

COLLEGE OF ENGINEERING AND ARCHITECTURE

Department of Electrical and Computer Engineering

Bachelor in Computer Engineering

Study Plan and Degree Plan 2023-2024

Department of Electrical and Computer Engineering



	UNIVERSITY OF NIZWA														
	Department of Electrical and Computer Engineering														
	BSc in Computer Engineering														
	Study Plan 2023 2024														
				C – Crec	lit Hot	ırs, L	-Lect	ure Contact H	Hours, P - Pract	tical Contact	Hours				
				COD	Е			С	OURSE		C L	Р			
		Summ	ner Semester	MATH116/L		Pr	e- Cal	culus			4 3	2			
				AKAB100		A	radic I	Language I			3 3	0			
		CODE	COUD	217	C	т	р		CODE			2 SE	C	т	D
		PHYS101/L	General Physics I	512	4	3	2		MATH212/L	Calculus II	COUR	5E	3	2	2
Y		MATH 211/	L Calculus I		3	2	2		ENGN103	Engineering	g Drawing		2	1	1
E		ENGL150	English Language I	[3	3	0		PHYS150/L	General Ph	ysics II		4	3	2
A R		COMP101/L	Computer Skill		3	2	2		ELEC212	Circuit Ana	ılysis I		3	3	0
K	FALL	ENGN101	Introduction to Eng	ineering	2	2	0	SPRING	COMP151/L	Introduction	n to Algori	thm &	4	3	2
1		LINGINIOI	introduction to Eng	,eering	-	-	Ű		00111101/2	Programmi	ng		_ _	Ű	_
				COD	15	12	6	~			~ ·	2	16	12	6
				ARAB101	E	Δ	rahic I	anguage II	OURSE		C L 3 3	P			
		Summ	ner Semester	ENGL152		E	nglish	Language II			$\frac{3}{3}$ $\frac{3}{3}$	0			
		Sum	ner bemester				0	8			6 6	0			
		CODE	COUR	SE	С	L	Р		CODE		COUF	RSE	С	L	Р
		MATH222/L	Discrete Mathemati	ics	3	3	0		MATH312/L	Differentia	1 Equation	s for Engineers	3	2	2
		ELEC221	Electronics I		3	3	0		ELEC241	Digital Log	gic Design		3	3	0
Y		ELEC331	Signals & Systems		3	3	0		ELEC322	Digital Electronics		3	3	0	
E		ENGL155	Communication Sk	ill .	3	3	0	_	ELEC311	Measureme	ent and Ins	trumentation	3	3	0
A P	FALL	COMP222/L	Electrical Circuits	ogramming	3	2	2	SPRING	COMP255/L	Data Struct	ture & Alg	orithm Design	1	3	1
K		ELEC291	Electrical Circuits	Lau	16	14	4		ELEC292	Allalog Ele		ab	16	14	5
2				COD	E	14	-	C	OURSE		C L	Р	10	17	
		Summer Semester MNGT100/. STAT105/L				Eı St	Entrepreneurship Creativity And Innovation322Statistics for Engineers330652								
		CODE	COURS	E	С	L	Р		CODE		COUR	SE	С	L	Р
		ELEC412	Control Systems		3	3	0		ELEC442	Embedded	System de	sign	3	3	0
		ELEC431	Communication Syste	ems	3	3	0		ELEC443	Computer A	Architectur	e & Organizatio	n 3	3	0
		ELEC351	Database Systems		3	3	0		ELEC444	Computer I	nterfacing		3	3	0
Y			Microprocessors and		2	2	0		ELEC/61	Computer	Notworks		2	2	0
E		ELEC341	Microcontrollers		3	3	0		ELEC401	Computer	Networks		3	3	0
R		ELEC432	Digital Signal Process	sing	3	3	0		ELEC213	CIRCUIT A	ANALYSI	S II	3	3	0
	FALL	ELEC281	Digital Logic Design	lab	1	0	1	SPRING	ELEC392	Digital Elec	ctronics La	ıb	1	0	2
3									ELEC491	Control Lab	0		1	0	1
				COD	16	15	I		OUDSE			D	17	14	0
		Sumn	ner Semester	COD ENCN222	E	T.,	1	C	OURSE			P			
				ENGN333		In	dustria	a training			2 0	4			
		CODE	COUPS	Г	C	T	D		CODE			4 SE	C	т	D
		ELEC5**	Elective – I		3	3	0		CODE			SE		L	-
		ELEC5**	Elective - II		3	3	0		ELEC5**	Elective - I	11		3	3	0
Y		ELEC552	Operating Systems		3	3	0		ELEC551	Intelligent S	System De	sign	3	3	0
E	FALL	ELEC570	Graduation Project	ah	6	0	6	SPRING	ELEC482	Microproce Computer N	essor and h	nterfacing Lab	1	0	1
A		ELEC404	Embedded Systems L	au	1 16	0	1 9		ELEC403		NCLWOIKS I	Lau	1 Q	6	1
к				COD	E 10	у 	0		OURSE			Р	0	U	4
					14 A			U	OURSE						
4		Sum	ner Semester	COD		Co	ollege	Elective			3 3	0			
4		Sumn	ner Semester	HIST150		Co	ollege lamic	Elective Civilization			3 3 3 3	0 0			
4		Sumn	ner Semester	HIST150		Co Is	ollege lamic (Elective Civilization			3 3 3 3 6 6	0 0 0			

