



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



COURSE OF COMPUTER SCIENCE - 2020/1 (curriculum 4)  
OURO PRETO'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL	CWL	CLASSES		SEM
					T	P	
BCC201	INTRODUCTION TO PROGRAMMING		90	108	4	2	1
BCC265	ELECTRONICS TO COMPUTING		90	108	4	2	1
BCC501	INTRODUCTION TO COMPUTER SCIENCE		30	36	2	0	1
MTM122	DIFFERENTIAL AND INTEGRAL CALCULUS I		90	108	6	0	1
MTM131	ANALYTICAL GEOMETRY AND VECTOR CALCULUS		60	72	4	0	1
BCC101	DISCRETE MATHEMATICS I		60	72	4	0	2
BCC202	DATA STRUCTURES I	BCC201	90	108	4	2	2
BCC266	COMPUTER ORGANIZATION	BCC201	60	72	4	0	2
BCC324	HUMAN-COMPUTER INTERACTION		60	72	4	0	2
EAD700	READING PRACTICE AND TEXTS PRODUCTION		60	72	2	2	2
MTM123	DIFFERENTIAL AND INTEGRAL CALCULUS II	MTM122	60	72	4	0	2
BCC102	DISCRETE MATHEMATICS II	BCC101	60	72	4	0	3
BCC203	DATA STRUCTURES II	BCC202	60	72	4	0	3
BCC221	OBJECT ORIENTED PROGRAMMING	BCC202	60	72	4	0	3
BCC222	FUNCTIONAL PROGRAMMING	BCC201	60	72	2	2	3
BCC263	COMPUTER ARCHITECTURE	BCC266	60	72	4	0	3
MTM112	INTRODUCTION TO LINEAR ALGEBRA	MTM131	60	72	4	0	3
BCC204	GRAPH THEORY	BCC202	60	72	4	0	4
BCC264	OPERATIONAL SYSTEMS	BCC202 BCC263	60	72	4	0	4
BCC322	SOFTWARE ENGINEERING I	BCC221	60	72	4	0	4
BCC361	COMPUTER NETWORKS	BCC266	60	72	4	0	4
BCC760	NUMERICAL CALCULUS	BCC201 MTM112	60	72	2	2	4
EST202	STATISTICS AND PROBABILITY	MTM122	60	72	4	0	4
BCC241	DESIGN AND ANALYSIS OF ALGORITHMS	BCC204	60	72	4	0	5
BCC244	THEORY OF COMPUTATION	BCC102 BCC204	60	72	4	0	5
BCC321	DATABASE I	BCC203	60	72	4	0	5
BCC323	SOFTWARE ENGINEERING II		60	72	4	0	5
BCC362	DISTRIBUTED SYSTEMS	BCC361	60	72	4	0	5
BCC502	RESEARCH METHODOLOGY IN COMPUTER SCIENCE	720 hours	30	36	2	0	5
BCC325	ARTIFICIAL INTELLIGENCE	BCC101 BCC202	60	72	4	0	6
BCC326	IMAGE PROCESSING		60	72	4	0	6
BCC327	COMPUTER GRAPHICS	BCC202 MTM112	60	72	4	0	6
BCC328	COMPILER CONSTRUCTION I	BCC222 BCC244	60	72	4	0	6
BCC342	INTRODUCTION TO OPTIMIZATION	BCC201	60	72	4	0	6
BCC392	UNDERGRADUATE THESIS I	1500 hours BCC502	120	144	0	8	7
BCC503	INFORMATICS AND SOCIETY	1500 hours	30	36	2	0	7
FIL101	INTRODUCTION TO THE HISTORY OF PHILOSOPHY	1500 hours	60	72	4	0	7
BCC393	UNDERGRADUATE THESIS II	BCC392	120	144	0	8	8
DIR260	INFORMATICS LAW	1500 hours	30	36	2	0	8
PRO302	ENTREPRENEURIAL ACTIVITIES	1500 hours	60	72	1	3	8

CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL	CWL	CLASSES		SEM
					T	P	
BCC402	ALGORITHMS AND ADVANCED PROGRAMMING	720 hours BCC202	60	72	0	4	
BCC403	ADVANCED USER INTERFACE FOR WEARABLE COMPUTING	720 hours BCC221 BCC324 BCC327	60	72	2	2	



