

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Selected internet technologies		Code 1010331561010337132
Field of study Information Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty Security of Information Technology (IT)	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 30 Classes: - Laboratory: 30 Project/seminars: -		No. of credits 5
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 5 100% 5 100%
Responsible for subject / lecturer: dr inż. Jolanta Cybulka email: jolanta.cybulka@put.poznan.pl tel. 0-61 6653724 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	1. Student has structured and methodologically grounded knowledge on software engineering. 2. Student has structured and theoretically grounded knowledge on network technologies. 3. Student has structured and theoretically grounded knowledge on databases and warehouses.
2	Skills	1. Student can use programming platforms and environments to design, run and debug simple programs written in imperative, object-oriented and declarative programming languages. 2. Student is able to design and implement a simple database or warehouse and he/she can formulate simple queries to it.
3	Social competencies	Student knows that she/he is obliged to perform well her/his job and also knows that she/he is obliged to perform well the part of assigned to her/him part of teamwork.
Assumptions and objectives of the course: Student knows that she/he is obliged to perform well her/his job and also knows that she/he is obliged to perform well the part of assigned to her/him part of teamwork.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student has structured and theoretically grounded knowledge on internet technologies. - [K_W11] 2. Student has knowledge on state-of-the-art and modern trends in computer engineering. - [K_W19]		
Skills:		
1. Student can design and implement basic functionalities concerning internet portals and services. - [K_U15] 2. Student can work individually and in collaboration; is able to estimate time needed to perform the ordered task; is able to formulate a schedule of works to be done. - [K_U02]		
Social competencies:		
1. Student is aware of his/her responsibility for the work done and he/she is ready to comply the rules of work in a team and to bear the responsibility for the collaboratively performed task. - [K_K04]		
Assessment methods of study outcomes		

<p>Lecture: writing exam (testing the knowledge concerning the basic standards and features of Semantic Web and Web 2.0 applications), minimal score 50,1%.</p> <p>Laboratory: scored: a) presentation of a (fragment of collaboratively developed) running system/description of a practically developed resource b) submission of an individual report on a work done c) punctuality of work.</p>		
Course description		
<p>Lecture: Internet information systems (definition, classes of architectures, classification of systems). Web generations. Representing and processing of data on the Web (markup languages and their application interfaces: SGML, HTML, HTML5 and the XML family). Notion of a ?semantic metadata?. Standards of metadata (RDF and RDFS). Semantic Web (ideas, tools and applications): a notion of a (computational) ontology, classifications of ontologies, selected ontologies and their creation&processing methodologies; OWL and OWL2 languages; selected ontology editing and processing tools. Rule-based representations of data on the Web: SWRL language. Querying Web metadata via SPARQL. The idea and basic features of Web 2.0/3.0. Linked Open Data (LOD). DBpedia and YAGO 2/3 knowledge bases.</p> <p>Laboratory: Collaborative designing and implementing modules of applications that are elements of the ?Environment to semantics-directed creating and exploiting of an information system?:</p> <ol style="list-style-type: none"> 1. Acquiring the features of the legacy environment and the task to be done; forming the working team and selecting its leader; methodology selection and assigning tasks to the team members. 2. Writing the report on the ?introductory work? and making the individual work schedule. 3. - 5. Working on tasks. 6. Reporting works done (a model, an algorithm, chosen tools and technologies). 7. Multimedia presentation of the obtained results, chaired by the team leader. 8. Summary. 		
Basic bibliography:		
<ol style="list-style-type: none"> 1. W3C Consortium documents http://www.w3.org/TR. 2. RFC documents. 3. Thematic Internet portals. 		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. lecture	20	
2. laboratory	16	
3. exam and consulting hours with the teacher	14	
4. preparation for exam	16	
5. preparation for laboratory	59	
Student's workload		
Source of workload	hours	ECTS
Total workload	125	5
Contact hours	50	2
Practical activities	75	3