

R.V.R. & J.C. COLLEGE OF ENGINEERING  
(Autonomous)  
DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING

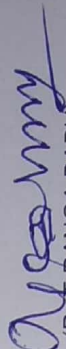
Percentage of Syllabus Content added or replaced in R16 Syllabus compared to R12 Syllabus

R12		R16		Subject Code	Subject Name	Subject Code	Remarks	Percentage of Syllabus content added or replaced
S.No	Subject Name	Subject Code	Subject Name					
1	Engineering Mathematics-I	EC111	Differential Equations and Statistics	EC-101	No change		0	
2	Engineering Physics-I	EC 112	Engineering Physics	EC-102	1 Unit changed		20	
3	Engineering Chemistry-I	EC 113	Applied Chemistry	EC-103	1.5 units changed		30	
4	Environmental Studies Engineering	EC125	Environmental Studies	EC-104	No change		0	
5			Elements of Mechanical Engineering	EC-105	New course		100	
6			Economics for Engineers	EC-106	New course		100	
7	Physics Lab.	EC-161	Physics lab	EC-151	No change		0	
8	Engineering Graphics Lab	EC-163	Engineering Graphics Lab	EC-152	Change in 1 unit		20	
9			Communication Skills lab	EC-153	New course		100	
10	Engineering Mathematics - II	EC 121	Calculus and Numerical Methods	EC-107	2 Units changed		40	
11			Electronic and Electrical Engineering Mat	EC-108	New course		100	
12	Engineering Chemistry - II	EC 123	Chemistry of Engineering Materials	EC-109	2 Units changed		40	
13	Technical English & Communication Skills	EC 124	English for Communication	EC-110	1 Unit changed		20	
14	C-Programming	EC-114	Problem Solving with C	EC-111	No change		0	
15	Professional Ethics And Human Values	EC -316	Professional Ethics and Human Values	EC-112	No change		0	
16	Chemistry Lab	EC-151	Chemistry Lab	EC-154	No change		0	
17	C Programming Lab	EC-153	C Programming Lab	EC-155	Change in three exp		20	
18			Electronics Engineering Workshop	EC-156	New course		100	
19			Transformation Techniques	EC-201	New course		100	
20	Electronic Devices	EC 215	Electronic Devices and Circuits	EC-202	1 Unit changed		20	
21	Digital Logic Design	EC 214	Digital Logic Design	EC-203	1 Unit changed		20	
22	Circuit Theory	EC 212	Circuit Theory	EC-204	No change		0	
23			Data Structures Through C++	EC-205	New course		100	

S.No	Subject Name	Subject Code	Subject Name	Subject Code	Remarks	Percentage of Syllabus content added or replaced
24	Signals And Systems	EC-224	Signals and Systems	EC-206	No change	0
25	Electronic Devices Lab	EC-251	Electronic Devices Lab	EC-251	Change in four exp	30
26	Digital Logic Design Lab	EC-252	Digital Logic Design Lab	EC-252	Additional experiments added	20
27	Data Structures Lab	EC-262	Data Structures through C++ Lab	EC-253	Additional experiments added	40
28	Engineering Mathematics - IV	EC-221	Complex and Numerical Analysis	EC-207	1 Unit changed	20
29	Electronic Circuits – I & Electronic Circuits - II	EC-223	Electronic Circuit Analysis	EC-208	No change	0
30	Computer Organization	EC-326	Computer Organization	EC-209	1 Unit changed	10
31	Analog Communication	EC-315	Analog Communication	EC-210	No change	0
32	Transmission Lines And Waveguides & Electromagnetic Field Theory	EC-226	Electromagnetic Fields & Transmission Lines	EC-211	No change	0
33	Electronic Measurements and Instrumentation	EC-227	Electrical Engineering & Measurements	EC-212	2 Units changed	40
34			Signals & Systems Lab	EC-254	New course	100
35	Electronic Circuits Lab	EC-261	Electronic Circuits Lab	EC-255	Change in some exp	40
36			Professional Communication Skills Lab	EC-256	New course	100
37	Pulse Circuits	EC-314	Pulse and Digital Circuits	EC-301	1 Unit changed	20
38	Microprocessors and Microcontrollers	EC-322	Microprocessors & Microcontrollers	EC-302	1 Unit changed	20
39	Linear ICs and Applications	EC-321	Linear IC's And Its Applications	EC-303	1 Unit changed	20
40	Digital Communications	EC-323	Digital Communications	EC-304	No change	0
41	Linear Control Systems	EC-311	Linear Control Systems	EC-305	No change	0
42	Antennas and Wave Propagation	EC-325	Antennas and Wave Propagation	EC-306	No change	0
43	Microprocessors & Microcontrollers Lab	EC-362	Microprocessors & Microcontrollers Lab	EC-351	No change	0
44	Analog Communication Lab	EC-351	Analog Communication Lab	EC-352	Change in few exp	40
45	Ops and Pspice Lab	EC-352	Circuit Simulation Lab	EC-353	Change in few exp	40
46			HDL Programing	EC-307	New course	100
47			Graphical System Design	EC-308	New course	100
48	Computer Networks	EC-412	Computer Networks	EC-309	No change	0
49	Digital Signal Processing	EC-324	Digital Signal Processing	EC-310	No change	0
50	TV Engineering	EC-326	TV Engineering	EC-311A	1 Unit changed	20
51	Electromagnetic Compatability	EC-326	Electromagnetic Compatability	EC-311B	No change	0
52	Biomedical Instrumentation	EC-326	Biomedical Instrumentation	EC-311C	1 Unit changed	20

