SL/NO	Part One	Duration	Engineering and Development (Developer)
01	Structure Programming	1 Month	Core Programming (C++ and JavaScript)
02	Object-Oriented Programming	1 Month	Core Programming (C++ and JavaScript)
03	Data Structure	1 Month	Core Programming (C++ and JavaScript)
04	Algorithm	1 Month	Core Programming (C++ and JavaScript)
05	Database Management System	1 Month	Database Design (MySQL and MongoDB)
	Part Two		**Engineering and Development (Architect)**
06	Software Engineering	1 Month	
07	Architecture and Design Pattern	1 Month	Micro-service, Scalability, Design Patterns – Data Intensive App
08	System Analysis and Design	1 Month	
09	Software Security	1 Month	
10	Professional Ethics for Information System	1 Month	
	Part Three		**Product Management (QA | DevOps)**
11	Requirement Specification and Analysis	1 Month	
12	Software Metrics		
13	Testing and Quality Assurance	1 Month	Manual Testing and Testing Automation Tool (Selenium)
	QA Automation		Test Framework (Cypress|Appium), Perofrmance Testing
14	Project Management	1 Month	Agile Methodology, Scrum, Stakeholder Management
15	Software Maintenance		
	Part Four		**Product Management (QA | DevOps)**
16	Human-Computer Interaction		
17	UI/UX Design Fundamental	3 Months	Design Principle, Figma and Prototyping
	UI/UX Design Advanced		Advance Prototyping, Usability Testing, Motion Design
18	Virtualization and Cloud Computing	1 Month	
19	DevOps Fundamental	3 Months	Linux Command Line, Version Control, CI/CD Fundamentals
	DevOps Advance		Docker, Kubernetes, Infrastructure as Code
20	Development Process		
	Part Five		**Designer and User Experience | AI | DS | Cloud**
21	Artificial Intelligence and Machine Learning	3 Months	
22	Applied Data Science and Engineering	1 Month	
23	Web Technology and Frameworks	3 Months	Web Development Basic (HTML, CSS, JavaScript)
	Backend Development		Node.JS and Express.JS
	Frontend Development		React.JS, State Management and Responsive Design
	Full Stack Development		API, Authentication (JWT|QAuth) and Advanced JavaScript
	Advanced Full Stack		Real-Time Apps (Web-socket) and Server-less Architecture

SL/NO	Part Six	Duration	Computer science (Mathematics)
24	Discrete Mathematics		
25	Numerical Analysis		
26	Probability and Statistics		
27	Calculus, Deferential Equation and Analytical Geometry		
28	Combinational Optimization		
	Part Seven		**Computer Science Part-1**
29	Theory of Computation		
30	Operating System and System Programming		
31	Computer Network		
32	Distributed System and Parallel Computing		
33	Technical Writing and Documentation		
	Optional Group One		**Computer Science Part-2**
34	Computer Organization		
35	Computer Graphics and Multimedia		
36	Mobile and Wireless Computing		
37	Embedded System		
38	Pattern Recognizing and Image Processing		
	Optional Group Two		**Business Computing and Customer Support**
39	Numerical Computation for Financial Modeling		
40	Information Retrieval		
41	Enterprise Information System		
42	Data Mining and Warehouse		
43	Business Psychology		
44	Business Studies for Engineers		
45	Business Communication		CRM, Communication Strategies, Handling User Feedback
46	Strategic Management		

Here's a Bachelor of Science (BSc) degree-style curriculum table structured to cover Full Stack Development, Design, QA, DevOps, Project Management, Software Architecture, and Customer Support as Specialized areas. This schedule spans 8 semesters (4 years) and includes core courses, electives, projects, and industry-ready skills for expertise.

