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| The Faculty of: | Electrical and Computer Engineering |
| Field of study: | Control Systems and Robotics |
| Speciality: | Computer Control Systems |
| Study degree (BSc, MSc): | first circle full time studies |

COURSE UNIT DESCRIPTION

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| Course title: | Modern Programming Technologies |
| Lecturer responsible for course: Grzegorz Dec, PhD | |
| Contacts: phone: +48 17 8651486 | e-mail: gdec@prz-rzeszow.pl |
| Department : Computer Science and Automatic Control | |

| Semester | Weekly load | Type of classes | | | | Number of ECTS credits |
|----------|-------------|-----------------|-----------------------|---------------|-----------|------------------------|
| | | L Lectures | C Theoretical Classes | Lb Laboratory | P Project | |
| 5 | 3 | 25 | | 15 | 15 | 3 |

| Course description |
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| <p>Lecture:</p> <ol style="list-style-type: none"> 1. Introduction to XML 2. Servlet XSQL technology and XSQL language 3. Conversions and presentation of XML documents using the XSQL technology 4. Web Services in the XSQL technology 5. Internet applications in .NET environment 6. Web Services in the .NET technology 7. Security in internet applications 8. Deployment of .NET applications 9. The UML language in the development of J2EE applications 10. Business applications in the EJB technology 11. JSF – presentation layer of J2EE applications 12. Deployment of J2EE applications |
| <p>Classes:</p> |
| <p>Laboratory:</p> <p>Laboratorium</p> <p>-----</p> <ol style="list-style-type: none"> 1. Basic operations on data: CRUD (Create, Read, Update, Delete) in XSQL language. 2. Passing parameters between XSQL pages. 3. Presentation layer in the XSQL scripts. 4. HTML forms for entering data in the XSQL language. |

5. Internet application development in the C# language.
6. Web services in the .NET technology.
7. .NET applications deployment.

Project:

Development of an internet application prototype using chosen technology (XSQL, .NET, J2EE)

Objectives of the course

Development of data base internet applications using technologies .NET, XSQL, J2EE (data layer, business logic layer, presentation layer). Development of Web services.

Examination method

Laboratory: reports from the classes
 Project: a prototype of an information system
 Lecture: a written test

Bibliography

1. Ben Chang, Mark Scardina, Stefan Kiritzov "Oracle9i i XML", Helion 2003
2. Stephen C. Perry, Sławomir Orłowski „C# i .NET C#. Tworzenie aplikacji sieciowych.”, Helion 2008
3. Michael D. Thomas „Oracle XSQL: Combining SQL, Oracle Text, XSLT, and Java to Publish Dynamic Web Content”, Wiley Publishing, Inc., 2003
4. Lars Powers, Mike Snell „, Microsoft Visual Studio 2005. Księga eksperta”, Helion 2007
5. Deepak Alur, John Crupi, Dan Malks "J2EE. Wzorce projektowe. Wydanie 2", Helion 2004
6. Bill Burke, Richard Monson-Haefel "Enterprise JavaBeans 3.0. Wydanie V", Helion 2007
7. David Geary, Cay S. Horstmann "JavaServer Faces. Wydanie II" Helion 2008

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| Lecturer signature | |
| Head of Department signature | |
| Dean signature | |