S.No	Subject Name	Subject Code	Subject Name	Subject Code	Remarks	Percentage of Syllabus content added or replaced
53	Telecommunication Switching System	EC - 416	Telecommunication Switching System	EC-311D	No change	0
54			Operating Systems	EC-312A	New course	100
55	Neural Networks	EC - 424	Neural Networks	EC-312B	1 Unit changed	20
56			Fuzzy Logic	EC-312C	New course	100
57			Spread Spectrum Communications	EC-312D	New course	100
58	Digital Communication Lab	EC-361	Digital Communication Lab	EC-354	Change in few exp	30
59			HDL Programming Lab	EC-355	New course	100
60	Pulse Circuits & ICs Lab	EC-353	Pulse Circuits & ICs Lab	EC-356	No change	0
61	Microwave Engineering	EC - 413	Microwave Engineering	EC-401	1 Unit changed	20
62	VLSI Design	EC - 414	VLSI Design	EC-402	1 Unit changed	20
63	Energy Engineering	EC - 415/A	Energy Engineering	CHE-404A	1 Unit changed	20
64	Bio-Fuels	EC - 415/B	Bio-Fuels	CHE-404B	1 Unit changed	20
65	Java Programming	EC - 415/A	Java Programming	CS-404A	1 Unit changed	20
66	Database Management Systems	EC - 415/B	Database Management Systems	CS-404B	No change	0
67	Applied Electronics	EC - 415/A	Applied Electronics	EC-404A	1 Unit changed	20
68	Basic Communication	EC - 415/B	Basic Communication	EC-404B	1 Unit changed	20
69	Renewable Energy Sources	EC - 415/A	Renewable Energy Sources	EE-404A	No change	0
70	Utilization of Electrical Energy	EC - 415/B	Utilization of Electrical Energy	EE-404B	No change	0
71	Software Engineering	EC - 415/B	Software Engineering	IT-404A	1 Unit changed	20
72	Web Technologies	EC - 415/A	Web Technologies	IT-404B	1 Unit changed	20
73	Robotics	EC - 415/A	Robotics	ME-404A	1 Unit changed	20
74	Operations Research	EC - 415/B	Operations Research	ME-404B	No change	0
75	Industrial Management	EC - 411	Industrial Management & Entrepreneurship	EC-405	2 Units changed	40
76	Digital Image Processing	EC - 416	Digital Image Processing	EC-406A	1 Unit changed	20
77			Fundamentals of Global Positioning System	EC-406B	New course	100
78	Advanced Digital Signal Processing	EC - 416	Advanced Digital Signal Processing	EC-406C	1 Unit changed	20
79			Smart Antennas	EC-406D	New course	100
80	Mini Project / Term Paper	EC-451	Mini Project / Term Paper	EC-451	No change	0
81			Graphical System Design Lab	EC-452	New course	100
82	Digital Signal Processing Lab	EC-453	Digital Signal Processing Lab	EC-453	Change in few exp	40
83	Mobile and Cellular Communications	EC - 421	Mobile and Cellular Communications	EC-407	No change	0

S.No	Subject Name	Subject Code	Subject Name	Subject Code	Remarks	Percentage of Syllabus content added or replaced
84	Optical Communications	EC - 422	Optical Communications	EC-408	1 Unit changed	20
85	Satellite Communication	EC - 424	Satellite Communication	EC-409A	1 Unit changed	20
86	Embedded Systems	EC - 424	Embedded Systems	EC-409B	No change	0
87	DSP Processors	EC - 424	DSP Processors	EC-409C	1 Unit changed	20
88			RF System Design	EC-409D	New course	100
89			Wireless Adhoc Networks	EC-410A	New course	100
90			Real Time Operating System	EC-410B	New course	100
91			Speech Processing	EC-410C	New course	100
92	Radar & Navigational Aids	EC-423	Radar & Navigational Aids	EC-410D	No change	0
93	Microwave & Optical Communication Lab	EC-461	Microwave & Optical Communication Lab	EC-454	No change	0
94	Project and Viva - Voce	EC-462	Project and Viva - Voce	EC-455	No change	0
<b>Percentage change in content</b>						<b>34</b>

