PREREQUISITES
It would be appropriate the students to have good knowledge of subjects related to business principles and management of organizations and companies and informatics.

COURSE PRESENTATION

1. **ABSTRACT**
   The course "Management Information Systems" will be newly introduced to these students.

2. **Description of the course content:**
   With the development of information systems and their intensive use, as well as their scalable expansion, the management of organizations began to seek the support of common methodologies for designing management information systems in order to improve results, increase the efficiency of developing solutions and justify the investments.

   The study of methodologies for management information systems design is aiming to cover the nature and characteristics of the activities related to the deep understanding of the management process and development of systems to fulfill its effective implementation. It is usually based on a comprehensive management and philosophy of an organization and building an information technology solution for it. Knowing different methodologies is the key for appropriate choice of the most successful approach. At the surface, methodologies can differ in the recommended techniques or contents of the individual stages, but in deep understanding, their differences are profoundly fundamental.

   The main objective of the course is to study the nature and specificity of different information systems that could be implemented in the enterprises in order to support the management and decision processes. Study of analysis, design and development of information systems will be introduced in order students to learn how to achieve better results from the technological solutions implementation for more efficient operation and management of the business and the whole environment.

3. **Language of instruction:**
   English

CONTENT OF THE COURSE PROGRAM

A. LECTURES

№	TOPICS	Hours
1	Development Management and Information Strategies. Role and objectives of IS in the Management processes. Introduction to the subject area.	3
2	Management process and IS - concepts and definitions. Classification of IS. Information Infrastructure. Information resources management.	4
3	IS role for competitive business environment development. Modern approaches in IS establishment and use.	4
4	Management process feasibility and analysis. IS and technologies planning. Planning for Information Strategy. Technological architecture planning.	4
5	Management process and IS design and development. IS life cycle. Prototype, application and object-oriented development.	4
6	Selection and management of hardware technologies. Input and output organization and design. Information processing, storage and control reguirements.	3
7	Selection and management of software technologies. Types of software solutions.	3
8	Logical data organization. Models. Databases. Data warehouses. Data physical organization management.	3
9	IS implementation and use. Functional IS. Transaction IS. Innovative technological solutions in economy areas. Integrated IS and CRM.	4
10	Decision support systems. Concepts, models and prototyping. Corporate organization and technological approaches.	4
11	Outside environment information exchange design. Telecommunication concepts. Communication environment.	3
12	IS business cost definition. Change management. Economic and financial issues in IS design and implementation costs analysis. Tangible and intangible assets evaluation.	3
13	IS security and control. Main aspects in protection and control organization. Organization and management control structures establishment. Technological solutions.	3
	Total	**45**

Б. SEMINARS

№	TOPICS	Hours	Hours Self study
1	Power Designer Capabilities. Acquaintance with the interface of the product.	2	3
2	Conceptual data model - basic components and method of presentation.	2	4
3	Conceptual data model - presentation of business rules.	1	3
4	Conceptual data model - presentation of entities.	3	6
5	Conceptual data model - presentation of links.	2	6
6	Create a complete conceptual data model.	2	9
7	Examination of the conceptual data model. Generating a physical model.	1	4

8	Physical data model - basic components. Transformation of the components of the conceptual model in the physical data model.	3	3
9	Modify the physical data model.	2	4
10	Analysis of the physical data model. Generating the database.	2	6
11	Documentations.	2	6
12	Creating an object-oriented model with Power Designer. Types of charts.	1	3
13	Creating class diagrams.	3	6
14	Creating use case diagrams.	2	6
15	Creating sequence diagrams.	2	6
	Total	30	75

METHOD / TEACHING STRATEGIES:

- According to the program - three hours lecture and two hours seminars per week. Preparation for each seminar session requires the release of a number of self study hours for the students.
- All lectures are prepared in Power Point and for the seminars practical problems cases are introduced. Necessary technical resources for training in this course are: multimedia projector, computer class.
- The software used - Microsoft Office and Power Designer.

SELF STUDY

Practical experience will be approached by assigning each student an individual task. Tasks are placed at the seminars in accordance with the individual preferences and abilities of the students. Practical work is designed for a specific real object. The assignments are assessed separately and have a certain influence in shaping the final grade.

METHODS FOR EVALUATION

- The individual assignment is subject to the oral defense within the study groups.
- The final grade includes two parts with equal weights - assessment of the written exam and assessment of the individual assignment.
- The formula for the formation of the final grade is the following:

FG = 0,5 * WE + 0,5 * IA,
where

FG = final grade WE = written exam
IA = individual assignment,

- The final score is based on a six-point scale, the minimum score for successful completion of the study is "Average *131*." Compliance assessments with the European system of credit transfer is the following:

Excellent /6/	Very good /5/	Good /4/	Average /3/		Bad /2/	
A	**B**	**C**	**D**	**E**	**FX**	**F**
Credits are awarded according to the curriculum					No credits are awarded	

LEARNING OUTCOMES

The course will give the following knowledge results:

- The advanced aspects of the theory and practice of MIS design.

- The nature, types and characteristics of MIS.
- The nature, characteristics and elements of the methodology for the design of MIS.
- Acquaintance with the techniques and tools for selection and design of MIS.
- Acquaintance with the main aspects of the various methodologies for design, their comparison and appropriate selection.

The course provides the following skills:

- Using different methods and tools for designing information systems.
- Application of Power Designer for the design and description of information systems.

SIMILLAR PROGRAM

1. London School Of Economics;
2. Manchester Business School;
3. University Of Patras.

TOTAL STUDENT OCCUPATION

Type classes	Total hours per semester	Total hours per week	Hours self study	Total
1. Lectures	45	3		**45**
2. Seminars	30	2	60	**90**
3. Laboratory				
4. Practical				
5. Course work				
6. Paper				
7. Individual assignment			15	**15**
8. Mid examination/test				
9. Mid grade				
10. Exam	written		15	**15**
Total	**75**	**5**	**90**	**165**

A. Required

Recommended Literature:

1. Avison, D., Fitzgerald, G., Information Systems, Development, McGraw-Hill Publishing Company, 2012.
2. Avison, D., Information systems Development Methodologies: A Classification According to the Problem Situations, Journal of Information technology, 12, 2011.
3. Bocij, P., Chaffey, D., Business Information Systems, Prentice Hall Europe, 2011.
4. Dennis, A., Wixon, B., Systems Analysis & Design - An Object-Oriented Approach whith UML, John Wiley&Sons, 2010.
5. Edwards, C., Ward, J., The essence of Information Systems, Prentice Hall Europe, 2009.
6. Hirschheim, R., Information Systems: An Historical Perspective, North Holland, 2007.
7. Hoffer, J., George, J., Modern Systems Analysis and Design, Prentice Hall, 2012.

Prepare: .....

8. Kendall & Kendall, Systems Analysis and Design, Prentice Hall, 2009.
9. Langer, A., Analysis and Design of Information Systems, Springer, New York, 2011.

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Head of Department: ..... .

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Dean: .....

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Ниво на достъп: ☐ *общодостъпен* ☐ *за служебно ползване Оповерителен* ☐ *секретен*