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| **Timeline** | **Learning Outcomes in Modules** | **Original Capgemini Excel list (area/topic)** | **Additional expectations and**  **comments of Capgemini** |
| Pre-Studies  (July) | (1) Java & object-oriented programming   * Knowledge of the basic concepts of object-oriented programming (using UML) * Use of Eclipse for managing Java projects * Selection of suitable data types, declaration and initialization of variables * Use of operators to create statements, comparisons and assignments * Creating and modifying strings and using them for their intended purpose * Selection and use of sequence instructions to control the program flow * Recognition of scopes and identification of the validity of variables * Understanding and using one-dimensional fields (arrays)   (2) Docker   * Docker with Hello World * <https://docker-curriculum.com/#our-first-image>   (3) Practice using the command line  (4) Getting to know Jira, first steps   * Create Jira Account (on Capgemini Test Instance) * Work through given Tutorial   (5) Theory   * What do I understand by the DevOps value chain? * How does an agile team work together in a project? | Programming  General (Runtime Environments) |  |
| Week 1 | **Module 1: DevOps Mindset**  As a consultant I can explain basic concepts and a set of best practices of software engineering and DevOps.   * + I know how to run a simple JAVA program and a simple docker container.   + I can explain how development and operations work together. | General  (Software Development)  (Operations)  (Vorgehensmodelle)  (DevOps Approach) |  |
| Week 2 & 3 | **Module 2: Java Programming**  As a consultant I understand java programs and can write tests and fix bugs in java code.   * + I can manage my Java Project in Eclipse using maven dependencies, so packages are resolved automatically.   + I can write Unit Tests using JUnit 5 to achieve basic coding quality and maintainability.   + I can persist Entities using Hibernate to connect a JAVA application to a relational database.   + I can use the Debugger to follow a program execution.   As a consultant I can explain git-flow and its main benefits and can use it to share my code with other team members.   * + I can work proficiently with git and git-flow.   + I can manage and automate test cases using Selenium and X-Ray. | Version Control  Programming  Test  (Selenium)  Build Management  (Deployment)  General  (Testmanagement) |  |
| Week 4 | **Module 3: Engineering Process**  I understand common software engineering processes and methodologies and I can explain their basic principles.   * + I can use Jira to manage my issues   + I can use a Kanban board to visualize user stories   + I am able to explain the main differences between conventional project management and common agile practices   + I understand how changes and issues impact software development and can utilize common approaches to include them   + I am aware of basic data privacy regulations and security threats | General  (Data Privacy)  (Project-Management)  (Change-Management)  (Issue-Management)  (Kanban/Scrum)  (Agile Methoden)  Attlassian Products |  |
| Week 5 | **Module 4: Infrastructure as a Service**  I know the typical cloud services and their features and can compare cloud services to their on-premise counterparts.   * + I have theoretical background for container platforms.   + I can use terraform to create local servers via docker.   + I can deploy a Jenkins server on a Linux VM using ssh.   + I can deploy a Jenkins server on a Linux VM using ansible. | Runtime Environments  Build Management  Deployment |  |
| Week 6 (shared) | **Module 5: DevOps Soft Skills [& Start of Mini Project]**  As a consultant I know about necessary DevOps soft skill sets, can assess my individual level and am able to continuously improve upon them.  **Mini Project Topic:** I can deploy, and test a given application.   * Using test automation and Jenkins | Soft Skills  (DAF Application Consultant)  (Verantwortungs-bewusstsein)  (Vertrauens-würdigkeit)  Test  (Testautomation) |  |
| Week 7 & 8 | **Module 6: Deployment and Delivery**  As a consultant I understand common software engineering processes and methodologies and I can explain their basic principles.   * + I can write and configure a spring boot application using common spring boot mechanisms   + I can pack a deliverable artifact with documentation.   As a consultant I can deploy an application using scripts (without utilizing pipelines).   * + I can install and start a tomcat server using docker.   + I can deploy a tomcat server on a Linux VM using ssh, ansible.   + I can deploy a java war file to tomcat using ansible.   + I can deploy a java docker image to the docker runtime. | Programming  Build Management  Deployment  Runtime Environments |  |
| Week 9 | **Module 7: Continuous Integration**  As a consultant I know typical steps of Continuous Integration (CI) and can create pipelines.   * + I can create a hello World Jenkins file and a CI Pipeline.   + I can set up a Webhook to Jenkins.   + I can validate code quality with SonarQube. | Build Management  Deployment |  |
| Week 10 | **Module 8: Continuous Deployment**  As a consultant I know typical steps of Continuous Deployment (CD) and can detect simple errors.   * + I understand error messages in Jenkins or application logs and can fix the errors.   + I can deploy using a Jenkins file.   + I can inspect log files of my application.   + I can deploy my application to an existing logging stack using the sidecar pattern.   + I can monitor api health and ready metrics using Prometheus and Grafana.   + I can monitor CPU and memory usage. | Build Management  Deployment  Runtime Environments |  |
| Week 11 & 12 | **Finale Project** |  |  |

