



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

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SYLLABUS

| COURSE NAME | COURSE CODE | SEMESTER | COURSE LOAD | ECTS |
|---------------------------------------|-------------|----------|-------------|------|
| FUNDAMENTALS OF COMMUNICATION SYSTEMS | CEN - 2005 | 3 | 150 | 5 |

| | |
|-----------------|------|
| Prerequisite(s) | None |
|-----------------|------|

| | |
|--|------------------------------|
| Course Language | Macedonian, Turkish, English |
| Course Type | Elective |
| Course Level | First Cycle |
| Course Lecturer | |
| Course Assistants | |
| Classroom | |
| Extra Curricular Office Hours and Location | Meeting: Consultancy: |

| | |
|--------------------------|---|
| Course Objectives | The aims of this course is understanding basic terms and principles of signal processing in telecommunication transmission, describing basic principles of the modern digital telecommunications, implementing acquired knowledge in professional specialist courses (theoretical and practical), understanding basic operation settings for telecommunication systems and equipment. |
| Course Learning Outcomes | On successful completion of this course, student should be able to: <ul style="list-style-type: none"> • explain basic physical and technical principles of modern digital telecommunications, • describe basic principles of operation in modern digital telecommunication equipment and systems, • demonstrate measurements and experiments in laboratory on actual components, devices, equipment and systems in telecommunications, • describe development and implementation methods of telecommunication systems, • examine communication equipment for the technical functionality. |
| Course Contents | Introduction to data communication, Standards and architecture model used in data communication, Coding of signaling and signal, Parallel and serial communication, Communications environments and specifications, Multiplexing (time and frequency in context), Error detection and error correction techniques, Data link control techniques, flow control, The most compatible and the incompatible data link protocols, IEEE 802- local area network technology, Connected and disconnected services, keying. |

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

| Week | Subjects | Related Preparation |
|-------------|--|------------------------------------|
| 1 | Introduction to data communication | Related Chapters of Course Sources |
| 2 | Standards and architecture model used in data communication | Related Chapters of Course Sources |
| 3 | Coding of signaling and signal | Related Chapters of Course Sources |
| 4 | Parallel and serial communication | Related Chapters of Course Sources |
| 5 | Communications environments and specifications | Related Chapters of Course Sources |
| 6 | Multiplexing (time and frequency in context) | Related Chapters of Course Sources |
| 7 | Mid-term Exam | Related Chapters of Course Sources |
| 8 | Error detection and error correction techniques | Related Chapters of Course Sources |
| 9 | Data link control techniques, flow control | Related Chapters of Course Sources |
| 10 | Evaluation of the mid-term exam questions | Related Chapters of Course Sources |
| 11 | The most compatible and the incompatible data link protocols | Related Chapters of Course Sources |
| 12 | IEEE 802- local area network technology | Related Chapters of Course Sources |
| 13 | Connected and disconnected services, keying | Related Chapters of Course Sources |
| 14 | Review | 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,

In order to be included, learn and achieve full success that you deserve in the courses you need to come well prepared by reading the basic and secondary textbooks. We are expecting from you carefully to obey to the course hours, not to interrupt the lessons unless is very indispensable, to be an active participant on the courses, easily to communicate with the other professor and classmates, and to be interactive by participating to the class discussions. In case of unethical behavior both in courses or on exams, will be acting in framework of the relevant regulations. The attendance of the students will be checked in the beginning, in the middle or at the end of the lessons. Throughout the semester the students who attend to all lectures will be given 15 activity-attendance points in addition to their exam grades.

SOURCES**COMPULSORY LITERATURE**

| No | Name of the book | Author's Name, Publishing House, Publication Year |
|----|--------------------------------------|--|
| 1 | Ağ Teknolojileri ve Telekomünikasyon | Dr. Cebrazil Taşkın, Pusula Yayıncılık ve İletişim, 2014 |
| 2 | Data & Computer Communications | William Stalings |
| 3 | | |

ADDITIONAL LITERATURE

| No | Name of the book | Author's Name, Publishing House, Publication Year |
|----|--|---|
| 1 | Bilişim Sistemleri, Bilgisayar Bilgi İşlem ve Telekomünikasyon | Prof. Dr. Emin Doğan Aydın, Doruk Yayınları, 1992 |
| 2 | Data Networks: Concepts, Theory and Practice | Uyless D. Black |
| 3 | | |

EVALUATION SYSTEM

| Underlying the Assessment Studies | NUMBER | PERCENTAGE 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 of the students are cheating or attempt to cheat on exams, and in the case of not to reference the sources used in seminar studies, assignments, projects and presentations, in accordance to the legislations of the Ministry of Education and Science of Republic of Macedonia and International Vision University, will be applied the relevant disciplinary rules. International Vision University students are expected never to attempt to this kind of behavior.