Covenant University

B.Eng. Degree Programme in

Computer Engineering

COURSE STRUCTURE

Course Structure

The programme workload of the students in Computer Engineering (CEN) Programme.is seen in Table 1 for the 10 semesters (5years 2 semesters for each year)

Table 1: Programme Workload of StudentsProgram Workload by Student

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
**SEMESTER 1**
**Core Courses**
1	MAT111	Algebra	3	3			3
2	MAT112	Trigonometry and Geometry	3	3			3
3	PHY111	Mechanics and Properties of Matter	3	3			3
4	PHY112	Heat, Sound and Optics	3	3			3
5	PHY119	Physics Practical I	1			3	3
6	GEC117	Technical Drawing	1	1			1
7	CHM111	General Physical Chemistry	3	3			3
8	CHM119	General Chemistry	1			3	3
**University Courses**
9	EDS111	Entrepreneurial Development Studies I	1	1			1
10	TMC111	Total Man Concept I	1	1			1
11	TMC112	Total Man Concept - Sports I	-				-
**General Courses**
12	CST111	Computer Applications and Library Studies I	2	2			2
13	GST111	Communication in English I	2	2			2
		Total	**24**				**28**

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
**SEMESTER 2**
**Core Courses**
1	MAT121	Calculus	3	3			3
2	MAT122	Vector Algebra	3	3			3
3	PHY121	Electricity and Magnetism	2	2			2
4	PHY122	Atomic and Nuclear Physics	2	2			2
5	PHY129	Physics Practical II	1			3	3
6	CHM123	General Organic Chemistry	3	3			3
7	CHM122	General Inorganic Chemistry	2	2			3

8	CHM129	General Chemistry Practical II	1			3	3
		University Courses					
9	EDS121	Entrepreneurial Development Studies II	1	1			1
10	TMC121	Total Man Concept II	1	1			1
11	TMC122	Total Man Concept - Sports II	-				-
		General Courses					
12	CST121	Computer Applications and Library Studies II	2	2			2
13	GST121	Communication in English II	2	2			2
14	GST122	Communication in French	2	2			2
		Total	**25**				**30**

Semester 3

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Core Courses					
1	GEC210	Engineering Mathematics I	3	3			3
2	GEC211	Fundamentals of Electrical Engineering I	2	2			2
3	GEC212	Engineering Graphics	2	2			2
4	GEC213	Material Science and Engineering	2	2			2
5	GEC214	Applied Mechanics	3	3			3
6	GEC215	Applied Computer Programming I	2	2			2
7	GEC216	General Engineering Laboratory I	1			3	3
8	GEC217	Engineer-In- Society	2	2			2
9	GEC218	Workshop Technology	2			6	6
10	GEC219	Applied Mechanics Practical	1	1			1
		University Courses					
11	EDS211	Entrepreneurial Development Studies III	1	1			1
12	TMC211	Total Man Concept III	1	1			1
13	TMC212	Total Man Concept - Sports III	-				-
		General Courses					
14	GST211	Logic, Philosophy and Human Existence	2	2			2
		Total	**24**				**30**

Semester 4

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Core Courses					
1	GEC220	Engineering Mathematics II	3	3			3

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
2	GEC221	Thermodynamics	3	3			3
3	GEC222	Computer Aided Design & Manufacture	2	2			2
4	GEC223	Fluid Mechanics	3	3			3
5	GEC224	Strength of Materials	3	3			3
6	GEC225	Applied Computer Programming II	1	1			1
7	GEC226	General Engineering Laboratory II	1			3	3
8	GEC228	Fundamentals of Electrical Engineering II	2	2			2
9	GEC229	Student Workshop Experience Program (SWEP)					
		University Courses					
10	EDS221	Entrepreneurial Development Studies III	1	1			1
11	TMC221	Total Man Concept III	1	1			1
12	TMC222	Total Man Concept - Sports III	-				-
		General Courses					
13	GST221	Logic, Philosophy and Human Existence	2	2			2
14	GST222	Peace Studies and Conflict Resolution	2	2			2
		Total	**24**				**26**
		Semester 5					
No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Core Courses					
1	GEC310	Engineering Mathematics III	3	3			3
2	EIE311	Electromagnetic Fields & Waves	3	3			3
3	EIE312	Communication Principles	3	3			3
4	EIE333	Physical Electronics and Semiconductor Devices	3	3			3
5	EIE314	Electric Circuit Theory I	3	3			3
6	EIE315	Electrical Machines	2	2			2
7	EIE318	Laboratory Practical I	1			3	3
8	CEN317	Electric Machine Practical	2	2			2
		University Courses					
9	EDS311	Entrepreneurial Development Studies V	1	1			1
10	TMC311	Total Man Concept V	1	1			1
11	TMC312	Total Man Concept – Sports V	-				-
		General Courses					
12	GST311	History and Philosophy Science	2	2			2

