

Shree.Shetty Sangappa Trust's

### SHETTY INSTITUTE OF TECHNOLOGY

(An ISO 9001:2015 Certified Institution)

(Affiliated to Visvesvarya Technological University Belgaum and approved by AICTE, New Delhi)

Shahabad Road, Kalaburagi- 585105, Karnataka- India

Office: 08472-298922

Website: www.sit gulbarga.org

Date: 10/10/2022

CET Code: E-216(UG)

### **CIRCULAR**

All the Students are hereby informed to attend the Certification course on "APPTITUDE" from 18-Oct-22 onwards in Seminar Hall without fail. Attendance will be recorded every day.

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### Copy to:

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- 2) Classrooms
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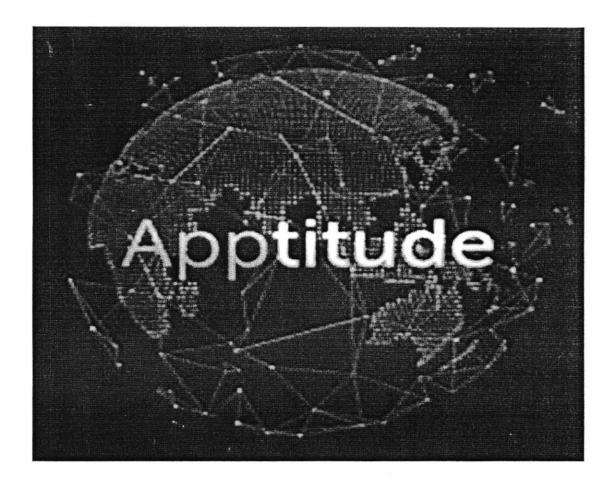


## CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023







### APPTITUDE

#### Course Overview:

Aptitude refers to one's natural ability or skill in specific areas, such as problem-solving, critical thinking, and logical reasoning. It is often assessed through tests to evaluate readiness for academic or professional challenges. Developing aptitude involves practice and exposure to varied learning experiences, essential for personal and professional growth.

### Course Objectives:

- · Evaluate thinking and problem-solving skills.
- · Predict ability to learn and adapt.
- Assess readiness for jobs or studies.
- Identify strengths and areas to improve.
- · Help make smart choices for education and careers.

### **SYLLABUS**

Sl.no	Topics	
1	Introduction to Aptitude	<ul> <li>Overview of aptitude tests</li> <li>Importance and applications</li> </ul>
2	Numerical Reasoning - Basics	<ul> <li>Number systems, arithmetic operations</li> <li>Practice exercises</li> </ul>
3	Numerical Reasoning - Advanced	<ul> <li>Percentages, ratios, proportions</li> <li>Practice exercises</li> </ul>
4	Algebra and Geometry	<ul> <li>Basic algebra, geometry concepts</li> <li>Practice exercises</li> </ul>
5	Data Interpretation	Graphs, charts, and tables     Practice exercises

### Outcomes:

- Guide career and academic decisions.
- Encourage personal growth.
- Ensure appropriate placement.
- Support ongoing skill improvement



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Office: 08472-298922

Website: www.sit gulbarga.org

Date: 27/10/2022

### **CIRCULAR**

Students are required attend the certification course on "The Future of AI" beginning November 2, 2022, in the Seminar Hall. Daily attendance will be monitored.

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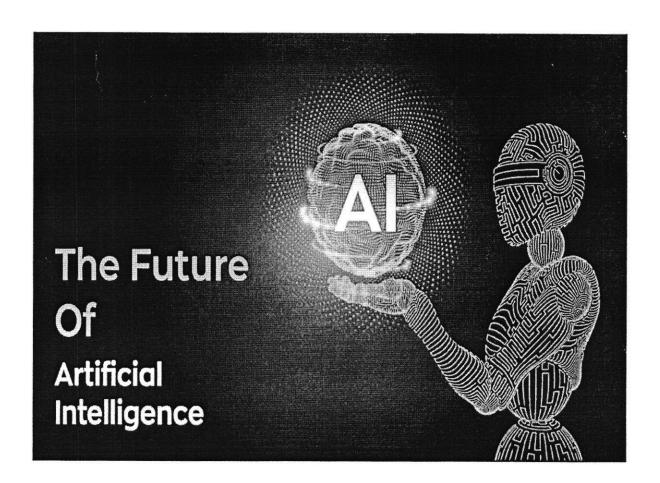
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## CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023





#### THE FUTURE OF AI

### Course Description:

This course explores the current landscape and future trends of Artificial Intelligence (AI). Participants will examine various applications of AI, its impact on society and industries, and the ethical considerations surrounding its development and deployment.

