



Tempus

JEP 19090-2004
CSMSPUP



UNIVERSITETI I PRISHTINËS
UNIVERSITAS STUDIORUM PRISHTINIENSIS

FORMULARI I MODULIT - MODULE TEMPLATE

Emri i modulit Module Title	Algorithms and Data Structure		
Obligativ/Mandatory Zgjedhor/Elective	Mandatory	ECTS	6
Qëllimet e modulit Module Aim	Enable students to apply algorithm analysis and data structures on maintaining large collections of elements.		
Rezultatet e të nxënit Learning Outcomes	On completion of this course, students will be able to: <ol style="list-style-type: none"> 1. Apply algorithm analysis and standard data structures 2. Build and apply complex data structures on managing collections and modelling applications. 		
Përmbajtja e modulit Module Content	Will include: <ul style="list-style-type: none"> • Management of complexity. Abstract data types • Algorithm analysis. Execution-time measurement. Correctness • Vectors. Sorting • Linked lists. List variations. Stacks. Queues. • Trees. Binary search trees. Priority queues. Hash tables. Maps. Sets. Matrices. • Graphs 		
Parakushtet Pre-Requisite(s)	Assumed that the students will have had at least one course introducing programming (e.g. using Java).		
Kërkesat paralele Co-Requisite(s)	None		
Strategjitë e mësimdhënies & nxënies Teaching & Learning Strategies	Will include: <ul style="list-style-type: none"> • Case studies used during the course • Practical exercises using a programming language (e.g. Java) • Continuous assessment • An individual assignment 		

Protokolet e vlerësimit
Assessment Protocols

Will include:

- Assessment on algorithm analysis and data structures
- Assessment on using a programming tool for modelling expertise
- An individual assignment
- A final examination

Organizimi i mësimit Delivery Schedule	<input type="text" value="15"/>	<i>Laborator(y)</i>	Kohëzgjatja- Duration (h)	<i>Full-time</i>	<input type="text" value="45"/>
	<input type="text" value="25"/>	<i>Ligjërata-Lecture</i>			
	<input type="text" value="5"/>	<i>Ushtrime-Tutorial</i>		<i>Other</i>	<input type="text"/>
	<input type="text"/>	<i>Të tjera Other (Specify)</i>	Ngarkesa e përgjithsh. (h) Learner workload (hrs)	<i>Workload</i>	<input type="text" value="90"/>

Zbërthimi i vlerësimit	<i>CA</i>	<i>Proj</i>	<i>Prac</i>	<i>Final</i>	Total
Assessment Breakdown	<input type="text" value="20"/>	<input type="text" value="20"/>	<input type="text" value="10"/>	<input type="text" value="50"/>	<input type="text" value="100"/>

Bibliografia

Bibliography
Essential & Recommended
Texts and/or materials
required. Web references as
appropriate.

Essential:

1. T. Budd, *Classic data structures in Java*, ISBN 0-201-70002-6

Recommended:

2. T. H. Cormen, Ch. E. Leiserson, R. L. Rivest, *Algorithms*, ISBN 0-07-013143-0
3. D. E. Knuth, *The art of computer programming I, II, III*, ISBN 0-201-89683-4, 0-201-89684-2, 0-201-89684-0
4. D. Schmidt, *Programming principles in Java: architectures and interfaces*, Kansas State University, 2003.

CA- Vlerësimi në klasë/Classroom Assessment

Proj – Projektet/Projects

Prac – Praktika/Practice

Final – Vlerësimi përfundimtar/Final assessment