		Total	24				26

Semester 6							
No.	Course Code	Course Title	Credit	L	T	P	Total/Week
Core Courses							
1	GEC320	Numerical Methods	3	3			3
2	GEC324	Technical/Engineering Communication	2	2			2
3	GEC321	Engineering Economics	3	3			3
4	GEC329	**SIWES2 (see400level Omega)	-				-
5	EIE321	Electric Power Principles	2	2			2
6	EIE323	Analogue Electronics	3	3			3
7	EIE326	Software Development Techniques	3	3			3
8	EIE327	Digital Electronics	3	3			3
9	EIE328	Laboratory Practical II	2			6	6
10	EEE321	Electric Power Principles Practical	1			3	3
University Courses							
11	EDS321	Entrepreneurial Development Studies VI	1	1			1
12	TMC321	Total Man Concept VI	1	1			1
13	TMC322	Total Man Concept – Sports VI	-				-
		Total	24				30

Semester 7							
No.	Course Code	Course Title	Credit	L	T	P	Total/Week
Core Courses							
1	GEC410	Engineering Statistics	3	3			3
2	CEN416	Assembly Language Programming	3	3			3
3	EIE412	Control Engineering and Linear Systems	3	3			3
4	EIE411	Computer Architecture and Organization	3	3			3
5	EIE416	Measurements and Instrumentation	3	3			3
6	CEN413	Computing Laboratory Practical and Mini-Project	2			6	6
7	CEN414	Software Engineering I	2	2			2
8	EIE418	Data Communication & Computer Networks I	3	3			3
University Courses							
10	EDS411	Entrepreneurial Development Studies VII	1	1			1
11	TMC411	Total Man Concept VII	1	1			1

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
12	TMC412	Total Man Concept – Sports VII	-				-
		Total	**24**				**28llli CV**
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No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Semester 8					
		Core Courses					
1	GEC229	SIWES I (SWEP)	6			38	38
2	GEC329	SIWES II	6			38	38
3	GEC429	SIWES III (IT)	6			38	38
		Total	**18**				**118**

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Semester 9					
		Core Courses					
1	GEC517	Engineering Law	2	2			2
2	EIE510	Research Methodology	1	1			1
3	EIE512	Reliability and Maintainability	3	3			3
4	CEN510	Digital System Design with VHDL	3	3			3
5	CEN511	Embedded System Design and Programming	3	3			3
6	CEN513	Microprocessor System and Interfacing	3	3			3
7	CEN515	Computer Graphics and Animation	2	2			2
8	CEN512	Computer Software Engineering II	2	2			2
		University Courses					
11	EDS511	Cost Engineering	2	2			2
12	TMC511	Total Man Concept IX	1	1			1
13	TMC512	Total Man Concept– Sports IX	-				-
		Total	**23**				**23**

No.	Course Code	Course Title	Credit	L	T	P	Total/Week
		Semester 10					
		Core Courses					
1	GEC527	Engineering Management	3	3			3
2	CEN524	Artificial Intelligence and Application	3	3			3
3	CEN523	Computer Networks and Security	3	3			3
4	EIE527	Digital Signal Processing	2	2			2
5	GEC529	Project	6			6	6
		Elective					

7	EIE521	Electromagnetic Interference	2	2			2
8	EIE523	Design and Installation of Electrical and ICT services	2	2			2
9	EIE544	Cryptography Principles and Applications	2	2			2
10	EIE525	Digital Signal Processing	3	3			3
11	EIE542	Robotics And Automation	2	2			2
12	CEN527	Computer Security Techniques II	2	2			2
University Courses							
13	EDS521	Engineering Valuation/Appraisal	2	1			1
14	TMC521	Total Man Concept X	1	1			1
15	TMC522	Total Man Concept – Sports X	-				-
		Total	**25**				**30**