

SYLLABUS / FIȘA DISCIPLINEI
1. Information on the study programme / Date despre programul de studii

1.1. Institution / Instituția de învățământ superior	Universitatea de Vest din Timișoara
1.2. Faculty / Facultatea	Matematică și Informatică
1.3. Department / Departamentul	Computer Science (Informatică)
1.4. Study program field	Computer Science (Informatică)
1.5. Study cycle/ Ciclul de studii	Bachelor / licență
1.6. Study programme / Programul de studii / calificarea*	Computer Science / Informatică în limba engleză / Database administration / <i>Administrator baze de date - 252101; Computer network administration / Administrator de rețea de calculatoare - 252301; Analyst / Analist - 251201; Research assistant in computer science / Asistent de cercetare în informatică - 214918; Teacher in secondary schools / Profesor în învățământul gimnazial - 233002; Programmer / Programator - 251202; Software systems designers / Proiectant sisteme informatice - 251101</i>

2. Information on the course / Date despre disciplină

2.1. Title of the course / Denumirea disciplinei	Databases II						
2.2. Teacher in charge of the course / Titularul activităților de curs	Monica Tirea						
2.3. Teacher in charge of the seminar / Titularul activităților de seminar	Monica Tirea						
2.4. Study year / Anul de studii	2	2.5. Semester / Semestrul	2	2.6. Examination type / Tipul de evaluare: E(xam)/C(olloquim)	E	2.7. Course type / Regimul disciplinei: M(andatory)/ E(lective)/ F(acultative)	DI

3. Estimated study time (number of hours per semester) /Timpul total estimat (ore pe semestru al activităților didactice)

3.1. Attendance hours per week / Număr de ore pe săptămână	4	out of which din care: 3.2 lecture/ curs	2	3.3. seminar/laborator	2
3.4. Attendance hours per semester / Total ore din planul de învățământ	56	out of which: 3.5 lecture / curs	28	3.6. seminar/laborator	28
Distribution of the allocated amount of time / Distribuția fondului de timp*					hours/ ore
Individual study /Studiu după manual, suport de curs, bibliografie și notițe					35
Supplementary documentation at library or using electronic repositories / Documentare					15

suplimentară în bibliotecă, pe platformele electronice de specialitate		
Preparing for laboratories, homework, reports etc. /Pregătire seminarii/laboratoare, teme, referate, portofolii și eseuri		40
Exams / Examinări		6
Tutoring / Tutorat		8
3.7. Total number of hours of individual study / Total ore studiu individual	104	
3.8. Total number of hours per semester / Total ore pe semestru	160	
3.9. Number of credits (ECTS) / Număr de credite	5	

4. Prerequisites (if it is the case) / Precondiții (acolo unde e cazul)

4.1. curriculum / de curriculum	Not the case
4.2. skills / de competențe	Elementary knowledge of databases

5. Requirements (if it is the case) / Condiții (acolo unde e cazul)

5.1. for the lecture / de desfășurare a cursului	Lecture room with whiteboard and video projector
5.2. for the seminar, laboratory / de desfășurare a seminarului/laboratorului	Laboratory room with computers (Oracle installed)

6. Acquired skills / Competențe specifice acumulate

Professional skills / Competențe profesionale	<ul style="list-style-type: none"> • Knowledge of an actual database environment used on the real market (ORACLE), a superior understanding of the functionality of a real computer system, the practical application of the knowledge of general theory of relational databases, operating systems and computer networks . • Managing and designing relational databases, especially Oracle databases
Transversal skills / Competențe transversale	<ul style="list-style-type: none"> • The awareness of a good knowledge importance of the computer system for computer practice. Valuing correctly the information security and data privacy. Understanding the balance between cost and benefit in data security systems

7. Objectives of the course / Obiectivele disciplinei (reieșind din grila competențelor specifice acumulate)

7.1. General objective / Obiectivul general al disciplinei	1. Database – analyzing and querying
7.2. Specific objectives / Obiectivele specifice	Knowledge objectives(KO): 1. Knowledge of general theory related to relational databases 2. Knowledge of query language SQL

8. Content / Conținuturi*

8.1. Lecture / Curs	Teaching strategies / Metode de predare	Remarks, details / Observații
L1.(2h) Introduction. Oracle architectural components.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L2.(2h) The use of administration tools	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L3.(2h) Management of an Oracle instance	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L4.(2h) Database creation	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L5.(2h) Data dictionary and standard packages creation	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L6. (2h) Control file and Redo Log file maintenance	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L7. (2h) Space tables and data files management	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L8. (2h) Management of rollback segments. Management of temporal segments	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L9. (2h) Table management. Index management.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L10.(2h) Data integrity maintenance.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L11.(2h) Clusters usage. Index organized tables usage.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.

