Department of Civil Engineering:: RVR&JC College of Engineering

Criteria 1.1.2 Percentage of program where syllabus revision was carried out during the last five years

S.No	Semester	Name of subjects in R-16	No of subjects	Name of subjects in R-18	No of subjects
1	I-I	Differential Equations Engineering Physics Applied Chemistry Engineering Mechanics	4	Mathematics-I Engineering Physics	2
2	I-II	Calculus Physics of Materials Solid Mechanics	3	Mathematics-II Engineering Chemistry Programming for Problem solving	3
3	II-I	Computational Techniques & Statistical methods Building Materials, Planning & Construction	3	Solid Mechanics-1 Engineering Geology Building Materials and Construction	3
4	II-II	Surveying-II Structural Analysis-1	2	Mathematics-III Solidmechancis –II Basic Electrical Engineering	3
5	III-I	Geotechnical Engineering-1 Design of Concrete structures Structural analysis-II	3	Structural Analysis Environmental Engineering Design of steel structural Elements	3
6	III-II	Highway Engineering	1	Highway engineering Irrigation Structures Disaster management	3
7	IV-I	Bridge Engineering	1	Construction management Estimation & Costing Professional Ethics	3
8	IV-II	Advanced Design of Concrete Structures	1	-	

For R16 Regulations:
No. of subjects in where syllabus content added or replaced= 19
Total no. of subjects= 75
Percentage of program where syllabus revision was carried out during the last five
years = 19/75*100 = 25.33
For R18 Regulations:
No. of subjects in where syllabus content added or replaced=20
Total no. of subjects= 70
Percentage of program where syllabus revision was carried out during the last five
years=20/70*100=28.57

M·Rama Rao
HOD-CE

Dr. M. RAMA RAO, B.Tech., M.E., Ph.I
Professor & Head of Civil Engineering
R.V.R. & J.C. College of Engineering
Chowdavaram, Guntur-522 019 A P   India

Department of Civil Engineering:: RVR&JC College of Engineering

Criteria 1.1.2 Percentage of program where syllabus revision was carried out during the last five years

S.No	Semester	Name of subjects in R-15	No of subjects	Name of subjects in R-17	No of subjects
1	I-I	Theory of Elasticity and Plasticity Dynamics of structures Matrix methods of structural analysis	3	Ground Improvement Techniques Adv. Design of Steel Structures	2
2	I-II	Finite Element Analysis of Structures Theory of Plates and Shells	2	Stability of Structures Advanced Theory & Design of RCC Structures Earthquake Resistant Design of Structures	3

For R15 Regulations:
No. of subjects in where syllabus content added or replaced= 5
Total no. of subjects= 16
Percentage of program where syllabus revision was carried out during the last five
    years = 5/16*100 = 37.5
For R17 Regulations:
No. of subjects in where syllabus content added or replaced=5
Total no. of subjects= 17
Percentage of program where syllabus revision was carried out during the last five years
=5/17*100=29.4

M·Rama Rao
HOD-CE

Dr. M. RAMA RAO, B.Tech., M.E., Ph.
Professor & Head of Civil Engineering
R.V.R. & J.C. College of Engineering
Chowdavaram, Guntur-522 019 A P India

R.V.R. & J.C. COLLEGE OF ENGINEERING(A)

DEPARTMENT OF CHEMICAL ENGINEERING

R12 TO R16 CHANGES

S.NO	R12		R16			
	Subject Name	Subject code	Subject Name	Subject code	Remarks	Percentage of syllabus content added or replaced
1.	Mechanical Operations	ChE 225	Mechanical Operations	CH 205	No change	0
2.	Mechanical Operations Laboratory	ChE 261	Mechanical Operations Laboratory	CH 255	No change	0
3.	Chemical Reaction Engineering-I	ChE314	Chemical Reaction Engineering-I	CH 302	One unit is shifted to CRE-II	25
4.	Chemical Reaction Engineering-II	ChE 324	Chemical Reaction Engineering-II	CH 308	One unit is Introduced	25
5.	Petroleum Refinery Engineering	ChE 423 (F)	Petroleum Refining	CH 409(C)	Some topics are added to unit-I	10
6.	Biofuels	ChE 415(B)	Biofuels	CH 404(B)	Some topics are added to unit I and unit II	10
7.	Mass Transfer Operations - I	ChE312	Mass Transfer Operations - I	ChE301	Absorption is included	13
8.	Mass Transfer Operations - II	ChE322	Mass Transfer Operations - II	ChE307	Membrane separation are included	13
9.	Chemical Process Calculations	ChE 215	Chemical Process Calculations	CH203	Crystallization and dissolution unit operation calculation are added	10

10.			Computer Simulators	CH 306(A)	Newly Added Course
11.			General Pharmacy	CH 306(B)	Newly Added Course
12.			Petroleum Exploration	CH 306(C)	Newly Added Course
13.			Computational Fluid Dynamics	CH 312(A)	Newly Added Course
14.			Pre-formulation Studies including Stability Studies	CH 312(B)	Newly Added Course
15.			Petroleum well Logging and Technology	CH 312(C)	Newly Added Course
16.			Computer Aided Process Engineering	CH 406(A)	Newly Added Course
17.			Industrial Pharmacy	CH 406(B)	Newly Added Course
18.			Natural Gas Production and its applications	CH 406(C)	Newly Added Course
19.			Computer Aided Design	CH 409(A)	Newly Added Course
20.			Quality Control of Pharmaceutical Dosage Forms	CH 409(B)	

21.	Membrane Technology	ChE 326 (C)	Advanced Separation Techniques	CH 409(D)		15%
22.			Micro Process & Electronic Programming	CH 410(A)		
23.			Validation and Documentation of Pharmaceuticals	CH 410(B)		
24.			Petrochemical Technology	CH 410(C)		
25.	Process Dynamics and Control	ChE325	Process Dynamics and Control	CH309		Nil
26.	Transport Phenomena	ChE413	Transport Phenomena	CH401	Flow of two adjacent immiscible fluids added. Nuclear heat source is added to Energy transport.	10%
27.	Process Modeling and Simulation	ChE 422	Process Modeling and Simulation	CH405		
28.	Instrumentation & Process Control Laboratory	ChE361	Instrumentation & Process Control Laboratory	CH 453		Nil
29.	Mechanical Operations	ChE 225	Mechanical Operations	CH 205	No change	0
30.	Mechanical Operations Laboratory	ChE 261	Mechanical Operations Laboratory	CH 255	No change	0
31.	Chemical Reaction Engineering-I	ChE314	Chemical Reaction Engineering-I	CH 302	One unit is shifted to CRE-II	25
32.	Chemical Reaction Engineering-II	ChE 324	Chemical Reaction Engineering-II	CH 308	One unit is Introduced	25

