Syllabus

Descrizione corso

Titolo insegnamento	Modeling and Databases with Project
Codice insegnamento	76445
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	
Lingua	Inglese
Corso di Studio	Corso di laurea in Informatica e Management delle Aziende digitali
Altri Corsi di Studio (mutuati)	
Docenti	prof. Marco Montali, marco.montali@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/31326 prof. Davide Lanti, Davide.Lanti@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/34107
Assistente	dott. Albulen Pano
Semestre	Secondo semestre
Anno/i di corso	1
CFU	12
Ore didattica frontale	80
Ore di laboratorio	40
Ore di studio individuale	180
Ore di ricevimento previste	36
Sintesi contenuti	- Introduction to Business Process Management - Data modeling - Descriptive process modeling - Analytic process modeling - Decision modeling - Relational Model

	- Query languages (relational algebra and SQL) - Query management - Database design - Building database applications - NoSQL and large-scale data management
Argomenti dell'insegnamento	Students attending this course will study and put into practice languages, methodologies, and techniques for modelling data, business processes and decisions that are instrumental to the creation of information systems supporting contemporary organizations in their operations management. In addition, they will be able to translate a data model into a corresponding database, and learn how to make use of the basic functionalities (definition, update, and querying) of database management systems in the context of development and deployment of information systems. The course focuses specifically on relational databases, the SQL language, and software programs accessing them, but the taught methods and principles are of a more general nature, and can be applied also in those contexts where data models and database systems different from relational ones are adopted.
Parole chiave	data modelling process modelling databases SQL Entity-Relationship Diagrams BPMN
Prerequisiti	Students should have a solid mathematical foundation and be familiar with the basic programming concepts.
Insegnamenti propedeutici	
Modalità di insegnamento	Frontal classroom lectures plus exercises.
Obbligo di frequenza	Not compulsory. Non-attending students should contact the lecturers at the beginning of the course in order to get indications on how to best follow the course.
Obiettivi formativi specifici e risultati di apprendimento attesi	The course belongs to the type "attività formative di base – formazione informatica di base".

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Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	- Project work to test knowledge application skills and communication skills, done in small groups to present their work

	written and orally. - Written exam with verification questions and questions to test knowledge application skills.
Criteri di valutazione	- 40% project work - 60% written exercises Relevant for assessment of Module 1: ability to work in teams, skill in applying knowledge in a practical setting, ability to summarize in own words. Relevant for assessment of Module 2: clarity of answers, ability to recall principles and methods used in database systems, skill in applying knowledge such as developing and querying databases.
Bibliografia obbligatoria	• Raghu Ramakrishnan, Johannes Gehrke. Database Management Systems. 3rd edition. McGraw-Hill, 2005. • Dumas, M., La Rosa, M., Mendling, J. and Reijers, H. A.: Fundamentals of Business Process Management (II edition). Springer, 2018. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Bibliografia facoltativa	
Altre informazioni	Software used: PostgreSQL Database Management System
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità

Modulo del corso

Titolo della parte costituente del corso	Data and Process Modeling for Busines Informatics
Codice insegnamento	76445A
Settore Scientifico-Disciplinare	IINF-05/A
Lingua	Inglese
Docenti	prof. Marco Montali,

	marco.montali@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/31326
Assistente	
Semestre	
CFU	6
Docente responsabile	
Ore didattica frontale	40
Ore di laboratorio	20
Ore di studio individuale	90
Ore di ricevimento previste	18
Sintesi contenuti	- Introduction to Business Process Management - Data modeling - Descriptive process modeling - Analytic process modeling - Decision modeling
Argomenti dell'insegnamento	
Modalità di insegnamento	Frontal classroom lectures plus exercises.
Bibliografia obbligatoria	• Raghu Ramakrishnan, Johannes Gehrke. Database Management Systems. 3rd edition. McGraw-Hill, 2005. • Dumas, M., La Rosa, M., Mendling, J. and Reijers, H. A.: Fundamentals of Business Process Management (II edition). Springer, 2018. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Bibliografia facoltativa	

Modulo del corso

Titolo della parte costituente del corso	Introduction to Databases for Business Informatics
Codice insegnamento	76445B
Settore Scientifico-	IINF-05/A

Disciplinare	
Lingua	Inglese
Docenti	prof. Davide Lanti, Davide.Lanti@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/34107
Assistente	dott. Albulen Pano
Semestre	
CFU	6
Docente responsabile	
Ore didattica frontale	40
Ore di laboratorio	20
Ore di studio individuale	90
Ore di ricevimento previste	18
Sintesi contenuti	- Relational Model - Query languages (relational algebra and SQL) - Query management - Database design - Building database applications - NoSQL and large-scale data management
Argomenti dell'insegnamento	
Modalità di insegnamento	Frontal classroom lectures plus exercises.
Bibliografia obbligatoria	• Raghu Ramakrishnan, Johannes Gehrke. Database Management Systems. 3rd edition. McGraw-Hill, 2005. • Dumas, M., La Rosa, M., Mendling, J. and Reijers, H. A.: Fundamentals of Business Process Management (II edition). Springer, 2018. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Bibliografia facoltativa	