Total No. of Credit



Degree Plan for BSc in Computer Engineering 2024

Minimum No. of Credits for the Degree Plan = 14	8 Credits	
University Requirements	Required Hours	24

Course		Credit	Cor	itact Hour	Prerequisite/	
Code	Course Name	Hours	Theory Hours	Practical Hours	Co-requisite	
ARAB100	ARABIC LANGUAGE I	3	3	0		
HIST150	ISLAMIC CIVILIZATION	3	3	0	ULLS - University Life & Learning Skills	
ENGL150	ENGLISH LANGUAGE I	3	3	0		
ENGL152	ENGLISH LANGUAGE II	3	3	0	ENGL150 - ENGLISH LANGUAGE I	
ENGL155	COMMUNICATION SKILLS	3	3	0	ENGL152 - ENGLISH LANGUAGE II	
ARAB101	ARABIC LANGUAGE II	3	3	0	ARAB100 - ARABIC LANGUAGE I	
COMP101	COMPUTER SKILLS	3	2	1	DL - Digital Literacy COMP101L - COMPUTER SKILLS LAB	
					MATH-BP - Basic Pure Mathematics	
					MATH001 - BASIC MATHEMATICS	
COMP101L	COMPUTER SKILLS LAB	0	0	2	COMP101 - COMPUTER SKILLS	
MNGT100	ENTREPRENEURSHIP CREATIVITY AND INNOVATION	3	2	1	MNGT100L - ENTREPRENEURSHIP CREATIVITY AND INNOVATION TUTORIAL	
MNGT100L	ENTREPRENEURSHIP CREATIVITY AND INNOVATION TUTORIAL	0	0	2	MNGT100 - ENTREPRENEURSHIP CREATIVITY AND INNOVATION	

College Requirem	nents	Required Hours	18			
			Cont	act Hour		
Course Code	Course Name	Credit Hours	Theory Hours	Practical Hours	- Prerequisite/ Co-requisite	
MATH116	PRE-CALCULUS	4	3	1	MATH116L - PRE-CA	LCULUS Tutorial
MATH211	CALCULUS I	4	3	1	MATH116 - PRE-CAL MATH211L - CALCUI	CULUS LUS I LAB
COMP151	INTRODUCTION TO ALGORITHMS	4	3	1	COMP101 - COMPUT COMP151L - INTRO.T ALGORITHIM LAB	ER SKILLS 'O
MATH116L	PRE-CALCULUS Tutorial	0	0	2	MATH116 - PRE-CAL	CULUS
COMP151L	INTRO.TO ALGORITHIM LAB	0	0	2	COMP151 - INTRODU ALGORITHMS	ICTION TO
MATH211L	CALCULUS I LAB	0	0	2	MATH211 - CALCUL	US I
ENGN101	INTRODUCTION TO ENGINEERING	2	2	0	MATH116 - PRE-CAL	CULUS
ENGN103	ENGINEERING DRAWING	2	1	1		
ENGN333	INDUSTRIAL TRAINING	2	0	2		