### Course Objectives:

- Provide an overview of Artificial Intelligence (AI) technologies and their evolution.
- Discuss current and emerging AI applications across different sectors.
- Explore the ethical implications and societal impacts of AI advancements.

### **SYLLABUS**

Sl.	Topics	
1	Introduction to AI	<ul> <li>Overview of Al concepts and its history.</li> <li>Applications of Al in different fields (e.g., healthcare, finance).</li> </ul>
2	AI Technologies	<ul> <li>Basics of machine learning and deep learning.</li> <li>Practical examples of AI technologies (e.g., image recognition, natural language processing).</li> </ul>
3	Ethical Issues in AI	<ul> <li>Bias and fairness in AI algorithms.</li> <li>Privacy concerns and data protection</li> </ul>
4	Future Trends in AI	<ul> <li>Emerging technologies like quantum computing and AI-driven robotics.</li> <li>Predictive analysis and AI's role in decision-making</li> </ul>

#### Outcomes:

By the end of this course, participants will be able to:

- Understand the fundamental concepts and history of Artificial Intelligence (AI).
- Identify current applications of AI in various industries and sectors.
- Discuss ethical considerations related to Al development and deployment.
- Evaluate the societal impacts of AI on employment, privacy, and healthcare



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Date: 27/10/2022

### **CIRCULAR**

All students are required to attend the certification course on "Critical Thinking and Decision-Making" starting November 2, 2022, in the Seminar Hall. Attendance will be taken daily

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# CERTIFICATION COURSE

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ACADEMIC YEAR 2022-2023

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#### CRITICAL THINKING AND DECISION-MAKING

### Course Description:

This course focuses on developing critical thinking skills and effective decision-making strategies. Participants will explore principles of logic, reasoning, and problem-solving techniques to enhance their ability to make informed decisions in various personal and professional contexts.

### Course Objectives:

- Introduce participants to the importance of critical thinking in decision-making processes.
- Develop participants' ability to analyze information objectively and evaluate arguments.
- · Teach practical strategies for problem-solving and decision-making under uncertainty.

### **SYLLABUS**

SI.	Topics	
1	Introduction to Critical Thinking	<ul> <li>Understanding Critical Thinking</li> <li>Definition and importance in decision-making</li> <li>Elements of critical thinking (logic, reasoning, analysis)</li> <li>Barriers to Critical Thinking</li> <li>Common biases and fallacies</li> <li>Overcoming cognitive biases</li> </ul>
2	Logic and Reasoning	<ul> <li>Principles of Logic         <ul> <li>Deductive and inductive reasoning</li> <li>Logical fallacies and their impact</li> </ul> </li> <li>Analytical Thinking         <ul> <li>Breaking down complex problems</li> <li>Analyzing arguments and evidence</li> </ul> </li> </ul>
3	Problem-Solving Techniques	Structured Problem-Solving Methods     Steps in problem-solving (identify, analyze, generate solutions, implement)     Root cause analysis and decision trees     Creative Problem-Solving     Generating innovative solutions     Brainstorming and lateral thinking techniques
4	Decision-Making Models	<ul> <li>Rational Decision-Making         <ul> <li>Decision-making under certainty, risk, and uncertainty</li> <li>Expected utility theory</li> </ul> </li> <li>Behavioral Decision-Making         <ul> <li>Factors influencing decisions (emotions, biases, heuristics)</li> <li>Prospect theory and framing effects</li> </ul> </li> </ul>

5	Practical Application of Critical Thinking	<ul> <li>Case Studies and Real-World Scenarios</li> <li>Applying critical thinking to real-life situations</li> <li>Group discussions and analysis</li> <li>Ethical Considerations</li> <li>Ethical decision-making frameworks</li> <li>Balancing ethical principles with practical outcomes</li> </ul>
6	Reflection and Application	<ul> <li>Integrating Critical Thinking Skills</li> <li>Reflecting on personal growth in critical thinking</li> <li>Developing a personal action plan for continuous improvement</li> </ul>

### **Outcomes:**

By the end of this course, participants will be able to:

- 1. Apply critical thinking skills.
- 2. Identify and address biases and logical fallacies.
- 3. Analyse complex problems systematically.
- 4. Utilize structured problem-solving methods.
- 5. Generate innovative ideas using creative techniques.





