

AMITY UNIVERSITY RAJASTHAN

**PROGRAMME STRUCTURE
Electronics & Communication Engineering**

**Bachelor of Technology
(Electronics & Communication Engineering)**

Programme Code: BEC

Duration – 4 Years Full Time

(2018-2022)

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE Electronics & Communication Engineering

Semester I						
Code	Course	Category	L	T	P	Credits
Core Courses						
AM 101	Applied Mathematics – I	CC	3	1	-	4
AP 102	Applied Physics - I – Fields & Waves	CC	2	1		3
AC 003	Applied Chemistry	CC	2	1		3
BME 004	Element of Mechanical Engineering	CC	2	1		3
BCS 003	Introduction to Computers & Programming in C	CC	2	1		3
BEE 003	Basic Electrical Engg.	CC	2	1		3
Practical Courses						
AP 122	Applied Physics lab	CC	-	-	2	1
AC 023	Applied Chemistry lab	CC	-	-	2	1
BME 024	Element of Mechanical Engineering lab	CC	-	-	2	1
BCS 023	Programming in C lab	CC	-	-	2	1
BEE 023	Basic Electrical Engg. lab	CC	-	-	2	1
Value Added Courses						
BCS 101	English	VA	1	-	-	1
BSS 101	Understanding Self For Effectiveness- I		1	-	-	1
FLF 101	French		2	-	-	2
FLG 101	German					
FLS 101	Spanish					
FLC 101	Chinese					
Total						28

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE Electronics & Communication Engineering

Semester II						
Code	Course	Category	L	T	P	Credits
Core Courses						
AM 201	Applied Mathematics – II	CC	3	1	-	4
AP 202	Applied Physics - II – Modern Physics	CC	2	1		3
BCS 203	Object Oriented Programming using C++	CC	2	1		3
BME 003	Engineering Mechanics	CC	2	1		3
BME 005	Engineering Graphics	CC	1			1
EVS 001	Environmental Studies	CC	3	1	-	4
	Domain workshop	CC	1			1
Practical Courses						
AP 222	Applied Physics - II – Modern Physics lab	CC	-	-	2	1
BCS 223	Object Oriented Programming using C++ lab	CC	-	-	2	1
BME 023	Engineering Mechanics lab	CC	-	-	2	1
BME 025	Engineering Graphics lab	CC	-	-	2	1
Open Elective-I						
	OPEN ELECTIVE - I	OE	3	-	-	3
Value Added Courses						
BCS 201	English	VA	1	-	-	1
BSS 201	Behavioural Science – II	VA	1	-	-	1
FLF 201	Foreign Language - II French	VA	2	-	-	2
FLG 201	German					
FLS 201	Spanish					
FLC 201	Chinese					
Total						30

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester III

Code	Course	Category	L	T	P	Credits
Core Courses						
AM 301	Applied Mathematics - III	CC	3	-	-	3
BEC 302	Analog Electronics-I	CC	2	1	-	3
BEC 303	Circuits & Systems	CC	2	1	-	3
BEC304	Signal & Systems	CC	2	1	-	3
BEC305	Java Programming	CC	3	-	-	3
Practical Courses						
BEC322	Analog Electronics-I Lab	CC	-	-	2	1
BEC 323	Circuits & Systems Lab	CC	-	-	2	1
BEC 325	Java Programming Lab	CC	-	-	2	1
Domain Elective-I: Student must select one course from the following courses						
BEC 305	Electromagnetic Properties of Materials	DE	2	1		3
BEC 306	Measurements & Instrumentation	DE	2	1		3
Open Elective						
	OPEN ELECTIVE - II	OE	3		-	3
Value Added Courses						
BCS 301	Communication Skills - I	VA	1	-	-	1
BSS 304	Understanding Self for Effectiveness II	VA	1	-	-	1
FLF 301 FLG 301 FLS 301 FLC 301	Foreign Language - III French German Spanish Chinese	VA	2	-	-	2
Total						29

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester IV						
Code	Course	Category	L	T	P	Credits
Core Courses						
BEC 401	Digital Circuits & Systems-I	CC	3	-		3
BEC 402	Analog Electronics-II	CC	3	-		3
BEC 403	Communication Systems	CC	3	-	-	3
BEE 404	Control System	CC	3	-		3
Practical Courses						
BEC 421	Digital Circuits & Systems-I Lab	CC			2	1
BEC 422	Analog Electronics-II Lab	CC			2	1
BEC 423	Communication Systems Lab	CC			2	1
BEE 424	Control System Lab	CC			2	1
Domain Elective-II: Student has to select one course from the following courses						
BEC 405	Computer Oriented Numerical Methods	DE	2	1		3
BEC 406	Electromagnetic Field Theory	DE	2	1		3
Open Elective						
	OPEN ELECTIVE - III	OE	3			3
Value Added Courses						
BCS 401	Communication Skills - II	VA	1	-	-	1
BSS 404	Understanding Self for Effectiveness V	VA	1	-	-	1
FLF 401	Foreign Language - IV	VA	2	-	-	2
FLG 401	French					
FLS 401	German					
FLC 401	Spanish					
	Chinese					
Total						25

