Course name:		
Advanced Internet Programming		
Field of study: **Computer science**	Type of study: **Full-time**	Sourse code:
Course characteristics: **Mandatory within the additional content**	Level: **First**	Year: Semester:
Type of classes: **lectures, laboratories**	Hours per week:	ECTS points amount:

COURSE GUIDE

I. GENERAL INFORMATION OF THE COURSE

AIMS OF THE COURSE

A1. Obtaining knowledge in developing advanced internet application.

A2. Obtaining practical skills in designing and developing advanced internet application.

PRELIMINARY REQUIREMENTS FOR THE KNOWLEDGE, SKILLS AND OTHER COMPETENCIES

1. Basic skills of programming in some high level programming language
2. Basic knowledge about ASP.NET
3. Ability to use various sources of information including manuals and technical documentation.
4. Ability to work independently and in a group
5. Basic knowledge about modelling techniques and data base programming.

II. EFFECTS OF EDUCATION

EE 1 – able to use some basic design and architectural patterns.

EE 2 – able to use test-driven development methodology .

EE 3 – able to create ASP.NET MVC application.

EE 4 – able to use some advanced mechanisms of ASP.NET MVC (e.g. routing).

EE 5 – able to optimize internet application

PROGRAM OF EDUCATION

Lectures		Hours
Lect. 1	Introduction to Advanced Internet programming	**2**
Lect. 2	Design Patterns in ASP.NET Application I	**3**
Lect. 3	Design Patterns in ASP.NET Application II	**3**
Lect. 4	Test Driven Development	**3**
Lect. 5	Introduction to ASP.NET MVC	**3**
Lect. 6	ASP.NET MVC – views	**2**
Lect. 7	ASP.NET MVC – users authorizations and data validations	**2**
Lect. 8	ASP.NET MVC – routing	**2**
Lect. 9	ASP.NET MVC – AJAX	**2**
Lect. 10	Optimization of Internet Application I	**2**

Lect. 11	Optimization of Internet Application II	2
Lect. 12	IIS Administration	2
Lect. 13	IIS Administration	2
Laboratories		**Hours**
Lab. 1	Developing of simple database application with ASP.NET	3
Lab. 2	Designing and developing multi-tier application in ASP.NET	3
Lab. 3	Design patterns in ASP.NET	3
Lab. 4	Model View Presenter architectural pattern in ASP.NET	3
Lab. 5	Unit tests in ASP.NET	3
Lab. 6	Developing of simple ASP.NET MVC application I	3
Lab. 7	Developing of simple ASP.NET MVC application II	3
Lab. 8	Developing of simple ASP.NET MVC application III	3
Lab. 9	Optimization of ASP.NET MVC application	3
Lab. 10	IIS Administration	3

DIDACTIC TOOLS

1. – multimedial presentations for lectures
2. – instructions for laboratories
3. – wide range of algorithm and programming tools
4. – workplaces for students equipped with workstations

BASIC AND ADDITIONAL LITERATURE

1. Troelsen A., „Pro C# 5.0 and the .NET 4.5 Framework", APress 2012
2. Jason N. Gaylord, Christian Wenz, Pranav Rastogi, Todd Miranda, Scott Hanselman, "Professional ASP.NET 4.5 in C# and VB" Wrox 2013
4. Millett S., "Professional ASP.NET Design Patterns", Wiley Publishing, 2010
5. Arking J., Millett S., "Professional Enterprise.NET", Wiley Publishing, 2009
6. Palermo J., Scheirman B., Bogard J., Hexter E., Hinze M., "ASP.NET MVC 4 in action", Manning Publication 2012
7. Freeman A „Pro ASP.Net MVC 4 ", Apress, 2013.

TEACHERS

dr inż. Łukasz Bartczuk lukasz.bartczuk@iisi.pcz.pl