			Petroleum Refining		Some topics are	10
33.	Petroleum Refinery Engineering	ChE 423 (F)		CH 409(C)	added to unit-I	
34.	Biofuels	ChE 415(B)	Biofuels	CH 404(B)	Some topics are added to unit I and unit II	10
35.	Introduction to Chemical Engineering	ChE125	Introduction to Chemical Engineering	CH 112		10
36.	Chemical Process Calculations	ChE 215	Chemical Process Calculations	CH 203		20
37.	Professional Ethics & Human Values	ChE 223	Professional Ethics & Human Values	CH 212		0
38.	Material Technology	ChE 311	Material Technology	CH 206		20
39.	Electro-Chemical Engineering	ChE 326 (A)	Electro-Chemical Engineering	CH 306(D)		20
40.	Industrial Pollution Control Laboratory	ChE:454	Pollution Control Laboratory	CH 354		0
41.	Nanotechnology	ChE 423 (D)	Nanotechnology	CH406(D)		10
42.	Inorganic chemical technology	ChE 313	Inorganic chemical technology	CH210		0
43.	Industrial Pollution Control	ChE 321	Industrial Pollution Control	CH 305	Solid waste management topics are added	10
44.	Organic Chemical technology	ChE 323	Organic Chemical technology	CH 304		0
45.	Chemical Technology Lab	ChE 363	Chemical Technology Lab	CH 353	Some experiments are deleted	5
46.	Bio-Chemical Engineering	ChE 414	Bio-Chemical	CH 410(D)	Fermentation	20

			Engineering		technology and Transport phenomena in Bio Process systems topics are added	
47.	Industrial hazards and safety analysis	ChE424 (F)	Industrial hazards and safety analysis		Safety aspects of site selection, layout and unit plot planning. Flammability Characteristics of Liquids and Vapors. Concepts to Prevent Fires and Explosions: Explosion-Proof Equipment and Instruments. Ventilation. Sprinkler Systems. FMEA topics are added	15
48.	Process Instrumentation	ChE 316	Process Instrumentation and Instrumental Methods of analysis	CH 311 CH 211		20
49.	Chemical Engineering Thermodynamics I	ChE 226	Chemical Engineering Thermodynamics I	CH 209		25
50.	Chemical Engineering Thermodynamics II	ChE 315	Chemical Engineering Thermodynamics II	CH 303		30

51.	Energy Engineering (Open Elective)	ChE 415(A)	Energy Engineering (Open Elective)	CH 404(A)		05
52.	Fluidization Engineering (Elective)	ChE 326 (F)	Fluidization Engineering (Elective)	CH 312 (D)		00
53.	Computational Programming Laboratory	ChE 262	Computational Programming Laboratory	CH 256		00
54.	Computer Applications in Chemical Engineering	ChE 411	Course is Removed			Course is Removed
55.	Computer Applications in Chemical Engineering Laboratory	ChE 453	Computer Applications in Chemical Engineering Laboratory	CH 452		00
56.	Computer Aided Process Equipment Design Laboratory	ChE 461	Computer Aided Process Equipment Design Laboratory	CH 454		00
57.	Computer Aided Design	ChE 423 (E)	Computer Aided Design	CH 409(A)		00
58.			Computer Simulators	CH 306(A)		Newly Added Course
59.			Computational Fluid Dynamics	CH 312(A)		Newly Added Course
60.			Computer Aided Process Engineering	CH 406(A)		Newly Added Course

Professor & Head

R.V.R. & J.C. COLLEGE OF ENGINEERING(A)
DEPARTMENT OF CHEMICAL ENGINEERING
R16 TO R18 CHANGES

S.NO	R16		R18		Remarks	Percentage of syllabus content added or replaced
	Subject Name	Subject code	Subject Name	Subject code		
1.	Mechanical Operations	CH 205	Mechanical Operations	CH 216	No change	0
2.	Mechanical Operations Laboratory	CH 255	Mechanical Operations Laboratory	CH 262	No change	0
3.	Chemical Reaction Engineering-I	CH 302	Chemical Reaction Engineering-I	CH 226	One unit is shifted to CRE-II	0
4.	Chemical Reaction Engineering-II	CH 308	Chemical Reaction Engineering-II	CH 313	One unit is Introduced	0
5.	Petroleum Refinery Engineering	CH 409(C)	Petroleum Refining	CHEL02	Some topics are added to unit-I	0
6.	Biofuels	CH 404(B)	Biofuels	CHOL02	Some topics are added to unit I and unit II	5
7.	Mass Transfer Operations - I	CH301	Mass Transfer Operations - I	CH301	Absorption is included	15
8.	Mass Transfer Operations - II	ChE307	Mass Transfer Operations - II	CH307	Membrane separation are included	15
9.	Chemical Process Calculations	CH203	Chemical Process Calculations	CH203	Crystallization and dissolution unit operation calculation are added	0
10.	Computer Simulators	CH 306(A)	Computer Simulators			0

11.	General Pharmacy	CH 306(B)	General Pharmacy	CHEL05	0
12.	Petroleum Exploration	CH 306(C)	Petroleum Exploration	CHEL01	0
13.	Computational Fluid Dynamics	CH 312(A)	Computational Fluid Dynamics	CHEL12	0
14.	Pre-formulation Studies including Stability Studies	CH 312(B)	Pre-formulation Studies including Stability Studies	CHEL06	0
15.	Petroleum well Logging and Technology	CH 312(C)	Petroleum well Logging and Technology		0
16.	Computer Aided Process Engineering	CH 406(A)	Computer Aided Process Engineering	CHEL10	0
17.	Industrial Pharmacy	CH 406(B)	Industrial Pharmacy	CHEL07	0
18.	Natural Gas Production and its applications	CH 406(C)	Natural Gas Production and its applications	CHEL04	0
19.	Computer Aided Design	CH 409(A)	Computer Aided Design	CHEL11	0
20.	Quality Control of Pharmaceutical Dosage Forms	CH 409(B)	Quality Control of Pharmaceutical Dosage Forms	CHEL08	0
21.	Petrochemical Technology	CH 410(C)	Petrochemical Technology	CHEL03	
22.	Process Dynamics and Control	CH309	Process Dynamics and Control	CH309	Nil
23.	Transport Phenomena	CH401	Transport Phenomena	CH401	Flow of two adjacent immiscible fluids added. Nuclear heat source is added to Energy transport. / 10%
24.	Process Modeling and Simulation	CH405	Process Modeling and Simulation	CH405	
25.	Instrumentation & Process Control Laboratory	CH 453	Instrumentation & Process Control Laboratory	CH 453	Nil

