

SYLLABUS ECCC

MODULE: **CS M3** CREATING WEB APPLICATIONS

LEVEL: **ADVANCED (C)**

The examination of this module includes all aspects of the intermediate level (B) extended the competencies listed below.

COMPETENCE GROUP	COMPETENCE WITHIN ECCC STANDARDS
1. Object Oriented Programming (OOP)	1.1 Succession (extension classes) 1.2 Polymorphism 1.3 Cloning 1.4 Constructors and destructors 1.5 Constants Classes 1.6 Classes and abstract methods, interfaces 1.7 Succession and access modifiers 1.8 Aggregation and composition
2. Object-Oriented techniques	2.1. Inner class, anonymous classes, final, static 2.2. Model of exception handling (try / catch / finally) 2.3. Annotations 2.4. Assertions 2.5. Garbage collector
3. Databases	3.1. Installation of MySQL server 3.2. ERD diagram 3.3. Principles of design relationships - normal forms 3.4. Creating tables, columns types 3.5. Basic SQL statements: Insert, downloading, editing and removing the data 3.6. Sorting data 3.7. Grouping and aggregation 3.8. Limiting query results 3.9. Advanced SQL: subqueries, joins
4. Java	4.1 Java Platform 4.2 Application structure 4.3 Integrated environment NetBeans 4.4 Window application 4.5 Java Applets 4.6 Topics 4.7 Web applications

Preferred development environment for the realization of the advanced-level tasks:

- Web Server/scripting language interpreter: Apache/PHP 5.0+
- Database server: MySQL, PostgreSQL, Oracle, Sybase
- Text editor: PSPad
- Web browser: Mozilla/Firefox, Internet Explorer, Opera, Safari
- Additional tools: JBuilder NetBeans, ASP .NET