

**COMPUTER APPLICATIONS - MODULE MAP 2024-2025**

| GROUP                   | PERIOD 1  | PERIOD 2  | PERIOD 3  | PERIOD 4   | PERIOD 5 SUMMER STUDIES  |
|-------------------------|---|---|---|--|--|
| <p><b>BBCAP24A3</b></p> | <p>Core Competence<br/> <b>Introduction to IT Studies</b><br/>                     CA00EE56-3002 Orientation to Studies<br/>                     CA00EE58-3002 Basics of Programming<br/>                     CA00EE60-3002 Operating Systems<br/>                     CA00EE62-3002 Finnish 1</p>                      | <p>Core Competence<br/> <b>Introduction to Software Development</b><br/>                     CA00EE64-3002 Databases<br/>                     CA00EE66-3002 Object-Oriented Programming<br/>                     CA00EE68-3002 Basics of Data Analysis<br/>                     CA00EE70-3002 Computer Networks and Security<br/>                     CA00EE72-3002 Finnish 2</p> | <p>Core Competence<br/> <b>Web Development</b><br/>                     CA00EE74-3002 Building a Static Website<br/>                     CA00EE76-3002 Web Programming<br/>                     CA00EE78-3002 Content Management Systems<br/>                     CA00EE80-3002 Finnish 3</p> | <p>Core Competence<br/> <b>Cloud Foundations</b><br/>                     CA00EE82-3002 Finnish 4<br/>                     TK00EC66-3002 Cloud Services<br/>                     TK00EC68-3002 Cloud-Based Business Solutions<br/>                     TK00EC70-3002 Agile Business Solution Development</p>                 | <p>Profiling Competence<br/> <b>Optional studies 15 op</b></p> |
|                         |   |   |   | <p>Core Competence<br/> <b>Software Development</b><br/>                     CA00EE82-3002 Finnish 4<br/>                     TK00EC60-3002 Applied Application Project<br/>                     TK00EC62-3002 Software Development Tools<br/>                     TK00EC64-3002 Web Services</p>                            |  |
| <p><b>BBCAP23A3</b></p> | <p>Core Competence<br/> <b>Customer Projects</b><br/>                     CA00EE96-3001 Data Processing with Python<br/>                     CA00EE98-3001 Software Testing<br/>                     CA00EF02-3001 Communication in Customer Projects<br/>                     TK00EC76-3001 Design Factory Project</p> | <p>Core Competence<br/> <b>Business Analytics</b><br/>                     CA00EF04-3001 Predictive Analytics with Python<br/>                     CA00EF06-3001 Foundations of Data Engineering<br/>                     CA00EF08-3001 Digital and Social Media Analytics</p>  | <p>Core Competence<br/> <b>Automating Business Processes</b><br/>                     CA00EF10-3001 Software Robotics and Automation<br/>                     CA00EF12-3001 Software Design<br/>                     CA00EF14-3001 Minithesis</p>   | <p>Profiling Competence<br/> <b>Delivering Software Products</b><br/>                     TK00ED18-3001 Software Delivery Models &amp; Methods<br/>                     TK00ED20-3001 Web Servers<br/>                     TK00ED22-3001 Containerization<br/>                     TK00ED24-3001 Software Delivery Tools</p> |  |
|                         |   |   |   | <p>Profiling Competence<br/> <b>Backend Web Development</b><br/>                     TK00EC94-3001 Web Accessibility<br/>                     TK00EC96-3001 JavaScript<br/>                     TK00EC98-3001 Web Framework Project</p>  |  |
|                         |   |   |   | <p>Profiling Competence<br/> <b>Data Science</b><br/>                     TK00ED06-3001 Mathematics for Data Science with Python<br/>                     TK00ED08-3001 Big Data Technologies<br/>                     TK00ED10-3001 Applied Machine Learning</p>  |  |

| GROUP     | PERIOD 1   | PERIOD 2   | PERIOD 3  | PERIOD 4            | PERIOD 5 SUMMER STUDIES |
|-----------|--|--|---|---------------------|-------------------------|
| BBCAP22A3 | Profiling Competence<br><b>Cloud Computing</b><br>TK00DJ26-3002 Cloud Computing<br>TK00DJ27-3002 Multicloud Management<br>TK00DJ28-3002 Cybersecurity in Cloud Environments  | Profiling Competence<br><b>Game Engine Development</b><br>TK00DJ33-3002 3D Modelling<br>TK00EX51-3001 Game Programming<br>TK00EX52-3001 Game Development Project | Profiling Competence<br><b>Optional studies 15 op</b> | <b>Thesis 15 op</b> |                         |
|           | Profiling Competence<br><b>Mobile Programming</b><br>TK00DH16-3003 Virtualization Techniques for Software Developers<br>TK00DH17-3002 Cross-platform Development<br>TK00DH18-3002 Mobile Programming Project             | Profiling Competence<br><b>ICT Project</b><br>TK00EX49-3001 ICT Project and Product Planning<br>TK00EX50-3001 ICT Project and Product Implementation             |   |                     |                         |
|           | Profiling Competence<br><b>Machine Learning &amp; AI</b><br>TK00DH12-3002 Solutions in Pattern Recognition<br>TK00DH13-3002 Development of Artificial Intelligence Applications<br>TK00DH14-3002 Artificial Intelligence |  |   |                     |                         |