

Discipline	Databases code: 13 winter semester	
Specialty	Software and internet Technologies	
ECTS credits: 5	Form of assessment: exam	
Lecturer	Assistant Prof. D. Dinev, PhD Room: 106TB /408A TB Phone: +359 883692007 E-mail: diyandinev@tu-varna.bg	PHOTO
Department	<i>SOFTWARE AND INTERNET TECHNOLOGIES</i>	
Faculty	<i>FACULTY OF COMPUTER SCIENCES AND AUTOMATION</i>	

Learning objectives:

The "Databases" (MS) course is designed for Bachelor's degree students of Software and Internet Technologies and is particularly important in all special disciplines because it is the basis of software technologies, particularly in information technology. It aims to acquaint future specialists with database theory as one of the main computer sciences. They examine database physical and logical foundations. The basic data models – ERM, relational, network, hierarchical and object-relational are subject to in-depth study, with the ERM and relational being the most detailed. The properties of relational information structures, methods for their analysis and synthesis (design) are given, using data modeling systems (Oracle Data Modeler). The high level languages for access to data and for describing databases models are discussed. Here the main place is the SQL standard, presented at DDL (Data Definition Language), DML (Data Manipulation Language), TCL (Transaction Control Language), DCL (Data Control Language) level. All subjects in the course are practiced, using up to date client-server environment, including Oracle database server, Oracle SQL Developer.

The subject is related to the prerequisites: "Programming Fundamentals", "Object Oriented Programming", "Programming Systems"; and output connections to subjects: "Systems with Data Bases", "Internet Technologies ", "Business Intelligence Systems" and others.

CONTENTS:

Training Area	Hours lectures	Hours seminar exercises
Databases - models	3	3
ERM, relational model.	6	6
Design of relational databases, normalization	6	6
Oracle data modeler	3	3
Oracle database server, Oracle SQL developer	3	3
SQL language – DDL, DML	6	6
SQL language – TCL, DCL	3	3
<b>TOTAL:</b> 60 h	<b>30</b>	<b>30</b>