College Electives

	Course Name	Credit Hours	Contact	Hours	Proroquisite/	
Course Code			Theory Hours	Practical Hours	Co-requisite	
INTD0405	MODERN PRACTICES IN INTERIOR DESIGN	3	3	0		
ARCH0105	BUILDING MATERIALS	3	3	0		
CIVL212	CIVIL ENGINEERING MATERIALS	3	2	1		
CIVL0211	ENGINEERING MECHANICS	3	3	0		
ARCH0204	ARCHITECTURE CAD I	3	1	2	COMP101 - COMPUTER SKILLS	
ARCH208	STRUCTURE I	3	3	0		
CIVL214	GEOMATIC ENGINEERING	3	2	1	CIVL214L - GEOMATIC ENGINEERING LAB	
CIVL0215	CIVIL ENGINEERING DRAWING	3	1	2	ENGN103 - ENGINEERING DRAWING	
CIVL331	ENGINEERING GEOLOGY	3	2	1		
CIVL241	ENVIRONMENTAL ENGINEERING	3	3	0		
CIVL341	HYDROLOGY	3	3	0		
CIVL0461	PROJECT MANAGEMENT	3	3	0		
INTD0406	SPACE PROGRAMMING AND OFFICE DESIGN	3	3	0		
INTD504	PROJECT MANAGEMENT	2	2	0		
INTD0505	COMPUTER BASED PROFESSIONAL APPLICATION	3	3	0		
CPEG516	COMPUTER GRAPHICS	3	3	0		
CIVL212L	CIVIL ENGINEERING MATERIALS LAB	0	0	1	CIVL212 - CIVIL ENGINEERING MATERIALS	
CIVL214L	GEOMATIC ENGINEERING LAB	0	0	1	CIVL214 - GEOMATIC ENGINEERING	
CIVL215L	CIVIL ENGINEERING DRAWING LAB	0	0	2		
CIVL331L	ENGINEERING GEOLOGY LAB	0	0	1	CIVL331 - ENGINEERING GEOLOGY	

ENVE413	ENVIRONMENTAL LAW AND REGULATIONS	3	3	0	
EDUC213	THE RESEARCH PROJECT	1	0	2	
ARCH408	LANDSCAPE DESIGN	3	2	1	
ENVE414	Health, safety and Environment in industries	2	2	0	CIVL241 - ENVIRONMENTAL ENGINEERING
ENGN201	HEALTH AND SAFETY AT WORK	3	3	0	
ENGN111	AFLAJ OMAN FOR ENGINEERS	3	3	0	