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Date: 19/12/2022

### NOTICE

All students are notified to attend the online certification course on "Basics of Front-End Development Using HTML" starting on December 26, 2022, in the Seminar Hall. Daily attendance will be recorded, and participation is mandatory.

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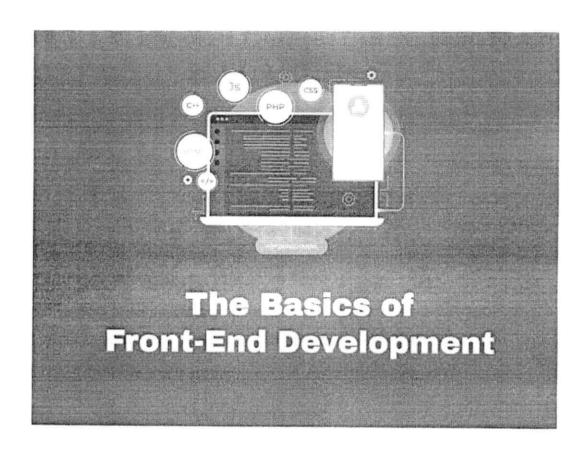


## CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023







### BASICS OF FRONT-END DEVELOPMENT USING HTML

#### Course Overview:

This course introduces students to the fundamental concepts of front-end web development using HTML (Hyper Text Markup Language). Participants will learn to create and structure web pages using HTML, understand the importance of semantic markup, and apply basic styling techniques.

### **Course Objectives:**

- Introduce students to HTML as the foundation of web development.
- Teach students how to structure content using HTML tags and elements.
- · Familiarize students with the essential principles of semantic markup.
- · Provide hands-on practice in building basic web pages and forms

### **SYLLABUS**

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	Topics	
no		O W D D
1	Introduction to HTML	<ul> <li>Overview of Web Development</li> <li>Introduction to front-end vs. back-end development</li> <li>Role of HTML in creating web pages</li> <li>Getting Started with HTML</li> <li>Understanding HTML syntax</li> <li>Setting up a text editor for coding</li> </ul>
2	HTML Basics	<ul> <li>HTML Document Structure         <ul> <li>Creating an HTML document</li> <li>Anatomy of an HTML tag</li> </ul> </li> <li>Text Formatting and Structure         <ul> <li>Heading tags (h1-h6)</li> <li>Paragraphs (p), line breaks (br), and horizontal lines (hr)</li> </ul> </li> </ul>
3	Working with Links and Images	<ul> <li>Creating Hyperlinks</li> <li>Linking to other web pages (absolute and relative URLs)</li> <li>Linking within the same page (anchor tags)</li> <li>Inserting Images</li> <li>Adding images to web pages</li> <li>Image attributes (alt text, width, height)</li> </ul>
4	HTML Lists and Tables	<ul> <li>Creating Lists</li> <li>Unordered lists (ul), ordered lists (ol), and definition lists (dl)</li> <li>Nesting lists</li> <li>Building Tables</li> <li>Creating tables and defining rows (tr) and cells (td/th)</li> <li>Table headers (thead, th) and footers (theoute)</li> </ul>

5	Forms and Input Elements	<ul> <li>Building Web Forms         <ul> <li>Form structure and attributes (action, method)</li> <li>Input types (text, password, checkbox, radio, etc.)</li> </ul> </li> <li>Form Validation and Submission         <ul> <li>Adding form validation using HTML5 attributes</li> <li>Submitting form data to a server</li> </ul> </li> </ul>	
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### **Outcomes:**

- Create Basic Webpages
- Structure Content
- Add Headings and Paragraphs
- Embed Links and Images



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Office: 08472-298922

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Date: 20/03/2023

### NOTICE

All students are now advised to attend the "AUTOCAD" Certification course in Seminar Hall beginning on March 27th, 23. On every day, attendance will be recorded.

