

# Меѓународен Универзитет Визион - International Vision University Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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# **SYLLABUS**

| COURSE NAME | COURSE<br>CODE | SEMESTER | COURSE LOAD | ECTS |
|-------------|----------------|----------|-------------|------|
| DATABASES   | CEN -3001      | 5        | 180         | 6    |

| Prerequisite(s)          | None                         |
|--------------------------|------------------------------|
|                          |                              |
| Course Language          | Macedonian, Turkish, English |
| Course Type              | Required                     |
| Course Level             | First Cycle                  |
| Course Lecturer          |                              |
| <b>Course Assistants</b> |                              |
| Classroom                | 106                          |
| Extra-Curricular         |                              |
| Office Hours and         |                              |
| Location                 |                              |

| Course Goals            | Database management systems, hierarchical, network and relational data models, Relational model, Relational algebra, Integrity, normalization, SQL queries, database |  |
|-------------------------|--|--|
|                         | design, concurrency, object-oriented databases, XML databases  |  |
| <b>Program Outcomes</b> | -Modeling of the large amount of data for efficient process.   |  |
|                         | -Design of software applications that can process large amounts of database and application.   |  |
|                         | -Choosing the necessary database software components and appropriate models to be used in the project  |  |
|                         | -Operation as part of a teamwork and providing the done work to audience.  |  |
| <b>Course Contents</b>  | -Teaching the use of database management systems   |  |
|                         | -Teaching of database application development  |  |
|                         | - Teaching of data modeling and realization of this model  |  |
|                         | - To teach the different data modeling approaches to develop teamwork and presentation skills  |  |
|                         |  |  |

# WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

| Week | Subjects                                  | Related Preparation                |
|------|---|------------------------------------|
| 1    | Introduction                              | Related Chapters of Course Sources |
| 2    | Relation Model                            | Related Chapters of Course Sources |
| 3    | Relation Model-SQL                        | Related Chapters of Course Sources |
| 4    | Relation Algebra                          | Related Chapters of Course Sources |
| 5    | Relation Algebra-SQL                      | Related Chapters of Course Sources |
| 6    | Database Design                           | Related Chapters of Course Sources |
| 7    | Mid-term Exam                             | Related Chapters of Course Sources |
| 8    | Practice Session                          | Related Chapters of Course Sources |
| 9    | Simultaneous Operation                    | Related Chapters of Course Sources |
| 10   | NoSQL Database                            | Related Chapters of Course Sources |
| 11   | Optimization                              | Related Chapters of Course Sources |
| 12   | Project Presentations and Representations | Related Chapters of Course Sources |
| 13   | Project Presentations and Representations | Related Chapters of Course Sources |
| 14   | Reviewing of the Semester                 | Related Chapters of Course Sources |
| 15   | Final Exam                                | Related Chapters of Course Sources |

#### ECTS / WORKLOAD TABLE

| Presentation / Seminar                                  |    |    |    |
|---|----|----|----|
| Hours for off-the-classroom study (Pre-study, practice) | 14 | 3  | 42 |
| Midterm Exam  | 1  | 12 | 12 |
| Final examination                                       | 1  | 14 | 14 |
| Total Work Load   |    |    |    |
| ECTS  |    | 6  |    |

#### GENERAL PRINCIPLE RELATED WITH COURSE

Dear students,

You need to be included in the flow, please follow the course of learning and using that to achieve our success you deserve, you need to practice every day on topics that are covered by the course. It takes practice reading basic and auxiliary literature that is strictly recommended. You should visit classes course I need to make an effort to visit all the professors' lectures. Your activity on the session will be assessed by your professors and the Battle active participant in the discussions that will take place during the time. Students visiting lectures for all at the end if an additional 15 points.

## **SOURCES**

|    | COMPULSORY LITERATURE                  |   |  |  |
|----|--|---|--|--|
| No | Name of the book                       | Author's Name, Publishing house, Publication Year |  |  |
| 1  | Veritabanları                          | Ryan Stephens, Row Piew                           |  |  |
|    |  | ALFA YAYINLARI ,2003                              |  |  |
| 2  | Алгоритми и структури на податоци      | Владимир Трајковиќ ,интерна скрипта на ФИНКИ 2010 |  |  |
| 3  | AN INTRODUCTION TO<br>DATABASE SYSTEMS | C.J. DATE, ADDISON- (Textbook) WESLEY, 2004,      |  |  |

|    | ADDITIONAL LITERATURE                            |   |  |  |
|----|--|---|--|--|
| No | Name of the book                                 | Author's Name, Publishing house, Publication Year |  |  |
| 1  | Hızlı Çözümler Microsoft Access<br>Veritabanları | Virginia Andersen<br>ARKADAŞ YAYINLARI ,2001      |  |  |
| 2  |  |   |  |  |
| 3  | Skiena The Algorithm Design<br>Manual            | Steven S. Springer 2008                           |  |  |

#### **EVALUATION SYSTEM**

| Underlying the Assessment Studies | NUMBER | PERCENTAGE<br>OF GRADE |
|-----------------------------------|--------|------------------------|
| Attendance/Participation          | 15     | %10                    |
| Project / Event                   | 1      | %20                    |
| Mid-Term Exam                     | 1      | %35                    |
| Final Exam                        | 1      | %35                    |
| TOTAL                             | 17     | %100                   |

## ETHICAL CODE OF THE UNIVERSITY

In case students are cheating on exams or preparation the same, it is not making reference to the source to be used in studies, as for example in assignments, projects and presentation (plagiarism), in accordance with legislations by Ministry of Education and Science of the Republic of Macedonia and International Vision University, apply relevant disciplinary rules. International Vision University students are expected never attempts in this kind of behavior.