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester V						
Code	Course	Category	L	T	P	Credits
Core Courses						
BEC 501	Microprocessor and Microcontroller Systems	CC	3	-		3
BEC 502	Digital Circuits & Systems-II	CC	3	-	-	3
BEC 503	Digital Communications	CC	3	-		3
BEC 550	Practical Training (Evaluation)	CC	-	-	-	6
Practical Courses						
BEC 521	Microprocessor and Micro Controller Lab	CC			2	1
BEE 522	MATLAB theory and practices	CC	-	-	2	1
BEC 522	Digital Circuits & Systems-II Lab	CC			2	1
Domain Elective-III: Student has to select one course from the following courses						
BEC 505	Telecommunication Networks	DE	3			3
BEC 506	Operating Systems	DE	3			3
BEE 505	Computer System Architecture	DE	3			3
Open Elective						
	OPEN ELECTIVE - IV	OE	3			3
Value Added Courses						
BCS 501	Communication Skills - III	VA	1	-	-	1
BSS 504	Understanding self for effectiveness V	VA	1	-	-	1
FLF 501	Foreign Language - V	VA	2	-	-	2
FLG 501	French					
FLS 501	German					
FLC 501	Spanish Chinese					
Total						26

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester VI						
Code	Course	Category	L	T	P	Credits
Core Courses						
BEC 601	VLSI Design	CC	3	-		3
BEC 602	Digital Signal Processing	CC	3	-		3
BEC 603	Microwave Engineering	CC	3	-		3
BEE 601	Power Electronics	CC	3	-	-	3
Practical Courses						
BEC 621	VLSI Design lab	CC			2	1
BEC 622	Digital Signal Processing lab	CC			2	1
BEC 623	Microwave Engineering lab	CC			2	1
BEC 624	Power Electronics Lab	CC		-	2	1
Domain Elective-IV: Student has to select one course from the following courses						
BEC 605	Measurement & Measuring Instruments	DE	3			3
BEC 606	Data Structures and IT	DE	3			3
BEC 607	Information Theory & Coding	DE	3			3
Open Elective						
	OPEN ELECTIVE - V	OE	3			3
Value Added Courses						
BCS 601	Communication Skills - IV	VA	1	-	-	1
BSS 604	Understanding self for Effectiveness - VI	VA	1	-	-	1
FLF 601	Foreign Language - VI	VA	2	-	-	2
FLG 601	French					
FLS 601	German					
FLC 601	Spanish					
	Chinese					
Total						26

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester VII						
Code	Course	Category	L	T	P	Credits
Core Courses						
BEC 701	Radar & Satellite Communications	CC	3	-		3
BEC 702	Digital Image Processing	CC	3	-		3
BEC 703	Analog CMOS IC Design	CC	3	-		3
Practical Courses						
BEC 722	Digital Image Processing lab	CC			2	1
BEC 723	Analog CMOS IC Design lab	CC			2	1
BEC 701	Radar & Satellite Communications Lab	CC			2	1
BEC 750	Industrial Training (Evaluation)	CC				5
	Seminar	CC				3
Open Elective						
	OPEN ELECTIVE - VI	OE	3			3
Value Added Courses						
BCS 701	Communication Skills - V	VA	1	-	-	1
BSS 704	Understanding self for effectiveness - VII	VA	1	-	-	1
FLT 701 FLG 701 FLS 701 FLC 701	Foreign Language - VII French German Spanish Chinese	VA	2	-	-	2
	TOTAL					27

AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester VIII						
Code	Course	Category	L	T	P	Credits
Core Courses						
BEC 801	Antenna & Wave Propagation	CC	3	-	-	3
BEC 802	Embedded System Design and Device Driver Development	CC	3	-		3
Practical Courses						
BEC 822	Embedded System Design and Device Driver Development lab	CC		-	2	1
BEC 821	Antenna & Wave Propagation Lab	CC		-	2	1
BEC 861	Project	CC				12
Domain Elective-V: Student must select one course from the following courses						
BEC 803	Instrumentation	DE	3			3
BEC 804	Nanoscience & Nanotechnology	DE	3			3
BEC 805	Robotics & Automation	DE	3			3
	Total					22

Total credit	208
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