MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE OURO PRETO
PRÓ-REITORIA DE GRADUAÇÃO

UFOP

COURSE OF COMPUTER SCIENCE - 2026/2(curriculum 5)

OURO PRETO'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
BCC109	ELETRONICS FOR COMPUTER SCIENCE		90/0	108	4	2	1
BCC201	INTRODUCTION TO PROGRAMMING		90/0	108	4	2	1
BCC501	INTRODUCTION TO COMPUTER SCIENCE		30/0	36	2	0	1
MTM122	DIFFERENTIAL AND INTEGRAL CALCULUS I		90/0	108	6	0	1
MTM131	ANALYTICAL GEOMETRY AND VECTOR CALCULUS		60/0	72	4	0	1
BCC101	DISCRETE MATHEMATICS I		60/0	72	4	0	2
BCC136	COMPUTER ORGANIZATION	BCC201	60/0	72	2	2	2
BCC137	DATA STRUCTURES I	BCC201	90/0	108	4	2	2
BCC324	HUMAN-COMPUTER INTERACTION		60/0	72	4	0	2
EAD700	READING AND WRITING PRACTICE		60/0	72	2	2	2
MTM123	DIFFERENTIAL AND INTEGRAL CALCULUS II	MTM122	60/0	72	4	0	2
BCC102	DISCRETE MATHEMATICS II	BCC101	60/0	72	4	0	3
BCC111	FUNCTIONAL PROGRAMMING	BCC201	60/0	72	2	2	3
BCC138	OBJECT ORIENTED PROGRAMMING	BCC137	60/0	72	4	0	3
BCC203	DATA STRUCTURES II	BCC137	60/0	72	4	0	3
BCC263	COMPUTER ARCHITECTURE	BCC136	60/0	72	4	0	3
MTM112	INTRODUCTION TO LINEAR ALGEBRA	MTM131	60/0	72	4	0	3
BCC105	NUMERICAL CALCULUS	BCC201 MTM112 MTM122	60/0	72	2	2	4
BCC112	SOFTWARE ENGINEERING I	BCC138	60/0	72	4	0	4
BCC139	DATABASE I	BCC203	60/0	72	4	0	4
BCC204	GRAPH THEORY	BCC203	60/0	72	4	0	4
BCC264	OPERATIONAL SYSTEMS	BCC137 BCC263	60/0	72	4	0	4
EST202	STATISTICS AND PROBABILITY	MTM122	60/0	72	4	0	4
BCC107	INTRODUCTION TO OPTIMIZATION	BCC105	60/0	72	4	0	5
BCC113	INTRODUCTION TO MACHINE LEARNING	BCC137 EST202 MTM123	60/0	72	4	0	5
BCC114	SOFTWARE ENGINEERING II	BCC112	60/0	72	4	0	5
BCC241	DESIGN AND ANALYSIS OF ALGORITHMS	BCC204	60/0	72	4	0	5
BCC244	THEORY OF COMPUTATION	BCC102 BCC204	60/0	72	4	0	5
BCC361	COMPUTER NETWORKS	BCC136	60/0	72	4	0	5
BCC115	DISTRIBUTED SYSTEMS	BCC264 BCC361	60/0	72	2	2	6
BCC116	ARTIFICIAL INTELLIGENCE	BCC101 BCC136	60/0	72	4	0	6
BCC141	DIGITAL IMAGE PROCESSING	BCC137	60/0	72	2	2	6
BCC328	COMPILER CONSTRUCTION I	BCC111 BCC244	60/0	72	4	0	6
BCC502	RESEARCH METHODOLOGY IN COMPUTER SCIENCE	720 hours EAD700	30/0	36	2	0	6
BCC117	UNDERGRADUATE THESIS I	1500 hours	90/0	108	0	6	7
BCC118	EVENTS FOR COMPUTER SCIENCE	720 hours	120/120	144	0	8	7
BCC119	INFORMATICS AND SOCIETY	1500 hours	90/90	108	0	6	7
BCC327	COMPUTER GRAPHICS	BCC137 MTM112	60/0	72	4	0	7
BCC120	UNDERGRADUATE THESIS II	BCC117	90/0	108	0	6	8
DIR260	INFORMATICS LAW	1500 hours	30/0	36	2	0	8
FIL823	INTRODUCTION TO THE HISTORY OF PHILOSOPHY	1500 hours	60/0	72	4	0	8

CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
BCC121	DATABASE II	720 hours BCC139	60/0	72	4	0	

