ANUL I
1. Multimedia Design for e-Business – D27ISBM101
2. Computational and Algorithmic Methods in e-Business – D27ISBM102
3. Service and Agent Technologies for E-Business – D27ISBM103
5. Web Systems Engineering (Option 1a) – D27ISBM105
6. Image Processing (Option 1b) – D27ISBM106
8. Secure Payment Systems – D27ISBM208
10. Knowledge and Semantics-Based Systems – D27ISBM210
11. Complex Graphical Systems (Option 2a) – D27ISBM211
12. Legal, Ethical and Social Issues in e-Business (Option2b) – D27ISBM212

ANUL II
1. Software Metrics for Web Systems – D27ISBM313
2. Systems for Visual Information Retrieval (Option 3a) – D27ISBM314
3. Information Technology for e-Marketing and Branding (Option 3b) – D27ISBM315
4. Data Mining and Data Warehouses – D27ISBM316
5. Enterprise Information Systems – D27ISBM317
6. Research activity – D27ISBM418
7. Practical Stage for Dissertation Project – D27ISBM419
ANUL I

SUBJECT OF STUDY: MULTIMEDIA DESIGN FOR E-BUSINESS

NUMBER OF CREDITS: 6
SEMESTER: I
COURSE TYPE: sinteza
COURSE OBJECTIVES: The course covers the essential concepts and technologies of text, graphics, animation, audio, and video and how they are interwoven to create multimedia products for e-business. It introduces the essential concepts and technologies, every learner will receive a solid introduction to the field of multimedia, including design principles, storyboarding, component development, motion graphics, animation principles, camera moves, and storytelling techniques.


TEACHING LANGUAGE: English
EVALUATION: oral exam

BIBLIOGRAPHY:
- Multimedia Design and Production for Students and Teachers, Edward L. Counts, Alyn & Bacon, 2003

SUBJECT OF STUDY: COMPUTATIONAL AND ALGORITHMIC METHODS IN E-BUSINESS

NUMBER OF CREDITS: 6
SEMESTER: I
COURSE TYPE: aprofundare
COURSE OBJECTIVES: It is one of the specialty courses and it is a continuation of the knowledge obtained from the “Algorithms Complexity Analysis” course.

COURSE CONTENT: Optimisation problems; Optimization problems approximation; NP-complexity class; Complexity classes polynomial optimization; Probabilistic algorithms; Probabilistic Turing Machines; probabilistic complexity classes.

TEACHING LANGUAGE: English
EVALUATION: written exam

BIBLIOGRAPHY:
- DEXTER C. KOZEN - The Design and Analysts of Algorithms; Springer Verlag 1992;
- DAVID HAREL - Algorithmics - The Spirit of Computing; Addison-Wesley 1981;
- WEISS M. A. - Data Structures and Algorithms Analysis; Benjamin Cummings 1992;
- BOVET D. P.; CRESCENZI P. - Introduction to the Theory of Complexity; Prentice Hall 1994;
- BAASE S. - Computer Algorithms. Introduction to Design and Analysis; Addison- Wesley 1992;
- CORMEN TH., LEISERSON CH., RIVEST R.- Introduction to Algorithms; MIT Press 1992;
- AHO A. V., HOPCROFT J. E., ULLMAN J. D. - The design and Analysis of Computer Algorithms; Addison-Wesley 1975;
- J HOPCROFT J. E., ULLMAN J. D. - Introduction to Automata, Theory, Languages and Computation; Addison-Wesley 1979;
- MORET B. M. E., SHAPIO H. D. - Algorithms from P to NP; Benjamin Cummings 1990;
- LA SSAIGNE R., ROUGEMONT M. - Logique et Complexe; Editions Hermes 1996;
- BALCAZAR J., DIAZ J., GABARRO J. - Structural Complexity; Springer Verlag 1988;
- PAPADIMITRIOU CH. - Computational Complexity; Addison-Wesley 1994;
- NEIL D. JONÉS - Computability and Complexity; MIT Press 1997;
- JACQUES STERN - Fondements Mathematiques de L'informatique; McGraw-Hill 1990
- GREEN D., KNUTH D. E. -Mathematics for the Analysis of Algorithms; Birkhauser 1990;
- CALUDE CRISTIAN - Complexitatea calculului. Aspecte calitative; Ed. Stilnifica si Enciclopedica 1982;
- BURDESCU D. D., PATRICIU ALEX. - O implementare a unei reduceri intre probleme NP-complete; Revista ELSE-Software nr.7/1995;
- BURDESCU D. D. - Tehnici de programare in C; Ed. Radical 1995;
- BURDESCU D. D., PATRICIU ALEX. - Analiza algoritmulor (Indrumar de laborator), Reprograafia Universitatii Craiova 1996;
- BURDESCU D.D. - Analiza complexitatii algoritmilor (curs);Reprograafia Universitatii Craiova 1997