26.	Mechanical Operations	CH 205	Mechanical Operations	CH 216	No change	0
27.	Mechanical Operations Laboratory	CH 255	Mechanical Operations Laboratory	CH 262	No change	0
28.	Chemical Reaction Engineering-I	CH 302	Chemical Reaction Engineering-I	CH 226	One unit is shifted to CRE-II	25
29.	Chemical Reaction Engineering-II	CH 308	Chemical Reaction Engineering-II	CH 313	One unit is Introduced	25
30.	Petroleum Refinery Engineering	CH 409(C)	Petroleum Refining	CHEL02	Some topics are added to unit-I	10
31.	Biofuels	CH 404(B)	Biofuels	CHOL02	Some topics are added to unit I and unit II	10
32.	Chemical Process Calculations	CH 203	Chemical Process Calculations	CH 203		0
33.	Material Technology	CH 206	Material Technology	CH 222		0
34.	Industrial Pollution Control Laboratory	CH 354	Pollution Control Laboratory	CH 363		0
35.	Nanotechnology	CH406(D)	Nanotechnology	CHEL17		10
36.	Inorganic chemical technology	CH210	Inorganic chemical technology			NEW SUBJECT
37.	Industrial Pollution Control	CH 305	Industrial Pollution Control	CHEL18	Solid waste management topics are added	10
38.	Organic Chemical technology	CH 304	Organic Chemical technology			NEW SUBJECT
39.	Chemical Technology Lab	CH 353	Chemical Technology	CH 362	Some	5

			Lab		experiments are deleted	
40.	Bio-Chemical Engineering	CH 410(D)	Bio-Chemical Engineering	CHEL16		0
41.	Industrial hazards and safety analysis	CH 311	Industrial hazards and safety analysis	CHEL14		0
42.	Process Instrumentation	CH 211	Industrial Instrumentation & Instrumental Methods of Analysis	CH 223		0
43.	Chemical Engineering Thermodynamics I	CH 209	Chemical Engineering Thermodynamics I	CH 225		0
44.	Chemical Engineering Thermodynamics II	CH 303	Chemical Engineering Thermodynamics II	CH 312		0
45.	Energy Engineering (Open Elective)	CH 404(A)	Energy Engineering (Open Elective)	CHOL01		0
46.	Fluidization Engineering (Elective)	CH 312 (D)	Fluidization Engineering (Elective)	CHEL15		00
47.	Computational Programming Laboratory	CH 256	Computational Programming Laboratory	CH 263		00
48.	Computer Applications in Chemical Engineering Laboratory	CH 452	Computer Applications in Chemical Engineering Laboratory			00
49.	Computer Aided Process Equipment Design Laboratory	CH 454	Computer Aided Process Design and Simulation lab	CH 451		00
50.	Computer Aided Design	CH 409(A)	Computer Aided Design	CHEL11		00

15.7%

Professor & Head

R.V.R. & J. C. COLLEGE OF ENGINEERING (Autonomous)
Chandramoulipuram, Chowdavaram, Guntur – 522019
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

18-04-2019

Following are the contents added/ modified in R16 curriculum revised in 2016.

Subject code in R16	Subject title	% of syllabus changed	Topics added
CS/IT 101	Differential Equations & Transforms	50	UNIT-II: Differential Equations of First Order, UNIT-III: Partial order differential equations. UNIT-III: Laplace transforms
CS/CE/CHE/EC/ EE/IT/ME 102	Engineering Physics	20	UNIT-I: NDT UNIT IV: Principles of quantum mechanics, SCHRODINGER EQUATION and APPLICATIONS
CS/CE/EC/ EE/IT/ME 103	Applied Chemistry	30	UNIT IV:CORROSION and its Control, Protection methods UNIT V : Analytical techniques
CS/IT 106	Mechanics For Engineers	5	UNIT-I : Engineering mechanics basic concepts
CS 151	Physics Lab	10	Variation of magnetic field along the access of a circular current carrying coil
CS 152	C-Programming Lab	15	Program to perform the following using strings: a) to test the giver string is palindrome or not. b) To sort string s in alphabetical order. 2. Program using recursive functions. A program to find the factorial value, Fibonacci series, GCD of two numbers.
CS 153	Communication Skills Lab	10	Interactive classroom activities, communication skills
CS/IT 107	Matrix Algebra & Numerical Analysis	50	UNIT-II : multiple integrals UNIT-IV: numerical solutions of equations and interpolation UNIT-V Numerical differentiation and integration
CS/EC/ EE/IT 108	Electronic & Electrical Engineering Materials		New Subject
CS/CE/EC/ EE/IT/ME 109	Chemistry for Engineering Materials	60	UNIT-II :Plastics, RubbersUNIT-IV: Refractories, LubricantsUNIT-V: Liquid crystals, Explosives
CS/CHE/EC/IT 110	English for Communication		New Subject
CS/IT 201	Probability-Statistics & Random Processes	40	UNIT-IV: random processes, Analytical Representation of Random processes UNIT-V: Gaussian Process, Markov Process

CS/IT 202	Basic Electrical & Electronics Engineering	10	UNIT-III :Introduction to 1-Phase and 3-phase circuits
CS/IT 205	Computer Organization	10	UNIT-V: Cache and Secondary Memory
CS 253	Professional Communication Skills Lab		New Subject
CS/IT 207	Number theory & Algebra		New Subject
CS/IT 210	Database Management Systems	10	Dangling tuples and alternative relational design
CS/IT 212*	Operating Systems	10	UNIT V: Security
CS 254	Microprocessors & Interfacing Lab	30	1. Write an 8086 assembly language program to add two sixteen bit numbers and to subtract two sixteen bit numbers. 2. Write an assembly language program to verify the following logical operations on 16 bit numbers. AND, OR, XOR and also find 1's complement and 2's complement of 16 bit number. 12. Write an 8086 Assembly language to interface an 8-bit D-A converter and convert digital to analog (generate square and triangular). 13. To write an ALP to control the stepper motor and its speed of operation.
CS 256	Java Programming Lab	10	1. Write a program to demonstrate login validation using rich GUI components.
CS/IT 301	Computer Networks	50	UNIT 1: Introduction, The physical layer UNIT II: DLL Design issues, Elementary Data Link Protocols, Sliding Window Protocols, Carrier Sense Multiple Access Protocols, Collision-Free Protocols, Limited-Contention Protocols UNIT III: Broadcast Routing, Quality of Service-Application Requirements, Traffic Shaping, Packet Scheduling, Admission Control. UNIT IV: Network layer, Transport Layer . UNIT V : Application layer
CS/IT 306*	Software Engineering	30	UNIT I :Software Engineering Practice, A Generic process model, Other Agile process models, A Tool Set for the Agile Process. UNIT II: UML Models That Supplement the Use Case UNIT III: Patterns for Requirements Modelling, Requirements Modelling for WebApps.

