



Open Full Stack Lab

Fundamentals

- Data Structures and Real-World Implementations
- Algorithms Implementations
- Operating Systems Theory and real-world System Programming
- Real-World Software Engineering Practices
- Application Life Cycle

Best Practices

- Coding Standard
- Reading Code & How to Review Code
- Interface Design
- Shared Objects/JARs
- Build-Process Internals
- Multi-Platform Development
- Debug & Release Mode Development
- Agile Software Development
- Continuous Integration
- Spiral Development
- Done means Done
- Accurate Time Estimation
- Industry Quality Deliverables
- Remote Debugging
- Crash Dump Analysis

Languages

- Multi-Language Development
- bash
- C
- SQL/NoSQL
- Java
- Javascript
- Python
- AngularJS
- HTML5
- CSS3
- XML
- Ruby - optional
- C# - optional
- PHP - optional

Development Paradigms

- Procedural Programming
- Functional Decomposition
- Reactive Programming
- Object Oriented Programming (OOP)
- Design Patterns
- Project Lifecycles

Environments

- Node.js
- jQuery
- Maven

- GIT
- Webstorm
- Chrome devTools
- Maven/Ant
- GIT/Revision Control
- Optimizers / Profilers
- Debuggers
- Eclipse
- Code Blocks - optional
- VStudio - optional
- docker - optional
- AWS/OpenStack - optional
- LINQ - optional
- Spring - optional
- Hibernate - optional
- RabbitMQ - optional

Architectures

- Event Loops
- Multi-Process Systems
- Multi-Threaded Systems
- Distributed Systems
- Cloud-Based Systems
- Client /Server
- Multi-Platform Systems
- Mobile Platforms

UI Fundamentals

- Responsive Web Design
- MVC
- Animations
- Bootstrap
- UX Fundamentals

Networking & Server Side Development

- Network Software Development
- Distributed Systems
- WebSocket
- BaaS
- HTTP
- Gson / JSON
- AJAX
- REST/RESTful
- REST-Assured
- Web Services
- Apache/Tomcat
- Wireshark

Hybrid Mobile Development

- Sensors & Cameras
- Avoiding Platform & Device Fragmentation

Miscellaneous

- Linux Admin for Developers
- UML