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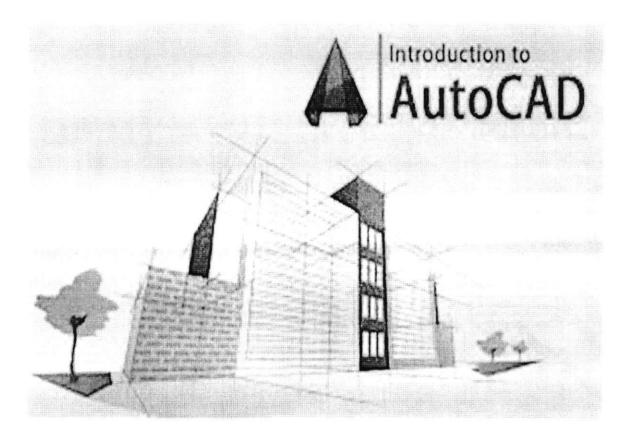


## CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023







#### AUTOCAD

### Course Description:

AutoCAD is a powerful computer-aided design (CAD) software used extensively in various industries for creating 2D and 3D designs, drafting, and modeling. This training course provides participants with the essential skills and knowledge to efficiently use AutoCAD for design and drafting tasks. Participants will learn to navigate the AutoCAD interface, create precise drawings, and leverage advanced tools for enhanced productivity.

### Course Objectives:

- Introduce participants to the fundamentals of AutoCAD software and its capabilities.
- Familiarize participants with the AutoCAD user interface, commands, and tools.
- Teach participants how to create accurate 2D drawings and 3D models using AutoCAD.
- · Provide hands-on experience in drafting techniques, dimensioning, and annotation.
- Prepare participants to customize AutoCAD settings and optimize workflow efficiency.

### **Syllabus**

Sl.no	Topics	
1	Introduction to AutoCAD	<ul> <li>Overview of AutoCAD         <ul> <li>Introduction to CAD and AutoCAD</li> <li>Applications of AutoCAD in various industries</li> </ul> </li> <li>AutoCAD Interface and Navigation             <ul> <li>Understanding the AutoCAD interface</li> <li>Navigation and zooming tools</li> </ul> </li> <li>Basic Drawing Tools                     <ul> <li>Creating basic shapes (lines, circles, rectangles, etc.)</li> <li>Using the Line, Circle, and Rectangle commands</li> <li>Drawing Precision</li></ul></li></ul>
2	Advanced Drawing Techniques	<ul> <li>Layers and Object Properties         <ul> <li>Creating and managing layers</li> <li>Assigning properties (color, line type, line weight)</li> </ul> </li> <li>Creating Complex Objects         <ul> <li>Polylines and splines</li> <li>Using the Polyline and Spline command</li> </ul> </li> </ul>

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		Blocks and Attributes
		<ul> <li>Creating and inserting blocks</li> </ul>
		<ul> <li>Using attributes in blocks</li> </ul>
		Annotating Drawings
		<ul> <li>Adding text annotations</li> </ul>
		<ul> <li>Multiline and single line text</li> </ul>
		Dimensioning Techniques
		<ul> <li>Creating and modifying dimensions</li> </ul>
		<ul> <li>Using Dimension styles</li> </ul>
		Hatching and Gradients
		Applying hatch patterns and gradients
		Modifying hatch properties
		External References (Xrefs)
		<ul> <li>Attaching and managing Xrefs</li> </ul>
		<ul> <li>Benefits of using Xrefs</li> </ul>
		Layouts and Viewports
		<ul> <li>Creating and managing layouts</li> </ul>
		<ul> <li>Using viewports in layouts</li> </ul>
		Plotting and Printing
		<ul> <li>Plot settings and configurations</li> </ul>
	Organizing and	<ul> <li>Printing a drawing to scale</li> </ul>
3		Advanced Object Editing
	Managing Drawings	<ul> <li>Using grips for editing</li> </ul>
		<ul> <li>Advanced Modify commands (Array, Mirror)</li> </ul>
		Introduction to 3D Drawing
		<ul> <li>Basic 3D modeling concepts</li> </ul>
		<ul> <li>Creating simple 3D objects</li> </ul>
		Practical Project
		<ul> <li>Applying all learned techniques</li> </ul>
		Project: Creating a detailed floor plan with annotation.
		and dimensions
		Advanced Text and Dimensions
		Text styles and dimension styles
		Creating and applying text and dimension styles
		Tables and Fields
		Creating and modifying tables
		Using fields in tables and annotations
		Dynamic Blocks
4	<b>Advanced Annotations</b>	
4	and Utilities	
		Using and modifying dynamic blocks  Leave Management and Filters
		Layer Management and Filters
		Advanced layer management techniques
		Using layer filters and states
		• Drawing Utilities
		Using drawing utilities (purge audit, recover)
		Using drawing utilities (purge audit, recover)  Managing drawing files and performance
		Thinking \$5 TICE * 51
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		<ul> <li>Practical Project</li> <li>Applying advanced annotations and utilities</li> <li>Project: Creating a detailed annotated drawing with layers and blocks</li> </ul>
5	Final Project and Review	<ul> <li>Project Development</li> <li>Plan and start developing a final project</li> <li>Outline the project and gather requirements</li> <li>Start the development process</li> <li>Project Completion and Testing</li> <li>Complete the project development</li> <li>Test and refine the project</li> <li>Project Presentation</li> <li>Present your AutoCAD project</li> <li>Explain the tools and techniques used and the outcome</li> <li>Demonstrate the working of the project</li> </ul>

