

## ECCC SYLLABUS

MODULE: **CS M3** CREATING WEB APPLICATIONS

LEVEL: **EXPERT (D)**

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

COMPETENCE GROUP	COMPETENCE WITHIN ECCC STANDARDS
1. Architectural models	1.1. MVC architecture (Model View Control). 1.2. IoC architecture (Inversion of Control).
2. Design patterns	<b>Design patterns (creative)</b> 2.1. Factory / Plant Abstract 2.2. Factory Method 2.3. Singleton <b>Structural patterns</b> 2.4. Adapter 2.5. Decorator 2.6. Facade <b>Functional patterns</b> 2.7. Iterator 2.8. The method of stencil 2.9. Observer
3. Object-Oriented rules	3.1. Single responsibility principle 3.2. Open/closed principle 3.3. Liskov substitution principle
4. Object-Oriented techniques	4.1. Serialization and caching (memcached) objects 4.2. Study the structure of objects by means of reverse engineering (Reflection API) 4.3. Validation code fragments using unit tests (PHPUnit).

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

- ASP.NET
- JBuilder
- NetBeans