  
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**Percentage of Syllabus Content added or replaced in R18 Syllabus compared to R16 Syllabus**

R16		R18		Subject Name	Subject Code	Remarks	Percentage of Syllabus content added or replaced
S.No	Subject Name	Subject Code	Subject Code				
1	Differential Equations and Statistics	EC-101	Mathematics-I	EC111	1.5 Units are changed	40	
2	Applied Chemistry	EC-103	Engineering Chemistry	EC112	1.5 Units are changed	40	
3			Basic Electrical Engineering	EC113	New Course	100	
4	Chemistry lab	EC-154	Chemistry Lab	EC151	No change	0	
5			Basic Electrical Engineering Lab	EC152	New Course	100	
6	Engineering Graphics Lab	EC-152	Engineering Graphics & Design Lab	EC153	No change	0	
7			Environmental Science	MC 002	New Course	100	
8	Calculus and Numerical Methods	EC-107	Mathematics-II	EC121	1 Unit changed	25	
9	Engineering Physics	EC-102	Engineering Physics	EC122	No change	0	
10	Problem Solving with C	EC-111	Programming for Problem Solving	EC123	No change	0	
11	English for Communication	EC-110	English for Communication Skills	EC124	No change	0	
12	Physics lab	EC-151	Physics Lab	EC161	No change	0	
13	C Programming Lab	EC-155	Programming for Problem Solving Lab	EC162	No change	0	
14			Workshop Practice Lab	EC163	New Course	100	
15	Communication Skills lab	EC-153	English Language Communication Skills Lab	EC164	No change	0	
16			Constitution of India	MC 001	New Course	100	
17			Essence of Indian Traditional Knowledge	MC 003	New Course	100	
18	Transformation Techniques	EC-201	Mathematics-III	EC211	1 Unit changed	25	
19	Electronic Devices and Circuits	EC-202	Electronic Devices	EC212	1.5 Units are changed	40	
20	Signals and Systems	EC-206	Signals and Systems	EC213	1.5 Units are changed	40	
21	Circuit Theory	EC-204	Circuit Theory	EC214	No change	0	
22	Electromagnetic Fields & Transmission Lines	EC-211	Electromagnetic Field Theory	EC215	1.5 Units are changed	40	
23	Electronic Devices Lab	EC-251	Electronic Devices Lab	EC251	No change	0	
24	Professional Communication Skills Lab	EC-256	Communicative English Lab	EC252	No change	0	
25			Basic Civil & Mechanical Engineering	EC221	New Course	100	
26			Life Sciences for Engineers	EC222	New Course	100	
27	Digital Logic Design	EC-203	Digital Electronics & Logic Design	EC223	1 Unit changed	25	
28			Network Analysis & Transmission Lines	EC224	New Course	100	
29	Electronic Circuit Analysis	EC-208	Analog Circuits	EC225	No change	0	

S.No	Subject Name	Subject Code	Subject Code	Subject Code	Subject Name	Subject Code	Subject Name	Subject Name	Remarks	Percentage of Syllabus content added or replaced
30					Basic Civil & Mechanical Engineering Lab		EC261		New Course	100
31	Signals & Systems lab	EC-254			Signals & Systems lab		EC262		No change	0
32	Digital Logic Design Lab	EC-252			Digital Electronics & Logic Design Lab		EC263		6 experiments are changed out of 15	40
33					Design Thinking & Product Innovation		MC 004		New Course	100
34	Control Engineering	EC-305			Control Systems		EC311		No change	0
35	Computer Networks	EC-309			Computer Networks		EC312		No change	0
36	Microprocessors & Microcontrollers	EC-302			Microprocessors & Microcontroller		EC313		No change	0
37					Integrated Circuits & Applications		EC314		New Course	100
38	Analog Communication	EC-210			Analog Communication		EC316		No change	0
39	Electronic Circuits Lab	EC-255			Analog Circuits Lab		EC351		6 programs are changed out of 15	40
40	Microprocessors & Microcontrollers Lab	EC-351			Microprocessors & Microcontroller Lab		EC352		No change	0
41					Integrated Circuits & Applications Lab		EC353		New Course	100
42	Digital Communications	EC-304			Digital Communications		EC321		No change	0
43	Digital Signal Processing	EC-310			Digital Signal Processing		EC322		No change	0
44	Antennas and Wave Propagation	EC-306			Antennas & Wave Propagation		EC323		No change	0
45					Analog & Digital Communications Lab		EC361		New Course	100
46	Digital Signal Processing Lab	EC-453			Digital Signal Processing Lab		EC362		No change	0
47	VLSI Design	EC-402			VLSI Design		EC411		No change	0
48	Microwave Engineering	EC-401			Microwave Engineering		EC412		No change	0
49	Mini Project/Term paper	EC451			Project Stage-I		EC451		No change	0
50					Advanced Communications Lab		EC452		New Course	100
51					Industrial Training / Internship / Certification/Research Projects in National laboratories / Academic Institutions		EC453		New Course	100
52	Project and Viva - Voce	EC455			Project Stage-II		EC461		No change	0
53					Information Theory & Coding		ECEL01		New Course	100
54					Data Communications & Networking		ECEL02		New Course	100
55	Optical Communications	EC-408			Optical Communications		ECEL03		No change	0
56	Satellite Communications	EC-409A			Satellite Communications		ECEL04		No change	0
57	Mobile and Cellular Communications	EC-407			Cellular & Mobile Communications		ECEL05		No change	0
58					Wireless Communications		ECEL06		New Course	100
59					Computer System Architecture		ECEL07		New Course	100
60	Real Time Operating System	EC-410B			Real Time Operating Systems		ECEL08		No change	0
61	Embedded Systems	EC-409B			Embedded Systems		ECEL09		No change	0
62					SoC Architectures		ECEL10		New Course	100