			UNIT IV: Component-level Design for WebApps, Designing Traditional Components, What is Quality? Software Quality, the Software Quality Dilemma, Achieving Software Quality. UNIT V:Software Measurements, Metrics for Software Quality, Process and Project Metrics
CS 352	Design & Analysis of Algorithms Lab		New Subject
CS/IT 309	Object Oriented Analysis & Design	5	UNIT I:UML- Principles of modelling, Definition of UML, Conceptual model of UML
CS/IT 311* ELECTIVE-I	(D) Multimedia Computing	5	UNIT-I : Types of text
CS/IT 401	Distributed Systems	40	UNIT I: Architectures UNIT II: virtualization, Remote Procedure Call, Stream-Oriented Communication, Multicast Communication. UNIT III: Flat Naming, Structured Naming, Attribute-Based Naming. Synchronization: Global Positioning Of Nodes UNIT IV: Replica Management UNIT V: Distributed File Systems, Distributed Web-Based Systems
CS/IT 402	Web Services	10	UNIT I: Java Server Pages: JSP with cookies and sessions.
CS/IT 403	MOOCS*	100	New Subject
CS 405*	Wireless Networks		New Subject
CS406	(C) Cyber Security	100	Completely changed
	(D) Data Analytics	100	Completely changed
CS/IT 407	Industrial Engineering & Management	40	UNIT I: General Management: Scientific Principles of Management, Administrative Principles of Management UNIT II: Objectives of Financial Management, Economic Evaluation of Alternatives: future worth method. UNIT III: Functions of Human Resource Management – Job Analysis, Induction & Orientation, Job Evaluation, Compensation. UNIT IV: FSN Analysis, VED Analysis. UNIT V: Marketing Mix, Marketing Segmentation
CS 408	Internet of Things		New Subject
CS/IT 409* Elective-V	(A) Parallel Algorithms (CS/IT)		New Subject
	(C) ARM Processor		New Subject
	(D) Big Data Analytics / IRS*	100	Completely changed
CS/IT 410* Elective-VI	(A) Machine Learning (CS/IT)		New Subject

	(B) Semantic Web (CS/IT)		New Subject
	(C) Secure Software Engineering		New Subject
	(D) Cloud Computing / IRS*	100	Completely changed
CS 454	Internet of Things Lab		New Subject
	Average % of Syllabus content added or replaced	25.60%	Total number of subjects including labs: 41

Dr. M.Sreelatha
Head, Department of CSE.
CHAIRMAN – BOS in CSE

R.V.R. & J. C. COLLEGE OF ENGINEERING (Autonomous)
Chandramoulipuram, Chowdavaram, Guntur – 522019
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

05-02-2020

The Following are the contents added/ modified in R18 curriculum revised in 2018.

COURSE CODE	NAME OF THE COURSE	PERCENTAGE CHANGE IN SYLLABUS	TOPICS CHANGED
CS/IT 111	Mathematics – I	100	Complete Change
CS/IT 112	Engineering Physics	100	Complete Change
CS/IT/EC 113	Basic Electrical Engineering	50	UNIT I:Batteries: Lead-acid, Nickel-iron, Nickel-Cadmium batteries UNIT II: Representation of sinusoidal waveforms, peak and RMS values, phasor representation, real-power, reactive power, apparent power, power factor. UNIT III: Transformers UNIT IV: Electrical Machines
CS V02	Introduction to Computing		New Subject
CS/IT 151	Physics Lab	40	1.Measurment Of Instruments 2.Four Probe Method For Measurement Of Resistivity And Conductivity 3.Caret Fosters Bridge
CS/IT/EC 152	Basic Electrical Engineering Lab	50	1. Familiarization of Electrical Installations and Electrical Testing Equipment 2.Basic safety precautions. 3. Verification of reciprocity theorem. 4. Verification of reciprocity theorem.
CS/IT/CH/EC 153	Engineering Graphics and Design Lab	20	UNIT IV: Perspective Projections UNIT V:Over view of Computer Aided drafting (AutoCAD)
CS/CE/IT 122	Engineering Chemistry	20	UNIT 1:critical phenomena-Andrew's isomers(Change In Subject Name)
CS/CH/IT/EC 124	English for Communication Skills	30	UNIT III: Subject- verb agreement. Noun-pronoun agreement. UNIT IV: Nature and Style of sensible Writing
MC000	Three Weeks Orientation Program		New Subject
MC 002	Environmental Science	50	Unit I . Awareness Activities - Small Group Meetings Unit II: Actual Activities
CS V01	English Competency		New Subject

1

	Development Program		
CS/CE/IT 161	Chemistry Lab	70	New Experiments: 1. Determination Of Surface Tension. 2. Determination Of Viscosity. 3. Determination Of Saponification / Acid Value Of Oil. 4. Preparation Of P-Bromo Acetanilide. 5. Preparation Of Phenol Formaldehyde Resin. 6. Determination Of Partition Co- Efficient Of I2 In Water. 7. Determination Of Rf Value Using Tlc. 8. Verification Of Freundlich Isotherm Using Adsorption Of Acetic Acid On Activated Charcoal
CS/CE/CH/IT/EE/EC/ ME 162	Programming for Problem Solving Lab		New Subject
CS/CH/IT/EC 163	Workshop Practices Lab		New Subject
CS/IT 211	Mathematics – III	20	UNIT III: Correlation and regression
CS/IT 212	Life Science for Engineers		NEW SUBJECT
CS/IT 213	Digital Electronics	20	UNIT IV:A/D and D/A Converters
CS/IT 214	Discrete Mathematics	10	UNIT III: Advanced Counting Techniques
CS/IT 216	Object Oriented Programming	10	UNIT III: Generic Method, Generic Class
MC 001	Constitution of India		New Subject
MC 004	Design Thinking and Product innovation		New Subject
CS/IT 251	Digital Electronics Lab		New Subject
CS/IT 225	Humanities Elective-I		New Subject
CS/IT 222	Operating Systems	10	UNIT II: Synchronization UNIT IV: Mass-Storage Structure
CS/IT 223	Data Base Management Systems	5	UNIT IV: Introduction to Database Security
CS/IT 226	Open Elective - I		New Subject
CS V04	Programming with Python		New Subject
MC 003	Essence of Indian Traditional Knowledge		New Subject
CS 261	Operating Systems Lab		New Subject
CS/IT 313	Web Technologies	10	Unit IV:JSP , Actions of JSP
CS/IT 315	Professional Elective-I		New Subject
CS/IT 316	Open Elective-II		New Subject
MC 005	Statistics with R Tool		New Subject
CS/IT 352	Web Technologies Lab	10	1. Write a program on simple JSP. 2. Write a program on JSP action tags.
CS/IT 321	Compiler Design	10	UNIT III: Syntax Directed Translation
CS/IT 322	Data Engineering	10	UNIT IV: Data Mining Trends