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					T	P	
BCC404	LOGICS IN COMPUTER SCIENCE	720 hours	60	72	4	0	
BCC405	NONLINEAR OPTIMIZATION	720 hours BCC202 MTM123	60	72	4	0	
BCC406	NEURAL NETWORK AND DEEP LEARNING	720 hours BCC202 MTM123	60	72	4	0	
BCC407	DESIGN AND ANALYSIS OF COMPUTATIONAL EXPERIMENTS	720 hours	60	72	2	2	
BCC408	INTEGRATED LOGIC CIRCUITS DESIGN USING HDL (HARDWARE DESCRIPTION LANGUAGE)	720 hours	60	72	1	3	
BCC409	RECOMMENDER SYSTEMS	720 hours BCC203	60	72	2	2	
BCC421	MOBILE COMPUTING	720 hours BCC362	60	72	4	0	
BCC422	CLOUD COMPUTING	720 hours BCC362	60	72	4	0	
BCC423	CRYPTOGRAPHY AND SECURITY SYSTEMS	720 hours BCC101 BCC266	60	72	4	0	
BCC425	EMBEDDED SYSTEMS	720 hours BCC263	60	72	2	2	
BCC441	DATABASE II	720 hours BCC321	60	72	4	0	
BCC442	COMPILER CONSTRUCTION II	720 hours BCC328	60	72	4	0	
BCC443	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	720 hours	60	72	4	0	
BCC444	DATA MINING	720 hours BCC321	60	72	4	0	
BCC445	MODELING AND SIMULATION OF LAND SYSTEMS	720 hours	60	72	4	0	
BCC446	LOGIC PROGRAMMING	720 hours BCC101	60	72	4	0	
BCC447	PARALLEL PROGRAMMING	720 hours	60	72	4	0	
BCC448	PATTERN RECOGNITION	720 hours BCC326	60	72	4	0	
BCC449	WEB INFORMATION RETRIEVAL	720 hours	60	72	4	0	
BCC450	WEB DATA MANAGEMENT	720 hours BCC321	60	72	4	0	
BCC461	EVOLUTIONARY COMPUTATION	720 hours BCC201	60	72	4	0	
BCC462	COMPUTATIONAL INTELLIGENCE	720 hours BCC202	60	72	4	0	
BCC463	NETWORK OPTIMIZATION	720 hours BCC202	60	72	4	0	
BCC464	LINEAR AND INTEGER OPTIMIZATION	720 hours BCC202	60	72	4	0	
BCC465	MULTI-OBJECTIVE OPTIMIZATION TECHNIQUES	720 hours BCC202	60	72	4	0	
BCC466	METAHEURISTICS IN COMBINATORIAL OPTIMIZATION	720 hours BCC202	60	72	4	0	
BCC481	WEB PROGRAMMING	720 hours BCC321 BCC322	60	72	4	0	
BCC482	SOFTWARE PROJECT MANAGEMENT	720 hours	60	72	4	0	
BCC483	SOFTWARE QUALITY	720 hours	60	72	4	0	



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					T	P	
BCC485	INTERACTION DESIGN	720 hours BCC324	60	72	4	0	
BCC486	EVALUATION OF INTERACTIVE SYSTEMS	720 hours BCC324	60	72	4	0	
BCC488	ADVANCED FUNCTIONAL PROGRAMMING	720 hours BCC222	60	72	2	2	
BCC505	WEB MINING	720 hours BCC321	60	72	2	2	
BCC601	DISTANCE LEARNING	720 hours	60	72	4	0	
CAT141	CONTROL THEORY I	720 hours BCC265	60	72	4	0	
FIS827	INTRODUCTION TO QUANTUM INFORMATION	720 hours	60	72	4	0	
LET966	INTRODUCTION TO BRAZILIAN SIGN LANGUAGE (LIBRAS)	720 hours	60	72	2	2	
PRO315	LOGISTICS	720 hours	60	72	4	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV100	ACADEMIC-SCIENTIFIC-CULTURAL ACTIVITY		MANDATORY	360	

Required Courses Load	Work Load
Mandatory Disciplines	2520
Elective Disciplines	360
Optative Disciplines	0
Facultative Disciplines	60
Activities	360
<b>Total</b>	<b>3300</b>