**Original Capgemini Excel list**

Basic: Wendet theoretisch fundiertes Wissen an, um klar definierter Aufgabenstellungen überwiegend unter Anleitung zu erledigen.

Experience: Wendet fundiertes Wissen an, um Lösungen weitestgehend selbsständig zu erarbeiten und Aufgabenstellungen eigenständig zu erledigen.

**Professional:** Wendet fundiertes Wissen und Praxiserfahrung an, um eigenständig Geschäftsprozesse und Lösungen umzusetzen

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| Area | Topic | Knowledge | | | Academy Modules |
| Basic | Experienced | Professional |
| Programming | Java |  | x |  | Pre, 1, 2, 6 |
| Spring Boot |  | x |  | 6 |
| Unit Test |  | x |  | 2 |
| Hibernate |  | x |  | 2 |
| Lokale Entwicklungsumgebung |  | x |  | All |
| Versioncontrol | GIT |  | x |  | 2+ |
| GIT Workflows |  | x |  | 2+ |
| Buildmanagement | CI Pipelines |  | x |  | 7 |
| Maven |  | x |  | 2, 6 |
| Jenkins |  |  | x | 4, 5, 7, 8 |
| Static Code Verification | x |  |  | 2, 7 |
| SonarQube | x |  |  | 7 |
| Nexus / Artifactory | x |  |  | 4 |
| Deployment | CD Pipelines |  | x |  | 8 |
| Jenkins Pipelines |  | x |  | 7, 8 |
| Groovy |  | x |  | 7 |
| Ansible |  | x |  | 4, 6 |
| SQL | x |  |  | 2 |
| Infrastructure as Code | x |  |  | 4, 6 |
| Test | Testautomation | x |  |  | 2, 5 |
| Selenium | x |  |  | 2, 5 |
| Runtime Environments | Hypervisor (e.g. VMWare) | x |  |  | 4 |
| Linux |  |  | x | 6 |
| Docker |  | x |  | All |
| Container Platforms (Kubernetes or OpenShift) | x |  |  | 4 |
| Cloud IaaS and PaaS (AWS or Azure) | x |  |  | 4 |
| Database (e.g. Oracle) | x |  |  |  |
| Application Server (e.g. Tomcat) |  | x |  | 4, 6, 8 |
| Webserver (e.g. Apache/Nginx) |  | x |  | 4, 6, 8 |
| Monitoring / Logging |  | x |  | 8 |
| General | Softwareengineering |  | x |  | 1 |
| DevOps Approach | x |  |  | 1 |
| Vorgehensmodelle | x |  |  | 1, 3 |
| Operations | x |  |  | 1 |
| Soft Skills | Siehe DAF für Applications Consultant |  | x |  | 5, All |
| Verantwortungsbewußtsein |  | x |  | 5, All |
| Vertrauenswürdigkeit |  | x |  | 5, All |