Semester	Subject Area	Topics	Learning Resources
01	Core Programming	Programming Fundamentals (Python, JavaScript), Algorithms, and Data Structures	- Introduction to the Theory of Computation by Michael Sipser - CS50's Introduction to Computer Science (Harvard)
02	Web Development Basics	HTML, CSS, JavaScript Basics	- HTML and CSS: Design and Build Websites by Jon Duckett - FreeCodeCamp Web Dev Guide
03	Backend Development	Node.JS, Express.JS, Database (SQL, MongoDB)	- Eloquent JavaScript by Marijn Haverbeke - MDN Backend Docs
04	UI/UX Design Basics	Design Principles, Figma, Prototyping	- The Elements of User Experience by Jesse James Garrett - Interaction Design Foundation
05	Frontend Development	React/Angular, State Management, Responsive Design	- Learning React by Kirupa Chinnathambi - Frontend Mastery by Codecademy
06	QA Testing Basics	Manual Testing, Introduction to Automation Testing Tools (Selenium)	- Testing Computer Software by Cem Kaner - Test Automation University
07	Full Stack Development	APIs, Authentication (JWT, OAuth), Advanced JavaScript	- The Odin Project Full Stack Path
08	UI/UX Advanced	Advanced Prototyping, Usability Testing, Motion Design	- Don't Make Me Think by Steve Krug - Design + Code Tutorials
09	Software Architecture	Micro-services, Design Patterns, Scalability	- Designing Data-Intensive Applications by Martin Kleppmann
10	Advanced Full Stack	Real-Time App (WebSocket), Server-less Architecture	- Node.JS in Action
11	QA Automation	Test Frameworks (Cypress, Appium), Performance Testing	- Continuous Testing for DevOps Professionals by Katrina Clokie
12	DevOps Basics	Linux Command Line, Git, CI/CD Fundamentals	- DevOps Full Course by Simplilearn
13	Project Management	Agile Methodology, Scrum, Stakeholder Management	- Scrum: The Art of Doing Twice the Work in Half the Time Agile M.
14	DevOps Advanced	Docker, Kubernetes, Infrastructure as Code	- The Phoenix Project by Gene Kim - Docker Documentation
15	Customer Support	CRM, Communication Strategies, Handling User Feedback	- Zendesk Customer Support Guide
16	Capstone Project	Build a Full-Scale Application Incorporating All Sills	- Mentorship Programs (linkedIn Learnig) - Personal GitHub Projects

Duration	Topics	Learning Resources	Practice Example	Collaboration Tools
Full Stack Development				
Week 1-4	HTML, CSS, JS Basic	- HTML & CSS by Jon Duckett - FreeCodeCamp	- Build a Portfolio Website - Frontend Mentor Challenges	- GitHub for version control - Discord for team discussions
Week 5-8	Backend (Node.JS, MongoDB)	- Eloquent JavaScript by Marijn Haverbeke - The Odin Project	- Build a REST API for a blog - API Practice	- GitLab for collaboration - Trello for task management
Week 9-12	Advanced Full Stack (React, Authentication)	- Learning React by Kirupa Chinnathambi - Scrimba React	- Build a real-time chat app - Socket.IO Demos	- VS Code Live Share for coding together
Design and User Experience				
Week 1-3	UI/UX Basics, Figma	- The Elements of User Experience by Jesse - Figma Tutorials	- Redesign a popular app's interface - Daily UI Challenges	- Figma Collaboration Tools - Miro for brainstorming
Week 4-5	Prototyping, User Research	- Don't Make Me Think by Steve Krug - User Research Basics	- Conduct a usability test for a basic prototype	- Optimal Workshop for usability testing
Week 6-8	Advanced Design (Motion, Accessibility)	- Google UX Design Certificate	- Create an accessible app interface - Contrast Checker	- XD Team Collaboration Features
Software Architecture				
Week 1-3	System Design Basic, Micro-services	- Designing Data-Intensive Applications by Martin Kleppmann	- Design an architecture for a social media platform	- Lucidchart or Draw.io for diagramming
Week 4-6	Scalability, Performance Optimization	- System Design Primer	- Optimize database queries	- AWS Architecture Tools
QA Engineering				
Week 1-2	Manual Testing Basics	- Testing Computer Software by Cem Kaner - ISTQB Foundations	- Test an e-commerce Website - Bug Reporting Practice	- Jira for test tracking - TestRail for test management
Week 3-6	Automation Testing (Selenium, Cypress)	- Test Automation University	- Write test cases for a web app - Selenium Project Ideas	- Browser-Stack for cross-browser testing
Week 7-8	Performance and Security Testing	- OWASP Testing Guide	- Load test with JMeter - Penetration test a small API	- OWASP ZAP for security testing
DevOps				
Week 1-2	CI/CD Basics, Git, Docker	- The Phoenix Project by Gene Kim - Docker Documentation	- Set up CI/CD with GitHub Actions - Create a Dockerized web app	- Jenkins for pipeline - Docker Hub for collaboration
Week 3-5	Kubernets, Infrastructure as Code	- Kubernetes Tutorials	- Deploy an app using Kubernetes - Practice with Terraform	- Kubernetes Dashboard
Week 6-8	Advanced Monitoring and Security	- Prometheus and Grafana Docs	- Monitor a live app - Visualize server performance	- Prometheuse and Grafana Tools
Project Management				
Week 1-2	Agile, Scrum Basics	- Scrum: The Art of Doing Twice the Work in Half the Time by Jeff Sutherland	- Plan a mock sprint with your team	- Trello/Asana for Agile project management