CS/IT 323	Artificial Intelligence	100	Complete Change(R16 Elective)
CS/IT 325	Professional Elective-II		New Subject
CS/IT 326	Open Elective-III		New Subject
CS/IT 361	Artificial Intelligence Lab		New Subject
CS/IT 362	PROJECT-1		New Subject
CS/IT 411	Machine Learning		New Subject
CS/IT 412	Neural Networks	50	UNIT III; Inductive and Analytical Learning Analytical Learning UNIT IV: Reinforcement Learning
CS/IT 413	Professional Elective-III		New Subject
CS/IT 414	Professional Elective-IV		New Subject
CS/IT 415	Humanities Elective-II		New Subject
CS/IT 451	Machine Learning Lab		New Subject
CS/IT 452	PROJECT-II		New Subject
CS/IT 421	PROFESSIONAL ELECTIVE-V(MOOCS)	100	New Subject
CS/IT 422	OPEN ELECTIVE-IV(MOOCS)	100	New Subject
CS/IT 461	Project-III		New Subject
CSEL02	Interactive Computer Graphics		New Subject
CSEL03	Big Data Analytics	100	Complete Change
CSEL05	Open Source systems	30	Database Connectivity with MySql
CSEL08	Mobile Application Development		New Subject
CSEL09	Internet of Things	100	Complete Change
CSEL11	Distributed Computing		New Subject
CSEL12	Principles of Programming Languages	40	UNIT II: Semantic Analysis, Control Flow . UNIT III: Data Abstraction and Object Orientation Functional Languages. UNIT IV: Logic Languages, Scripting Languages
CSEL13	*Industry Recommended Subject		New Subject
CSEL14	Advanced Computer Architecture	100	Complete Change
CSEL15	Design and Analysis of Parallel Algorithms		New Subject
CSEL17	Sematic Web	80	Unit I: The Sematic Web, Structured Web Documents Unit II: Describing Web Resources Unit IV: Applications Unit V: Ontology Engineering, Using Semiautomatic Methods
CSEL20	Quantum Computing		New Subject
CSEL21	Natural Language Processing		New Subject
CSEL22	Virtual Reality		New Subject

CSEL23	Cyber Security	50	UNIT II: Information Security Performance Metrics, Log Correlation and Management UNIT IV: Data Backup, Information Security Audit, Vulnerability Analysis
CSEL24	Block Chain Technology		New Subject
CSEL25	Multi Core Technologies		New Subject
CSEL26	* Industry Recommended Subject		New Subject
CSOL03	Programming with Python		New Subject
CSOL04	INTERNET THINGS	70	Unit I:Seven Generations Of IOT Sensors To Appear Unit IV: Preparing IOT Projects
Average % of Syllabus content added or replaced		**21.43%**	Total no.of subjects including labs: **73**

M. S. U

Dr. M. Sreelatha
Prof. & Head, Dept. of CSE.
Chairman – BOS in CSE

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

RVR & J.C. C.E
Dept. of E.C.E

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

S.No	R12 Subject Name	R12 Subject Code	R16 Subject Name	R16 Subject Code	Remarks	Percentage of Syllabus content added or replaced
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 Materials	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		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	Oops 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 Compatibility	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-411D	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 - 423	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-461	Project and Viva - Voce	EC-455	No change	0
					Percentage change in content	34

(Dr. RANGA BABU)
Professor & Head

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

S.No	R16 Subject Name	R16 Subject Code	R18 Subject Code	R18 Subject Name	Remarks	Percentage of Syllabus content added or replaced
1	Differential Equations and Statistics	EC101	EC111	Mathematics-I	1.5 Units are changed	40
2	Applied Chemistry	EC-103	EC112	Engineering Chemistry	1.5 Units are changed	40
3	Basic Electrical Engineering		EC113	Basic Electrical Engineering	New Course	100
4	Chemistry Lab	EC-154	EC151	Chemistry Lab	No change	0
5	Basic Electrical Engineering Lab		EC152	Basic Electrical Engineering Lab	New Course	100
6	Engineering Graphics Lab	EC152	EC153	Engineering Graphics & Design Lab	No change	0
7	Environmental Science		MC 002	Environmental Science	New Course	100
8	Calculus and Numerical Methods	EC 107	EC121	Mathematics-II	1 Unit changed	25
9	Engineering Physics	EC 102	EC122	Engineering Physics	No change	0
10	Problem Solving with C	EC 111	EC123	Programming for Problem Solving	No change	0
11	English for Communication	EC 110	EC124	English for Communication Skills	No change	0
12	Physics Lab	EC 151	EC161	Physics Lab	No change	0
13	C Programming Lab	EC 155	EC162	Programming for Problem Solving Lab	No change	0
14	Workshop Practice Lab		EC163	Workshop Practice Lab	New Course	100
15	Communication Skills lab	EC-153	EC164	English Language Communication Skills Lab	No change	0
16	Constitution of India		MC 001	Constitution of India	New Course	100
17	Essence of Indian Traditional Knowledge		MC 003	Essence of Indian Traditional Knowledge	New Course	100
18	Transformation Techniques	EC-201	EC231	Mathematics-III	1 Unit changed	25
19	Electronic Devices and Circuits	EC-202	EC232	Electronic Devices	1.5 Units are changed	40
20	Signals and Systems	EC-206	EC213	Signals and Systems	1.5 Units are changed	40
21	Circuit Theory	EC-204	EC214	Circuit Theory	No change	0
22	Electromagnetic Fields & Transmission Lines	EC-211	EC215	Electromagnetic Field Theory	1.5 Units are changed	40
23	Electronic Devices Lab	EC-251	EC251	Electronic Devices Lab	No change	0
24	Professional Communication Skills Lab	EC-256	EC252	Communicative English Lab	No change	0
25	Basic Civil & Mechanical Engineering		EC221	Basic Civil & Mechanical Engineering	New Course	100
26	Life Sciences for Engineers		EC222	Life Sciences for Engineers	New Course	100
27	Digital Logic Design	EC-253	EC223	Digital Electronics & Logic Design	1 Unit changed	25
28	Network Analysis & Transmission Lines		EC224	Network Analysis & Transmission Lines	New Course	100
29	Electronic Circuit Analysis	EC-208	EC225	Analog Circuits	No change	0