### **Outcomes:**

By the end of this course, participants will be able to:

- Navigate the AutoCAD interface proficiently, including menus, ribbons, and toolbars.
- · Create and modify 2D drawings with precision using drawing and editing commands.
- Generate detailed 3D models and renderings for visualization purposes.
- · Apply annotation and dimensioning techniques to their drawings.
- Utilize advanced features such as parametric constraints and dynamic blocks.





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Office: 08472-298922

Website: www.sitgulbarga.org

Date: 22/05/2023

CET Code: E-216(UG

### **CIRCULAR**

All the Students are hereby informed to attend the Certification course on "WEB DEVEOLPMENT" from 29-May-23 onwards in Seminar Hall without fail. Attendance will be recorded every day.

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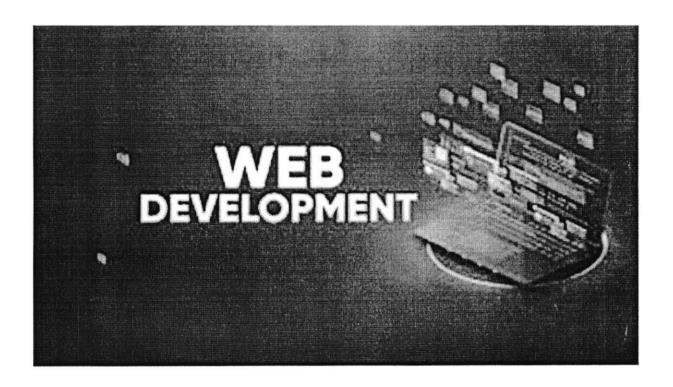


# CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023

Shetty Institute of Technology KALABURAGI





#### WEB DEVELOPMENT

### **Course Description:**

This course provides a comprehensive introduction to web development, covering both front-end and back-end technologies. Participants will learn essential skills and tools necessary to create interactive and responsive websites.

### Course Objectives:

- Introduce participants to the core concepts and technologies of web development.
- Equip participants with practical skills in HTML, CSS, JavaScript, and server-side scripting.
- Foster an understanding of responsive design principles and web development best practices.
- · Prepare participants to deploy and maintain websites using modern development tools.

### **SYLLABUS**

Sl. no	Topics	
1	Introduction to Web Development	<ul> <li>Overview of Web Technologies</li> <li>Client-side vs. server-side programming</li> <li>Roles of front-end and back-end development</li> <li>Web Development Tools and Environments</li> <li>Setting up a development environment</li> <li>Introduction to IDEs and text editors</li> </ul>
2	Front-End Development Basics	<ul> <li>HTML Fundamentals</li> <li>Structure of an HTML document</li> <li>HTML5 semantic elements and attributes</li> <li>CSS Fundamentals</li> <li>Styling HTML elements with CSS</li> <li>CSS selectors, properties, and values</li> <li>Responsive Web Design Principles</li> <li>Media queries and viewport settings</li> <li>Creating fluid layouts and flexible images</li> </ul>
3	JavaScript for Front- End Development	<ul> <li>Introduction to JavaScript</li> <li>Variables, data types, and operators</li> <li>Functions, arrays, and objects</li> <li>DOM Manipulation</li> <li>Accessing and modifying HTML elements</li> <li>Event handling and listeners</li> <li>jQuery Basics</li> <li>Simplifying DOM manipulation and event handling with jQuery</li> <li>Using jQuery plugins for enhanced functionality</li> </ul>

4	Back-End Development	<ul> <li>Introduction to Server-Side Scripting         <ul> <li>Overview of server-side scripting languages (e.g., Node.js, PHP)</li> <li>Setting up a local server environment</li> </ul> </li> <li>Handling Form Data and Server Requests         <ul> <li>Processing form submissions with server-side scripts</li> </ul> </li> </ul>
And the state of t		Working with databases (e.g., MySQL, MongoDB)

### Outcomes:

By the end of this course, participants will be able to:

- · Create well-structured and semantic HTML documents.
- · Style web pages using CSS to achieve desired layouts and designs.
- Implement interactive and dynamic behavior using JavaScript and jQuery.
- Develop responsive web designs that adapt to different screen sizes and devices.





