Scheme and Syllabus

B.Tech Full Stack Development

B.tech in Full Stack Development: 4 years program

Program Description:

The Full Stack Development Specialization is a comprehensive and hands-on program that will teach youthe skills and knowledge necessary to build and deploy web applications. Through a combination of lectures, projects, and practical, you will learn how to develop user interfaces, back-end servers, and databases. You will also learn how to apply software engineering principles and practices to your development projects. The program places a strong emphasis on practical skills and projects, giving students the opportunity to work on a variety of real-world web development projects to solidify their skills and gain practical experience.

Value Proposition:

The Full Stack Development Specialization is a valuable investment for anyone who wants to pursue a career in web development. The program is taught by industry experts and provides students with the skills and knowledge they need to be successful in the job market. The web development industry is growing rapidly, and there is a high demand for skilled full stack developers. The program curriculum is designed to meet the needs of the web development industry, and students will learn the latest tools andtechnologies that employers are looking for. In addition to the technical skills students will learn, the Full Stack Development Specialization also offersplacement assistance to help them find jobs after graduation. This means that students will have the opportunity to work on real-world web development projects as part of their coursework, and they will also have access to a network of industry professionals who can help them find a job after they graduate.

Learning Outcomes of the Program:

- Understand the fundamental concepts and principles of programming.
- Develop proficiency in designing and implementing algorithms and data structures.
- Gain knowledge of frontend development principles and best practices.
- Learn to design and implement databases using MySQL.
- Develop skills in backend development and server-side programming.
- Advance knowledge in backend development techniques and technologies.
- Gain proficiency in mobile app development using Flutter framework.
- Understand software design principles and architectural patterns.
- Explore the foundations of generative artificial intelligence in coding.
- Learn about production environments and best practices for code hygiene.

Job Titles:

- Front-End Developer
- Back-End Developer
- Software Engineer
- Web Developer
- Cloud Engineer
- Technical Lead
- Engineering Manager
- Product Manager

Career Prospects:

Course Structure:

YEAR 1 SEMESTER-I

Item	Item Name	Hours
Subject 1	Design Thinking for Programmers	45
Total		**45**

YEAR 1 SEMESTER-II

Item	Item Name	Hours
Subject 1	Database Design using MYSQL	45
	Database Design using MYSQL - Lab	30
Total		**75**

YEAR 2 SEMESTER-III

Item	Item Name	Hours
Subject 1	Foundations of Front-End Development	45
	Foundations of Front-End Development-Lab	30
Total		**75**

YEAR 2 SEMESTER-IV

Item	Item Name	Hours
Subject 1	Foundation of Back-End Development	45
	Foundation of Back-End Development-Lab	30
Total		**75**

YEAR 3 SEMESTER-V

Item	Item Name	Hours
Subject 1	Advanced Back-End Development	45
	Advanced Back-End Development-Lab	30
Total		**75**

YEAR 3 SEMESTER-VI

Item	Item Name	Hours
Subject 1	Software Design Principles	45
Total		**45**

YEAR 4 SEMESTER-VII

Item	Item Name	Hours
Subject 1	Foundations of Gen AI in Coding	45
Total		**45**

YEAR 4 SEMESTER-VIII

Item	Item Name	Time
	Industry Live Project	60 hours
	Internship	6 months
Total		