SUBJECT OF STUDY: SERVICE AND AGENT TECHNOLOGIES FOR E-BUSINESS

NUMBER OF CREDITS: 6
SEMESTER: I
COURSE TYPE: sinteza
COURSE OBJECTIVES: This course explores new technologies for software development based on agents and services. Results: Agent and service-oriented software development methodologies;Software platforms based on agents and services; Architectures, notations and standards in agent and service oriented software engineering; Applications: e-business, distributed decision making, crisis and disaster man.

COURSE CONTENT: 1. Introduction to agents and services; 2. Software architectures based on agents and services; 3. Service and agent based software development methodologies; 4. Notations and models for agent and service oriented software; 5. Service and agent oriented software technologies and platforms (coordination, processes, transactions, workflow systems); 6. Multi-agent systems: semantics, communication, negotiation, collaboration, organisations, societies, norms

TEACHING LANGUAGE: English
EVALUATION: written exam

BIBLIOGRAPHY:
Wooldridge, M. J. An Introduction to MultiAgent Systems. John Willey & Sons Ltd, 2002
Munindar P. Singh and Michael N. Huhns, Service-Oriented Computing: Semantics, Processes, Agents, John Willey & Sons, Ltd., 2005
Maria Fasli, Agent Technology for E-Commerce, Wiley, 2007
Christopher D. Walton, Agency and the Semantic Web, Oxford University Press, 2007
Fabio Luigi Bellifemine, Giovanni Caire, Dominic Greenwood, Developing Multi-Agent Systems with JADE, Wiley, 2007

SUBJECT OF STUDY: FORMAL METHODS IN WEB SYSTEMS DEVELOPMENT

NUMBER OF CREDITS: 6
SEMESTER: I

COURSE OBJECTIVES: To introduce students to the concepts and techniques required in Semantic Web. To introduce students to the concepts and techniques of the formal languages and models: the Z language, and of the Petri Net models. To apply formal methods to Semantic Web.


TEACHING LANGUAGE: English

EVALUATION: oral exam

BIBLIOGRAPHY:
M. Dean, G. Schreiber - OWL Web Ontology Language Reference, 2004 (http://www.w3.org/TR/owlref)

SUBJECT OF STUDY: IMAGE PROCESSING

NUMBER OF CREDITS: 6
SEMESTER: I

COURSE OBJECTIVES: To introduce students to the concepts and techniques required in Semantic Web. To introduce students to the concepts and techniques of the formal languages and models: the Z language, and of the Petri Net models. To apply formal methods to Semantic Web.


TEACHING LANGUAGE: English

EVALUATION: oral exam

BIBLIOGRAPHY:
M. Dean, G. Schreiber - OWL Web Ontology Language Reference, 2004 (http://www.w3.org/TR/owlref)

SUBJECT OF STUDY: MOBILE AND WIRELESS TECHNOLOGIES FOR E-BUSINESS

NUMBER OF CREDITS: 6
SEMESTER: II

COURSE OBJECTIVES: The course goals consist of teaching the main issues on mobile and wireless technologies, mobile devices, wireless networks, mobile and wireless security. During this course the students are also taught how to build Smart Client Applications and Wireless Internet Applications as well.


