav@git.edu">ryjadhav@git.edu</a>



# SKILL LAB

ON

## Network Simulation Tools For 7<sup>th</sup> Semester Students



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

Department of Computer Science & Engineering

#### Overview:

The primary purpose of the Network Simulation Tools Skill Lab is to bridge the gap between theoretical knowledge and practical application in the field of networking. As technology continues to evolve, the students must acquire the skills necessary to design, implement, and troubleshoot complex network systems. This skill lab serves several key purposes like Understanding Networking Fundamentals, Hands-On Experience with Simulation Tools, Real-World Application and Problem Solving, Collaboration and Teamwork, Preparation for Future Careers, and Enhancing Analytical and Critical Thinking Skills. The Network Simulation Tools Skill Lab is designed not just as a learning experience, but as a comprehensive program that prepares engineering students for the complexities of modern networking. The lab aims to equip students with the skills and confidence necessary to succeed in their future careers in technology and engineering.



#### Mode of Conduction of each Module: Offline

Theory: 10 Hours,  
Demo: 10 Hours,  
Lab Sessions: 16 Hours  
Total duration: 36 Hours  
Certification exam: 03 Hours

#### Module 1: Introduction to Networking and Simulation Concepts:

Fundamentals of Networking, Importance of Network Simulation, Setting Up the Simulation Environment.

#### Module 2: Cisco Packet Tracer and Introduction to GNS3

Creating Basic Network Topologies, Configuring Devices, Simulating Network Behavior, Advanced Configuration Techniques, Introduction to GNS3.



#### Module 3: Advanced GNS3 & Introduction to NS3

Configuring Real IOS Images, Dynamic Routing Protocols, Overview of Network Simulator 3, Creating Basic Simulations Analyzing Simulation Results.

#### Module 4: Advanced NS3 and OMNeT++

Advanced Features in NS3, Introduction to OMNeT++.

#### 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: Dr. Prasad M. Pujar  
Dept. of CSE  
Phone: 9886447375  
E-mail: [pmpujar@git.edu](mailto:pmpujar@git.edu)

Name: Dr. Arundhati Nelli,  
Prof Raghvendra Jadhav  
Dept. of CSE  
Phone: 9008450807, 9019374052  
E-mail: [avnelli@git.edu](mailto:avnelli@git.edu), [ryjadhav@git.edu](mailto:ryjadhav@git.edu)

#### Outcomes

- Proficiency in Networking Concepts.
- Hands-On Experience with Simulation Tools.
- Enhanced Troubleshooting and Analytical Skills.



**KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI**

## **SKILL LABS**



### **Schedule of Skill labs offered at KLSGIT**

<b>Sl No</b>	<b>Department</b>	<b>Start date</b>	<b>End date</b>	<b>Title of Skill lab</b>
1	CSE			Project Management Tools

### **Skill lab (Detailed schedule)**

<b>Sl No</b>	<b>Department</b>	<b>Title of Skill lab</b>	<b>Semester &amp; Division</b>	<b>Venue</b>	<b>Dates</b>	<b>Faculty name</b>	<b>Phone No</b>	<b>Email id</b>
1	CSE	Project Management Tools	7 <sup>th</sup>	IT BLOCK		Dr. Kavita Hanabaratti	9481558297	<a href="mailto:kdhanabaratti@git.edu">kdhanabaratti@git.edu</a>
2	CSE	Project Management Tools	7 <sup>th</sup>	IT BLOCK		Prof. Savita Bakare	7795023427	<a href="mailto:skbakare@git.edu">skbakare@git.edu</a>



# SKILL LAB

ON

## Project management tools for (7<sup>th</sup> Semester Students)



### KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI Department of Computer Science & Engineering

#### Overview:

Today's world is a digital world driven by software of varying sizes and complexity. Understandably, the effectiveness and efficiency of the quality of the software relies on the way it is managed during its development and maintenance phase. Hence, this course introduces students to learn the key Engineering Project Management methodologies and to develop broader skills for the holistic aspects of bringing a software product successfully.

#### Mode of Conduction of each Module:

Theory: 26 Hours,  
Lab Sessions: 10 Hours  
Total duration: 36 Hour  
Certification exam: 3 Hours

#### Module 1

Introduction to Project Management

#### Module 3

Introduction to Project Integration Management

#### Module 2

Importance of software quality in Project Management

#### Module 4

Tools & Techniques in Project Management



#### 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 Dr. Kavita Hanabaratti

Dept. of Computer Science & Engineering  
Phone: 9481558297  
E-mail: kdhanabaratti@git.edu

##### Name Prof. Savita Bakare

Dept. of Computer Science & Engineering  
Phone: 7795023427  
E-mail: skbakare@git.edu

#### Outcomes:

1. To learn importance of a software project and project management practices.
2. Estimate and evaluate project management schedules and determine risk management approaches.
3. Define and evaluate Quality assurance measures.
4. Implement a project, to manage project schedule, expenses and resources with the application of suitable project management tools.