S No	Subject Name	Subject Code	Subject Code	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	Microprocessor & 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 Architecture	ECEL10	New Course	100

S.No	Subject Name	Subject Code	Subject Code	Subject Name	Remarks	Percentage of Syllabus content added or replaced
63			Digital System Design	ECEL11	New Course	100
64			Advanced Digital Signal Processing	ECEL12	New Course	100
65			Analog IC Design	ECEL13	New Course	100
66			Digital IC Design	ECEL14	New Course	100
67			Low Power VLSI Design	ECEL15	New Course	100
68			VLSI Testing & Testability	ECEL16	New Course	100
69			Soft Computing Techniques	ECEL17	New Course	100
70			Digital Signal Processors & Architectures	ECEL18	New Course	100
71	Digital Image Processing	EC-405A	Image Processing	ECEL19	No change	0
72			Pattern Recognition	ECEL20	New Course	100
73	Speech Processing	EC-410C	Speech Processing	ECEL21	No change	0
74			Electromagnetic Interference & Compatibility	ECEL22	New Course	100
75			MEMS	ECEL23	New Course	100
76	Radar & Navigational Aids	EC-410D	Radar & Navigational Aids	ECEL24	No change	0
77			Cognitive Radio	ECEL25	New Course	100
78	RF System Design	EC-409D	RF System Design	ECEL26	No change	0
79	Electrical Engineering & Measurements	EC-212	Electronic Measurements & Instrumentation	ECEL27	1.5 Units are changed	40
80			Wireless Sensor Networks	ECEL28	New Course	100
81			English Competency Development Programme	EC V01	New Course	100
82			AI Tools, Techniques and Applications	EC V02	New Course	100
83			Internet of Things (IoT)	EC V03	New Course	100
84			Graphical System Design-I	EC V04	New Course	100
85			Graphical System Design-II	EC V05	New Course	100
86			Graphical System Design-III	EC V06	New Course	100
87			Building Materials and Construction	CEOL01	No change	0
88			Solid Waste Management	CEOL02	New Course	100
89			Remote Sensing and GIS	CEOL03	New Course	100
90			Energy Engineering	CHOL01	No change	0
91			Biofuels	CHOL02	No change	0
92			Pollution Control	CHOL03	New Course	100
93			Nanoscience and Nanotechnology	CHOL04	New Course	100
94			Programming with Java	CSOL01	New Course	100
95			Relational Database Management Systems	CSOL02	New Course	100
96			Introduction to Python Programming	CSOL03	New Course	100
97			Internet of Things	CSOL04	New Course	100

S.No	Subject Name	Subject Code	Subject Code	Subject Name	Remarks	Percentage of Syllabus content added or replaced
98				IEOL01	New Course	100
99				IEOL02	No change	0
100				IEOL03	New Course	100
101				IEOL04	New Course	100
102				IEOL05	New Course	100
103				ITOL01	New Course	100
104				ITOL02	New Course	100
105				ITOL03	New Course	100
106	Web Technologies	IT-404B		ITOL04	No change	0
107				MEOL01	New Course	100
108				MEOL02	New Course	100
109				MEOL03	New Course	100
110				MEOL04	New Course	100
111				MEOL05	New Course	100
112	Industrial Management & Entrepreneurship	EC-405		HSEL01	No change	0
113	Economics for Engineers	EC-106		HSEL02	No change	0
114				HSEL03	New Course	100
115				HSEL04	New Course	100
116				HSEL05	New Course	100
117				HSEL06	New Course	100
					Percentage change in content	58

(Dr. RANGA BABU)
Professor & Head

1.1.2 Percentage of programs where syllabus revision was carried out during the last five years (20)

Programme Code	Programme name	Name of the Department	Year of Introduction	If revision has been carried out in the syllabus during last 5 years	Year of revision	Percentage of Syllabus content added or replaced	Link of the relevant document
EE	B.Tech in Electrical & ELectronics Engineering	Electrical & Electronics Engineering	1994	Yes	2016	13.1	http://www.rvrjcce.ac.in/Electrical/r16eeesyllabus.pdf
PSE	M.Tech in Power Systems Engineering	Electrical & Electronics Engineering	2004	Yes	2017	25.75	http://www.rvrjcce.ac.in/Electrical/mtechpseee201718.pdf

Dr. K. CHANDRA SEKHAR
Professor & HOD, EEE Dept.
R.V.R & J.C. College of Engg.
Chowdavaram, GUNTUR-522 019.

18-04-2019

Following are the contents added/ modified in R16 curriculum revised in 2016.

Subject code in R16	Subject title	% of syllabus changed	Topics added
EE/EC/ME 101	Differential equations and statistics	20	Statistics topic is added as fifth unit
EE/CE/ChE/ CS/EC/ IT/ ME 102	Engineering Physics	10	Schrodinger equation and application
EE/CE/ME 104	English for communication	15	Lexis: (a) i. Synonyms & Antonyms ii. Words often confused. (b) i. One Word Substitutes ii. Analogies
EE 153	Workshop Practice Lab	3	Nano materials characterization techniques
EE/EC/CS/IT 108	Electronic and Electrical Engineering Materials	5	NDT
EE/EC/CS/IT /CE/ME 109	Chemistry of Engineering Materials	10	Refractories, Lubricants Liquid crystals, Explosives
EE 112	Introduction to Electrical Engineering	100	New subject
EE/EC 201	Transformation Techniques	20	Synchronous Sequential Networks: Structure and Operation of Clocked Synchronous Sequential Networks, Analysis of Synchronous Sequential Networks, Modelling Clocked Synchronous Sequential Network Behaviour. Algorithmic State Machines: The Algorithmic State Machine, ASM Charts, Examples of Synchronous Sequential Network, Design using ASM Charts, State Assignments, ASM tables.
EE/EC 202	Electronic Devices & Circuits	5	JFET and MOSFET: Non ideal effects, frequency limitations
EE/EC 203	Digital Logic Design	20	Unit V Synchronous sequential networks and Algorithmic state Machines is added.