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Office: 08472-298922

Website: www.sit gulbarga.org

Date: 2/6/2023

CET Code: E-216(UC

### NOTICE

All the Students are hereby informed to attend the Certification course on "PYTHON PROGRAMMING Q" from 12-Jun-23 onwards in Seminar Hall. Attendance will be taken every day.

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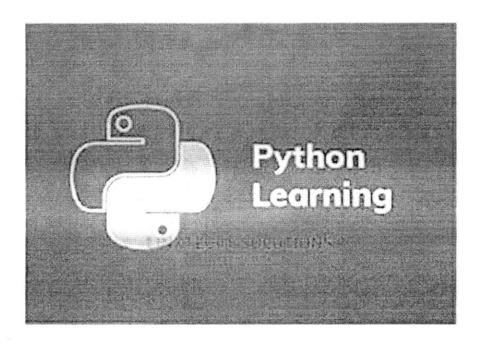
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**SYLLABUS** 

**ACADEMIC YEAR 2022-2023** 

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### PYTHON PROGRAMMING Q

### **Course Description:**

This course introduces participants to the fundamentals of programming using Python. Participants will learn how to write Python code, solve problems algorithmically, and apply programming concepts to develop practical applications.

### Course Objectives:

- Introduce Python syntax and its applications.
- Teach basic programming principles and data structures.
- Familiarize with object-oriented programming (OOP) concepts in Python.
- Provide hands-on experience in coding and problem-solving.

### **SYLLABUS**

Sl.	Topics	
The state of the s	Introduction to Python	<ul> <li>Overview of Python Programming Language</li> <li>History, features, and applications</li> <li>Installing Python and setting up the development environment</li> <li>Getting Started with Python</li> <li>Writing and executing Python scripts</li> <li>Understanding Python's interactive mode (REPL)</li> </ul>
2	Python Basics	<ul> <li>Variables and Data Types</li> <li>Primitive data types (int, float, str, bool)</li> <li>Working with collections (lists, tuples, dictionaries)</li> <li>Control Structures</li> <li>Conditional statements (if, elif, else)</li> <li>Loops (for, while) and iteration techniques</li> </ul>
3	Functions and Modules	<ul> <li>Defining Functions         <ul> <li>Function syntax, parameters, and return values</li> <li>Scope and lifetime of variables</li> </ul> </li> <li>Working with Modules         <ul> <li>Importing and using built-in and external modules</li> <li>Creating and organizing Python modules</li> </ul> </li> </ul>
4	Object-Oriented Programming in Python	<ul> <li>Introduction to OOP Concepts</li> <li>Classes and objects</li> <li>Encapsulation, inheritance, and polymorphism</li> <li>Advanced OOP Features</li> <li>Method overloading and overriding</li> <li>Class inheritance and composition</li> </ul>



5	Python Advanced Topics		Exception Handling  Handling errors and exceptions using try-except blocks Raising and catching exceptions  File Handling  Reading from and writing to files Working with different file formats (text files, CSV, JSON)
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### Outcomes:

- Understand Python language basics and its role in software development.
- Implement control structures, functions, and data structures in Python.
- Utilize object-oriented programming techniques to model real-world scenarios.
- · Develop proficiency in handling exceptions and working with files.
- · Create Python scripts for automation and data processing tasks.



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Website: www.sit gulbarga.org

Date: 11/7/2023

### **CIRCULAR**

All the Students are hereby informed to attend the Certification course on "APP DEVOLPMENT" from 19-Jul-23 onwards in Seminar Hall. Attendance will be recorded every day.