Major Requirements

Required Hours

		Credit	Contact I	Hours	Prereauisite/	
Course Code	Course Name	Hours	Theory Hours	Practical Hours	Co-requisite	
PHYS101	GENERAL PHYSICS I	4	3	1	MATH116 - PRE-CALCULUS PHYS101L - GENERAL PHYSICS I LAB	
PHYS150	GENERAL PHYSICS II	4	3	1	PHYS101 - GENERAL PHYSICS I PHYS150L - GENERAL PHYSICSII LAB	
MATH212	CALCULUS II	3	2	1	MATH211 - CALCULUS I MATH212L - CALCULUS II.LAB	
COMP222	OBJECT ORIENTED PROGRAMMING	3	3	0	COMP151 - INTRODUCTION TO ALGORITHMS COMP222L - OBJECT ORIENTED PROG. LAB	
COMP255	DATA STRUCTURES AND ALGORITHM DESIGN	3	3	0	COMP222 - OBJECT ORIENTED PROGRAMMING COMP255L - DATA STRUCTURE AND AL GORITHMS LAB	
MATH222	DISCRETE MATHEMATICS	3	2	1	MATH211 - CALCULUS I MATH222L - DISCRETE MATHEMATICS LAB	
MATH312	DIFFERENTIAL EQUATION FOR ENGINEERS	3	2	1	MATH212 - CALCULUS II MATH312L - DIFFERENTIAL EQUATIONS AND APPLICATIONS FOR ENGINEERST Tut	
PHYS101L	GENERAL PHYSICS I LAB	0	0	2	PHYS101 - GENERAL PHYSICS I	
PHYS150L	GENERAL PHYSICSII LAB	0	0	2	PHYS150 - GENERAL PHYSICS II	
COMP222L	OBJECT ORIENTED PROG. LAB	0	0	2	COMP151 - INTRODUCTION TO ALGORITHMS COMP222 - OBJECT ORIENTED PROGRAMMING	
COMP255L	DATA STRUCTURE AND ALGORITHMS LAB	0	0	2	COMP255 - DATA STRUCTURES AND ALGORITHM DESIGN	
MATH212L	CALCULUS II.LAB	0	0	2	MATH212 - CALCULUS II	
STAT105	STATISTICS FOR ENGINEERING	3	3	0	MATH211 - CALCULUS I	
STAT105L	STATISTICS FOR ENGINEERING LAB	0	0	0	STAT105 - STATISTICS FOR ENGINEERING	
MATH222L	DISCRETE MATHEMATICS LAB	0	0	0	MATH222 - DISCRETE MATHEMATICS	
MATH312L	DIFFERENTIAL EQUATIONS AND APPLICATIONS FOR ENGINEERST Tut	0	0	2	MATH312 - DIFFERENTIAL EQUATION FOR ENGINEERS	
ELEC221	ELECTRONICS I	3	3	0	ELEC212 - CIRCUIT ANALYSIS I	
ELEC212	CIRCUIT ANALYSIS I	3	3	0	PHYS101 - GENERAL PHYSICS I PHYS150 - GENERAL PHYSICS II	
ELEC431	COMMUNICATION SYSTEMS	3	3	0	ELEC331 - SIGNALS & SYSTEMS	
ELEC412	CONTROL SYSTEMS	3	3	0	ELEC331 - SIGNALS & SYSTEMS	
ELEC291	ELECTRICAL CIRCUITS LAB	1	0	1	ELEC212 - CIRCUIT ANALYSIS I	