S.No	Subject Name	Subject Code	Subject Code	Subject Code	Subject Name	Remarks	Percentage of Syllabus content added or replaced
63					Digital System Design	New Course	100
64					Advanced Digital Signal Processing	New Course	100
65					Analog IC Design	New Course	100
66					Digital IC Design	New Course	100
67					Low Power VLSI Design	New Course	100
68					VLSI Testing & Testability	New Course	100
69					Soft Computing Techniques	New Course	100
70					Digital Signal Processors & Architectures	New Course	100
71	Digital Image Processing	EC-406A			Image Processing	No change	0
72					Pattern Recognition	New Course	100
73	Speech Processing	EC-410C			Speech Processing	No change	0
74					Electromagnetic Interference & Compatibility	New Course	100
75					MEMS	New Course	100
76	Radar & Navigational Aids	EC-410D			Radar & Navigational Aids	No change	0
77					Cognitive Radio	New Course	100
78	RF System Design	EC-409D			RF System Design	No change	0
79	Electrical Engineering & Measurements	EC-212			Electronic Measurements & Instrumentation	1.5 Units are changed	40
80					Wireless Sensor Networks	New Course	100
81					English Competency Development Programme	New Course	100
82					AI Tools, Techniques and Applications	New Course	100
83					Internet of Things (IoT)	New Course	100
84					Graphical System Design-I	New Course	100
85					Graphical System Design-II	New Course	100
86					Graphical System Design-III	New Course	100
87					Building Materials and Construction	No change	0
88					Solid waste Management	New Course	100
89					Remote Sensing and GIS	New Course	100
90					Energy Engineering	No change	0
91					Biofuels	No change	0
92					Pollution Control	New Course	100
93					Nanoscience and Nanotechnology	New Course	100
94					Programming with Java	New Course	100
95					Relational Database Management Systems	New Course	100
96					Introduction to Python Programming	New Course	100
97					Internet of Things	New Course	100

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98					Renewable energy sources	EEOL01	New Course	100	
99					Utilization of Electrical Energy	EEOL02	No change	0	
100					Power Converters	EEOL03	New Course	100	
101					Energy Conservation	EEOL04	New Course	100	
102					Introduction to Electric Vehicles and Storage Systems	EEOL05	New Course	100	
103					Data Structures & Algorithms	ITOL01	New Course	100	
104					Operating Systems	ITOL02	New Course	100	
105					Big Data Analytics	ITOL03	New Course	100	
106	Web Technologies	IT-404B			Web Technologies	ITOL04	No change	0	
107					Automotive Engineering	MEOL01	New Course	100	
108					Robotic Engineering	MEOL02	New Course	100	
109					Introduction to Operations Research	MEOL03	New Course	100	
110					Mechatronics	MEOL04	New Course	100	
111					Applied Mechanics & Mechanical Engineering	MEOL05	New Course	100	
112	Industrial Management & Entrepreneurship	EC-405			Industrial Management & Entrepreneurship	HSEL01	No change	0	
113	Economics for Engineers	EC-106			Economics for Engineers	HSEL02	No change	0	
114					Introduction to Industrial Management	HSEL03	New Course	100	
115					Project Management & Entrepreneurship	HSEL04	New Course	100	
116					Human Resources & Organisational Behaviour	HSEL05	New Course	100	
117					Ethics & Human Values	HSEL06	New Course	100	
<b>Percentage change in content</b>									
<b>58</b>									

  
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