L12.(2h) Data loading and reorganization	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L13.(2h) User management. Profile management.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.
L14.(2h) Privileges management. Roles management.	Lecture, conversation, illustration	References: 1. M. Tirea – lecture slides – elearning.e-uvv.ro 2. ORACLE11g: 2day DBA, 2012. 3. ORACLE11g: Security Guide, 2012.

Recommended bibliography / Bibliografie

1. **Robert G. Freeman, Charles A. Pack, Doug Stuns, Oracle Database 11g Administrator Certified Professional Study Guide**
2. **Robert G. Freeman, Oracle database 11g : new features**
3. ORACLE11g: 2day DBA, 2012. http://docs.oracle.com/cd/B28359_01/server.111/b28301.pdf
4. ORACLE11g: Security Guide, 2012. http://docs.oracle.com/cd/B28359_01/server.111/b28337.pdf

8.2. Seminar, lab / Seminar, laborator	Teaching/learning strategies / Metode de predare/ învățare	Remarks, details / Observații
L1.(2h) Labwork related to Lecture 1	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	The labwork is accessible on elearning.e-uvv.ro. It contains the statements problems to be solved and related program templates that should be used to solve them. The teacher provides additional hints, and answers the questions the students may have.
L2.(2h) Labwork related to Lecture 2	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L3.(2h) Labwork related to Lecture 3	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L4.(2h) Labwork related to Lecture 4	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L5.(2h) Labwork related to Lecture 5	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L6.(2h) Labwork related to Lecture 6	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.

		evaluate the students.
L7.(2h) Labwork related to Lecture 7	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L8.(2h) Labwork related to Lecture 8	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L9.(2h) Labwork related to Lecture 9	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L10.(2h) Labwork related to Lecture 10	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L11.(2h) Labwork related to Lecture 11	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L12.(2h) Labwork related to Lecture 12	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L13.(2h) Labwork related to Lecture 13	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	Idem. The students should hand over the deliverables required by the previous labworks. The teacher will evaluate them, and may ask additional questions to evaluate the students.
L14. Final evaluation	Assisted practical labworks in SQL, using ORACLE. Learning by collaboration, dialog, and code testing.	The students should hand over the deliverables. The teacher will evaluate them, and may ask additional questions to evaluate the students.
Recommended bibliography / Bibliografie <ol style="list-style-type: none"> 1. ORACLE11g:2day DBA, 2012 2. ORACLE11g:Security Guide, 2012 		

9. Correlations between the content of the course and the requirements of the IT field / Coroborarea conținuturilor disciplinei cu așteptările reprezentanților comunității epistemice, asociațiilor profesionale și angajatorilor reprezentativi din domeniul aferent programului

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10. Evaluation / Evaluare*

Activity / Tip de activitate	10.1. Evaluation criteria / Criterii de evaluare**	10.2. Evaluation methods / Metode de evaluare***	10.3. Weight in the averaged mark / Pondere din nota finală
10.4. Lecture / Curs	Theoretical and practical questions	Exam	60%
10.5. Seminar/ lab	Management of storage and security essential structures	Practical lab	40%
10.6. Minimal knowledge for passing / Standard minim de performanță			
The minimal knowledge and abilities required to get a passing grade (which is 5) include: <ul style="list-style-type: none"> - to implement correctly code in sql related to the lecture material - basic knowledge about the material presented in the lectures 			

 Date/ Data completării
 10.10.2016

 Signature (lecture) /
 dr. Monica Tirea

Signature (seminar)

 Signature (director of the department)
 Semnătura directorului de departament
 Conf.dr. Victoria Iordan