ELEC292	ANALOG ELECTRONICS LAB	1	0	1	ELEC221 - ELECTRONICS I
ELEC281	DIGITAL LOGIC DESIGN LAB	1	0	1	ELEC241 - DIGITAL LOGIC DESIGN
ELEC322	DIGITAL ELECTRONICS	3	3	0	ELEC221 - ELECTRONICS I
ELEC491	CONTROL LAB	1	0	1	ELEC412 - CONTROL SYSTEMS
ELEC552	OPERATING SYSTEMS	3	3	0	ELEC443 - COMPUTER ARCHITECTURE AND ORGANIZATION
ELEC341	MICROPROCESSORS & MICROCONTROLLERS	3	3	0	ELEC241 - DIGITAL LOGIC DESIGN
ELEC482	MICROPROCESSOR AND INTERFACING LAB	1	0	1	ELEC341 - MICROPROCESSORS & MICROCONTROLLERS/ ELEC444 - COMPUTER INTERFACING
ELEC443	COMPUTER ARCHITECTURE AND ORGANIZATION	3	3	0	ELEC341 - MICROPROCESSORS & MICROCONTROLLERS
ELEC461	COMPUTER NETWORKS	3	3	0	ELEC431 - COMMUNICATION SYSTEMS
ELEC444	COMPUTER INTERFACING	3	3	0	ELEC341 - MICROPROCESSORS & MICROCONTROLLERS
ELEC331	SIGNALS & SYSTEMS	3	3	0	ELEC213 - CIRCUIT ANALYSIS II
ELEC483	COMPUTER NETWORK LAB	1	0	1	ELEC461 - COMPUTER NETWORKS
ELEC442	EMBEDDED SYSTEM DESIGN	3	3	0	ELEC341 - MICROPROCESSORS & MICROCONTROLLERS
ELEC484	EMBEDDED SYSTEM LAB	1	0	1	ELEC442 - EMBEDDED SYSTEM DESIGN
ELEC392	DIGITAL ELECTRONICS LAB	1	0	1	ELEC322 - DIGITAL ELECTRONICS
ELEC351	DATABASE SYSTEMS	3	3	0	COMP255 - DATA STRUCTURES AND ALGORITHM DESIGN
					MATH222 - DISCRETE MATHEMATICS
ELEC311	MEASUREMENTS AND INSTRUMENTATION	3	3	0	ELEC221 - ELECTRONICS I
ELEC213	CIRCUIT ANALYSIS II	3	3	0	ELEC212 - CIRCUIT ANALYSIS I MATH312 - DIFFERENTIAL EQUATION FOR ENGINEERS
ELEC241	DIGITAL LOGIC DESIGN	3	3	0	ELEC212 - CIRCUIT ANALYSIS I
ELEC432	DIGITAL SIGNAL PROCESSING	3	3	0	ELEC331 - SIGNALS & SYSTEMS
ELEC551	INTELLIGENT SYSTEM DESIGN	3	3	0	ELEC351 - DATABASE SYSTEMS
ELEC570	GRADUATION PROJECT	6	0	6	Final year

Major Electives

Required Hours

	Course Name	Con l'4	Contact]	Hours	Prerequicite/	
Course Code		Hours	Theory Hours	Practical Hours	Co-requisite	
ELEC562	Parallel Computing	3	3	0	ELEC443 - COMPUTER ARCHITECTURE AND ORGANIZATION	
ELEC573	ENGINEERING ECONOMICS & MANAGEMENT	3	3	0	100CH	
ELEC572	ROBOTICS	3	3	0	ELEC412 - CONTROL SYSTEMS	
ELEC565	COMPUTER NETWORK SECURITY	3	3	0	ELEC461 - COMPUTER NETWORKS	
ELEC555	IMAGE PROCESSING AND COMPUTER VISION	3	3	0	ELEC432 - DIGITAL SIGNAL PROCESSING	
ELEC563	WIRELESS & MOBILE NETWORKS	3	3	0	ELEC461 - COMPUTER NETWORKS	
ELEC557	NEURAL NETWORK AND FUZZY LOGIC	3	3	0	ELEC412 - CONTROL SYSTEMS	
ELEC558	MOBILE PROGRAMMING SYSTEMS	3	3	0	ELEC351 - DATABASE SYSTEMS	
ELEC546	COMPUTER CONTROLLED SYSTEMS	3	3	0	ELEC444 - COMPUTER INTERFACING	
ELEC559	INTERNET PROGRAMMING	3	3	0	ELEC351 - DATABASE SYSTEMS	
ELEC545	REAL-TIME SYSTEMS	3	3	0	ELEC552 - OPERATING SYSTEMS	
ELEC517	DIGITAL CONTROL	3	3	0	ELEC412 - CONTROL SYSTEMS	
ELEC553	MULTIMEDIA TECHNOLIGY	3	3	0	ELEC461 - COMPUTER NETWORKS	
ELEC564	NETWORK PROGRAMMING	3	3	0	ELEC461 - COMPUTER NETWORKS	
ELEC560	SPECIAL TOPICS IN COMPUTER ENGINEERING	3	3	0	100CH	
ELEC580	ARTIFICIAL INTELLIGENCE	3	3	0	ELEC551 - SOFTWARE SYSTEMS DESIGN	
ELEC585	ADVANCED DIGITAL SYSTEM DESIGN	3	3	0	ELEC443 - COMPUTER ARCHITECTURE AND ORGANIZATION	