Subject code in R16	Subject title	% of syllabus changed	Topics added
EE/EC 207	Complex and Numerical Analysis	20	Milne-Thomson method, Numerical Solutions of Partial Differential Equation : Classification of Partial differential equations of the second order - Laplace-s equation. Poisson's equation.
EE/EC 208	Electronic Circuit Analysis	20	IC biasing and active load
EE 211	Data Structures using C++	60	C++ first three units are added
EE 255	Data Structures Lab	100	complete experiments list is changed
EE/EC 301	Pulse and Digital Circuits	20	In Unit V, Digital Circuits : Fundamental concepts of digital circuits, cmos logic family, nmos logic family, TTL logic family, emitter coupled logic family
EE/EC 302	Microprocessors & Microcontrollers	5	Interface microprocessor to key boards
EE 352	Electronic Circuits Lab	40	6 new experiments are added in list.
EE 307	Linear ICs and Applications	5	APPLICATION ICs: IC Voltage Regulators- LM317, 723 Voltage Regulators, Isolation amplifiers, Opto coupler, Opto electronic ICs
EE 309	Power Electronics	8	**AC Voltage Controllers:** Single phase AC voltage controllers – two SCR's in anti parallel – With R and RL loads. Derivation of RMS load voltage, current and power factor.
EE 354	Electrical Measurements & Instrumentation Lab	12	Determination of transformer ration and phase angle error using current transformer or potential transformer; Measurement of R, L, C using digital LCR meter.
EE 355	Control systems Lab	6	Programmable Logic Controller
EE 356	Electrical Workshop practice Lab	5	New lab and few experiments are new from old curriculum.
EE 403	MOOCS	100	New subject
EE 451	Mini project / Term Paper	100	mini project is made mandatory
EE 452	Power Electronics Lab	25	4 new experiments are added
EE 453	Power Systems Lab	5	1 new experiment is added

Subject code in R16	Subject title	% of syllabus changed	Topics added
EE 408	Power System Operation & Control	20	Distribution automation
EE 409*	Elective-V	100	New Elective
EE 410*	Elective-VI	100	New Elective
311A	High voltage Engineering	20	Unit I
312B	ANN & Fuzzy systems	20	Unit V - Applications
312C	Renewable energy Resources	10	Unit I - Energy storage systems
EE311D	Power system deregulation		New elective
EE312D	Organizational Behaviour		New elective
EE406A	Industrial drives	10	Unit V - Conservation in electric drives
EE406B	Power plant instrumentation	20	Unit V - Turbine monitoring control
EE406D	Energy conservation & audit	100	Entire syllabus is revised
	Average % of Syllabus content added or replaced	12.56%	Total number of subjects including labs: 72

Dr. K. Chandra Sekhar
Head, Department of Electrical & Electronics Engg.
CHAIRMAN – BOS in EEE

Dr. K. CHANDRA SEKHAR
Professor & HOD, EEE Dept.
R.V.R & J.C. College of Engg.
Chowdavaram, GUNTUR-522 019.

R.V.R. & J. C. COLLEGE OF ENGINEERING (Autonomous)
Chandramoulipuram, Chowdavaram, Guntur – 522019
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

18-04-2019

Following are the contents added/ modified in R17 curriculum revised in 2017.

Subject code in R17	Subject title	% of syllabus changed	Topics added
PS 513	Advanced Power System Protection	40	Static differential relays in unit 3. Unit 4 equipment protection. Basic principle of digital computer relaying in Unit 5.
PS 551	Power Systems Lab	25	5 new experiments are added in list of experiments
PS 521	Flexible AC Transmission Systems	10	Unit 3: variable impedance type series compensators, switching converter type series compensators ;
PS 611	MOOCS (Self Learning)	100	New Subject
PS 571	Optimization Techniques	100	New subject
PS 572	Power System Planning & Reliability	30	Unit 1 , IN Unit 2 : Deregulation of power systems, power system planning under uncertainty, risk based power system planning
PS 574	Power Electronic Converters	20	Unit 5 Multi level inverters
PS 575	Computer Networks	100	entire syllabus is revised
PS 576	High Voltage Engineering & Insulation	10	Liquid as Insulator, pure and commercial liquids, breakdown in pure and commercial liquids. Intrinsic breakdown, electromechanical breakdown, thermal breakdown, breakdown of solid dielectrics in practice, Breakdown in composite dielectrics, solid dielectrics used in practice.
PS 578	HVDC Transmission Systems	60	All the units are revised and many topics are added
PS 579	Power Quality analysis & Improvement		Complete Syllabus is revised
PS 581	Distribution Systems Planning & Automation	20	Distribution Automation topic is added
PS 584	Power System Deregulation		Complete Syllabus is revised
PS 585	Energy Conservation & Audit		Complete Syllabus is revised

Subject code in R17	Subject title	% of syllabus changed	Topics added
PS 586	Renewable energy driven power systems		New subject
PS 587	Gas Insulated Systems (GIS)		New subject
PS 588	Distributed Generation & Microgrid		New subject
PS 589	Advanced Digital signal Processing		New subject
PS 590	Electrical Transients in Power systems		New subject
	Average % of Syllabus content added or replaced	25.75%	Total number of subjects including labs: 20

Dr. K. Chandra Sekhar
Head, Department of Electrical & Electronics Engg.
CHAIRMAN – BOS in EEE

18-04-2019

Following are the contents added/ modified in R18 curriculum revised in 2018.

Subject code in R18	Subject title	% of syllabus changed	Topics added
EE/EC/ME 112	Engineering Chemistry	20	Molecular structure, Intermolecular forces; Organic reactions
EE/CE/CH/ ME 113	English for communication skills	15	Vocabulary Building
EE/EC/ME 151	Chemistry Lab	50	Determination of surface tension, Determination of Viscosity, Determination of Saponification / acid value of oil, Preparation of p-bromo acetanilide. Preparation of Phenol Formaldehyde resin. Determination of partition co-efficient of I2 in water. Determination of Rf value using TLC. Verification of Freundlich isotherm using adsorption of acetic acid on activated charcoal
EE/CE/ME 153	Workshop Practice Lab	60	Manufacturing Methods, CNC machining and Additive manufacturing, Fitting operations and power tools , 4. Basic principles involved in electrical circuits and electronic PCB circuits, Plastic moulding, glass cutting, experiments in machine shop, Fitting Shop,
MC001	Constitution of India	100	New Mandatory course
MC002	Environmental Science	80	Course is modified as activity based course
MC003	Essence of Indian traditional knowledge	100	New Mandatory course