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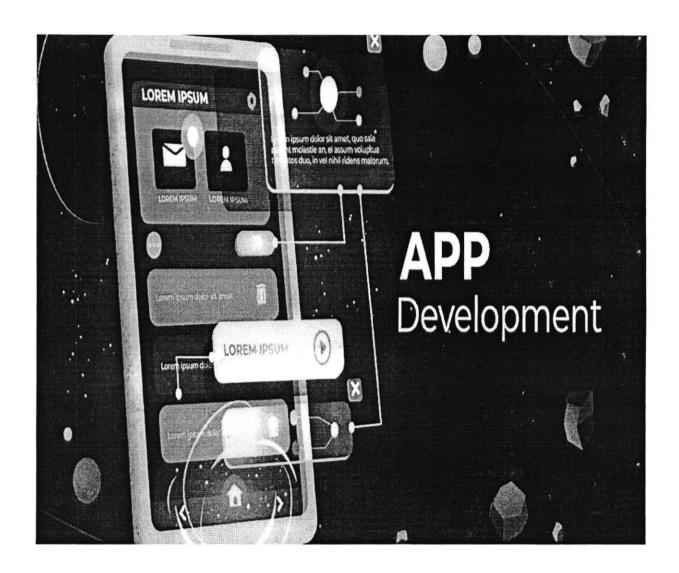


# CERTIFICATION COURSE

**SYLLABUS** 

ACADEMIC YEAR 2022-2023





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#### APP DEVELOPMENT

#### Course Overview:

This training course focuses on teaching participants the fundamentals of Android app development using Android Studio. Participants will learn to design, develop, and deploy Android applications, gaining practical skills through hands-on projects and exercises.

### Course Objectives:

- Introduce participants to Android app development tools and environment.
- Teach participants how to build user interfaces and implement functionality using Android Studio.
- Provide hands-on experience in developing and testing Android applications.
- Prepare participants to deploy their applications on Android devices and publish them on the Google Play Store.

#### **SYLLABUS**

Sl.no	Topics	
1	Introduction to Android Development	<ul> <li>Overview of Android and Android Studio</li> <li>Introduction to Android OS and its features</li> <li>Introduction to Android Studio</li> <li>Setting up the development environment</li> <li>Setting Up Android Studio</li> <li>Installing Android Studio</li> <li>Configuring the Android Emulator</li> <li>Creating your first Android project</li> <li>Understanding the Project Structure</li> <li>Project files and directories</li> <li>Key components: Activities, Services, Broadcast Receivers, Content Providers</li> </ul>
2	Android Project Structure and Basic Components	<ul> <li>Creating a Simple Activity</li> <li>Creating a new Activity</li> <li>Understanding the Activity lifecycle</li> <li>Building and running the application</li> <li>Basics of UI Design</li> <li>Introduction to layouts: Linear Layout, Relative Layout, Constraint Layout</li> <li>Common UI elements: Text View, Button, Edit Text, Image View</li> <li>Designing a Simple UI</li> <li>Creating a layout using XML</li> <li>Adding and arranging UI elements</li> </ul>

PRINCIPAL

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		<ul> <li>Applying styles and themes</li> </ul>
	Handling User Input	Event Handling and Listeners
		<ul> <li>Handling button clicks and user inputs</li> </ul>
		Using listeners for different UI elements
		Implementing User Interactions
3		<ul> <li>Handling clicks and inputs</li> </ul>
		<ul> <li>Displaying input data using Toast and Snackbar</li> </ul>
		Intents and Activity Navigation
		Explicit and implicit intents
		<ul> <li>Passing data between activities</li> </ul>
		Storing and Retrieving Data
		Shared Preferences
	Working with Data	SQ Lite Database
		Introduction to Room Persistence Library
		Implementing Data Storage
4		<ul> <li>Using Shared Preferences for simple data storage</li> </ul>
		<ul> <li>Creating and querying an SQ Lite database</li> </ul>
		Connecting to the Internet
		Making HTTP requests
		Parsing JSON data
		Introduction to libraries like Retrofit
		Fetching Data from a Web Service (1 Hour)
		Making a network request
	Networking and Web Services	Parsing and displaying JSON data
		Debugging and Testing (1 Hour)
_		Using Logcat
5		Writing unit tests
		Debugging common issues
		Writing and Running Tests (1 Hour)
		Debugging with Android Studio tools
		Writing and running tests

### **Outcomes:**

By the end of this course, participants will be able to:

- Understand the Android app development lifecycle and components.
- Develop user interfaces using XML and Android Studio's layout editor.
- Implement functionality using Java/Kotlin programming languages.
- · Debug and test Android applications effectively.
- Use Android Studio's tools and APIs to enhance app performance and user experience