TEACHING LANGUAGE: English

EVALUATION: written exam

BIBLIOGRAPHY:
The course has the objective of introducing and promoting the procedures, technologies, practices available today for secure electronic transactions.

COURSE CONTENT:

TEACHING LANGUAGE: English
EVALUATION: written exam
BIBLIOGRAPHY:
and code to commentary and to follow that same question into materials covering other research ebusiness domains.


**TEACHING LANGUAGE:** English

**EVALUATION:** written exam

**BIBLIOGRAPHY:**

**ANUL II**

### SUBJECT OF STUDY: SOFTWARE METRICS FOR WEB SYSTEMS

| NUMBER OF CREDITS: | 7 |
| SEMESTER: | II |
| COURSE TYPE: | aprofundare |
| COURSE OBJECTIVES: | | |
| COURSE CONTENT: | | |
| TEACHING LANGUAGE: | English |
| EVALUATION: | | |
| BIBLIOGRAPHY: | | |

### SUBJECT OF STUDY: SYSTEMS FOR VISUAL INFORMATION RETRIEVAL

| NUMBER OF CREDITS: | 8 |
| SEMESTER: | II |
| COURSE TYPE: | sinteza |
| COURSE OBJECTIVES: | | |
| COURSE CONTENT: | | |
| TEACHING LANGUAGE: | English |
| EVALUATION: | | |
| BIBLIOGRAPHY: | | |

### SUBJECT OF STUDY: INFORMATION TECHNOLOGY FOR E-MARKETING AND BRANDING

| NUMBER OF CREDITS: | 8 |
| SEMESTER: | II |
| COURSE TYPE: | sinteza |
| COURSE OBJECTIVES: | This course explores the basic principles that underlie marketing and how e-business marketing techniques will fundamentally change the traditional marketing process. This course prepares students for careers in a rapidly changing environment of non-linear, online, interactive advertising; new product development and distribution processes; and reliance on databases. Throughout the semester, students will learn how traditional marketing models are translated or modified into the electronic medium of the World Wide Web. This transformation will be examined from theoretical and case study perspectives. |
| COURSE CONTENT: | | |
| TEACHING LANGUAGE: | English |
| EVALUATION: | oral exam |
| BIBLIOGRAPHY: | Advances in Data Warehousing and Mining, David Taniar, IGI Publishing, USA |
| Data Warehousing, Data Mining, and OLAP (Data Warehousing/Data Management), Alex Berson, Stephen J. Smith, Computing Mcgraw-Hill, 1997 |
SUBJECT OF STUDY: ENTERPRISE INFORMATION SYSTEMS

NUMBER OF CREDITS: 8
SEMESTER: II
COURSE TYPE: sinteza
COURSE OBJECTIVES:
TEACHING LANGUAGE: English
EVALUATION: written exam

BIBLIOGRAPHY:

SUBJECT OF STUDY: RESEARCH ACTIVITY

NUMBER OF CREDITS: 15
SEMESTER: II
COURSE TYPE: CA
COURSE OBJECTIVES:
COURSE CONTENT:
TEACHING LANGUAGE: English
EVALUATION:
BIBLIOGRAPHY:

SUBJECT OF STUDY: PRACTICAL STAGE FOR DISSERTATION PROJECT

NUMBER OF CREDITS: 15
SEMESTER: II
COURSE TYPE: sinteza
COURSE OBJECTIVES:
COURSE CONTENT:
TEACHING LANGUAGE: English
EVALUATION:
BIBLIOGRAPHY:

Decan,
Prof.univ.dr.ing.Eugen BOBAŞU