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CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
BCC122	DATA MINING	720 hours BCC139	60/0	72	4	0	
BCC123	WEB PROGRAMMING	720 hours BCC112 BCC139	60/0	72	4	0	
BCC124	COMPLEX NETWORKS	720 hours BCC204	60/0	72	4	0	
BCC125	DATA ENGINEERING	720 hours BCC115	60/0	72	2	2	
BCC126	NATURAL LANGUAGE PROCESSING	BCC113	60/0	72	4	0	
BCC127	DATA VISUALIZATION	720 hours	60/0	72	4	0	
BCC128	EXPLAINABLE ARTIFICIAL INTELLIGENCE	BCC113	60/0	72	4	0	
BCC129	NEURAL NETWORK AND DEEP LEARNING	BCC113	60/0	72	2	2	
BCC130	UNSUPERVISED AND SEMI SUPERVISED LEARNING	BCC113	60/0	72	4	0	
BCC131	REINFORCEMENT LEARNING	BCC113	60/0	72	4	0	
BCC132	DISSEMINATION OF SCIENTIFIC KNOWLEDGE	720 hours	120/60	144	0	8	
BCC133	EXTENSION PROJECT	720 hours	120/120	144	0	8	
BCC134	NUMERICAL METHODS FOR DIFFERENTIAL EQUATIONS	720 hours BCC105	60/0	72	4	0	
BCC135	LOGICS IN COMPUTER SCIENCE	720 hours	60/0	72	4	0	
BCC140	INTRODUCTION TO DATA ANALYSIS	720 hours EST202	60/0	72	2	2	
BCC142	REAL-TIMESOFTWAREDESIGN	720 hours	60/0	108	2	2	
BCC143	INFORMATICS AND SOCIETY II	BCC119	60/60	72	0	4	
BCC144	INFORMATION AND COMMUNICATION TECHNOLOGIES FOR PRIMARY EDUCATION I	720 hours	90/60	108	2	4	
BCC145	INFORMATION AND COMMUNICATION TECHNOLOGIES FOR PRIMARY EDUCATION II	BCC144	90/60	108	2	4	
BCC402	ALGORITHMS AND ADVANCED PROGRAMMING	720 hours BCC203	60/0	72	0	4	
BCC403	ADVANCED USER INTERFACE FOR WEARABLE COMPUTING	720 hours BCC138 BCC324 BCC327	60/0	72	2	2	
BCC407	DESIGN AND ANALYSIS OF COMPUTATIONAL EXPERIMENTS	720 hours	60/0	72	2	2	
BCC408	DESIGN OF INTEGRATED LOGIC CIRCUITS USING HDL (HARDWARE DESCRIPTION LANGUAGE)	720 hours	60/0	72	1	3	
BCC409	RECOMMENDATION SYSTEMS	720 hours BCC203	60/0	72	2	2	
BCC421	MOBILE COMPUTING	720 hours BCC115	60/0	72	4	0	
BCC422	CLOUD COMPUTING	720 hours BCC115	60/0	72	4	0	
BCC423	CRYPTOGRAPHY AND SECURITY SYSTEMS	720 hours BCC101 BCC136 BCC264	60/0	72	4	0	
BCC425	EMBEDDED SYSTEMS	720 hours BCC263	60/0	72	2	2	
BCC442	COMPILER CONSTRUCTION II	720 hours BCC328	60/0	72	4	0	
BCC443	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	720 hours	60/0	72	4	0	
BCC445	MODELING AND SIMULATION OF LAND SYSTEMS	720 hours	60/0	72	4	0	
BCC446	LOGIC PROGRAMMING	720 hours BCC101	60/0	72	4	0	

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CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
BCC447	PARALLEL PROGRAMMING	720 hours BCC115	60/0	72	4	0	
BCC448	PATTERN RECOGNITION	720 hours	60/0	72	4	0	
BCC449	WEB INFORMATION RETRIEVAL	720 hours	60/0	72	4	0	
BCC450	WEB DATA MANAGEMENT	720 hours BCC139	60/0	72	4	0	
BCC461	EVOLUTIONARY COMPUTING	720 hours BCC201	60/0	72	4	0	
BCC463	NETWORK OPTIMIZATION	720 hours BCC137	60/0	72	4	0	
BCC464	LINEAR AND INTEGER OPTIMIZATION	720 hours BCC137	60/0	72	4	0	
BCC465	MULTI-OBJECTIVE OPTIMIZATION TECHNIQUES	720 hours BCC203	60/0	72	4	0	
BCC466	METAHEURISTICS TECHNIQUES IN COMBINATORIAL OPTIMIZATION	720 hours BCC137	60/0	72	4	0	
BCC482	SOFTWARE PROJECT MANAGEMENT	720 hours	60/0	72	4	0	
BCC483	SOFTWARE QUALITY	720 hours	60/0	72	4	0	
BCC485	INTERACTION DESIGN	720 hours BCC324	60/0	72	4	0	
BCC486	ASSESSMENT OF INTERACTIVE SYSTEMS	720 hours BCC324	60/0	72	4	0	
BCC488	ADVANCED FUNCTIONAL PROGRAMMING	720 hours BCC111	60/0	72	2	2	
BCC601	DISTANCE LEARNING	720 hours	60/0	72	4	0	
CAT141	CONTROL THEORY I	720 hours BCC109	60/0	72	4	0	
FIS827	INTRODUCTION TO QUANTUM INFORMATION	720 hours	60/0	72	4	0	
LET966	INTRODUCTION TO THE BRAZILIAN SIGN LANGUAGE	720 hours	60/0	72	2	2	
PRO035	ENTREPRENEURSHIP	1500 hours	60/30	72	2	2	
PRO315	LOGISTICS	720 hours	60/0	72	4	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV100			MANDATORY	120	
ATV300			MANDATORY	120	

Required Courses Load		Work Load
Mandatory Disciplines		2640
Elective Disciplines		360
Optative Disciplines		0
Facultative Disciplines		60
Activities		240
Extensions		330
	Total	3300

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