Subject code in R18	Subject title	% of syllabus changed	Topics added
EE/CE/CH/CS/ EC/IT/ME 123	Programming for Problem Solving	10	Idea of Algorithm
EE124	Electrical Circuits		
EE161	Physics Lab	30	To determine the energy band gap of a given semiconductor, 12) To study the laser beam characteristics like wavelength using diffraction grating aperture divergence. 13) To determine the NA of a given optical fiber and hence to find the acceptance angle. 14) To find the dispersive power and resolving power of a grating. 15) To determine the magnetic field in Helmoltz coil. 16) To determine the refractive index of the material of a prism. 17) To determine theFour probe method apparatus for measurements of resistivity and conductivity.
EE164	Electrical Circuits Lab	50	Familiarisation of Electrical Installations and Electrical Testing Equipment, Basic safety precautions, 10. Series resonance characteristics. Parallel resonance characteristics, Study of RL,RC, RLC series and RLC parallel circuits
EEV 01	English competency development program	100	New Value added course
EE215	Basic Civil & Mechanical Engineering	70	New subject title where Basic civil engineering and Refrigiration and airconditioning is added in mechanical engineering part
EE253	Basic Civil & Mechanical Engineering Lab	70	new lab title where civil engineering experiments are added. In mechanical part Study of refrigeration and air conditioning tutors; Study of boilers and mountings are added

Subject code in R18	Subject title	% of syllabus changed	Topics added
			as new experiments
EEV02	AI Tools, Techniques and Applications	100	New subect
MC004	Design thinking & product innovation	100	New subject
EE221	Mathematics – III	100	New subject exclusively for Probability & Statistics
EE222	Life sciences for Engineers	100	New subject offered according to AICTE and APSCHE prescribed curriculum
MC004	Design thinking & product innovation	100	New subject
EE316	Open Elective-2	100	New open elective
EE362	Electronics Design Laboratory	100	New lab
EEV04	Professional English	100	VA course to improve professional skills
EE415	HS Elective - 2	100	Additional HS course
EE416	Open Elective - 3	100	New open elective
EE421	Professional Elective – 5 (MOOCS)	100	Additional Professional elective
EE422	Open Elective – 4 (MOOCS)	100	New open elective
	Average % of Syllabus content added or replaced	75.57%	Total number of subjects including labs: 26

Dr. K. Chandra Sekhar
Head, Department of Electrical & Electronics Engg.
CHAIRMAN – BOS in EEE

Dr. K. CHANDRA SEKHAR
Professor & HOD, EEE Dept.
R.V.R & J.C. College of Engg.
Chowdavaram, GUNTUR-522 019

R.V.R.& J.C COLLEGE OF ENGINEERING, CHOWDAVARAM::GUNTUR-522019
DEPARTMENT OF INFORMATION TECHNOLOGY

1.1.2 % Syllabus Changes proof wih HOD signature (B.Tech R12 - R16)

S.No	SUBJECT NAME	SUBJECT CODE	CONTENT ADDED/REPLACED	Summary	% OF SYLLABUS CHANGE
			R-16 SYLLBAUS		
1	Differential Equations & Transforms	IT 101		Newly Introduced	100
2	Engineering Physics	IT 102	NDT: Normal beam pulse echo testing, ultrasonic scanner (A & B modes) WITH new Content Principles of Quantum Mechanics : de Broglie's concept of matter waves, Davisson and Germer experiment, Heisenberg's uncertainty principle- experimental verification (electron diffraction - single slit) Schrodinger equation and application : Time independent Schrodinger's wave equation, physical significance of the wave function, particle in a box (one dimensional), tunneling effect, expression for transition probability (Qualitative	ONE TOPIC IN I UNIT AND IV UNIT COMPLETELY CHANGED	20
3	Applied Chemistry	IT 103	Corrosion and it's control,protection methods,Colorimetry ,Analytical Techniques	Unit IV and Unit V Added	40
4	Environmental Studies	IT 104		No Change	0
5	Problem Solving With C	IT 105		No Change	0
6	Mechanics For Engineers	IT 106		No Change	0
7	Physics Laboratory	IT 151		No Change	0
8	C - Programming Lab	IT 152		No Change	0
9	Communication Skills Lab	IT 153		Newly Introduced	100
10	Matrix Algebra & Numerical Analysis	IT 107		Newly Introduced	100
11	Electronic And Electrical Engineering Materials	IT 108		Newly Introduced	100
12	Chemistry For Engineering Materials	IT 109	Refractories, Lubricants, Ligiuid crystals, Explosives	Unit IV and Unit V Added	40
13	English For Communication	IT 110		UNIT II, UNIT III , IV AND SOME PARTS OF UNIT V	70
14	Object Oriented Programming	IT 111		No change	0
15	Professional Ethics & Human Values	IT 112		No Change	0
16	Chemistry Laboratory	IT 154		No Change	0
17	Object Oriented Programming Lab	IT 155		No Change	0
18	Engineering Graphics Lab	IT 156		No Change	0

			Analytical representation of random processes, Gaussian process, Markov process		
19	Probability – Statistics & Random Processes	IT 201	Analytical representation of random processes, Gaussian process, Markov process	Minor changes in UNIT IV, UNIT V Added	30
20	Basic Electrical & Electronics Engineering	IT 202		No Change	0
21	Digital Logic Design	IT 203		No Change	0
22	Data Structures	IT 204		No Change	0
23	Computer Organization	IT 205		No Change	0
24	Discrete Mathematical Structures	IT 206		No Change	0
25	Basic Electrical Engineering Lab	IT 251		No Change	0
26	Data Structures Lab	IT 252		No Change	0
27	Professionalcommunication Skills Lab	IT 253		Unit IV and V added	40
28	Number Theory And Algebra	IT 207		Newly Introduced	100
29	Microprocessors & Interfacing	IT 208		No Change	0
30	Theory Of Computation	IT 209		No Change	0
31	Database Management Systems	IT 210		No Change	0
32	Java Programming	IT 211		No Change	0
33	Operating Systems	IT 212	Concurrency And Synchronization	Minor changes in UNIT I and UNIT II	20
34	Microprocessors & Interfacing Lab	IT 254		Three experiments are added	30
35	Database Management Systems Lab	IT 255		No Change	0
36	Java Programming Lab	IT 256	GUI Components	One Experiment added	10
37	Computer Networks	IT 301	Layers of networks in detail	Major changes in all units	90
38	Web Technologies	IT 302		No Change	0
39	Design & Analysis Of Algorithms	IT 303		No Change	0
40	Unix Programming	IT 304		No Change	0
41	Compiler Design	IT 305		No Change	0
42	Software Engineering	IT 306		UNIT I, UNIT II, UNIT III, UNIT IV AND UNIT V	60
43	Web Technologies Lab	IT 351		No Change	0
44	Design & Analysis Of Algorithms Lab	IT 352		Newly Introduced	100
45	Unix Programming Lab	IT 353	IPC Programming	Lab cycle V added	20
46	Network Programming	IT 307		No Change	0
47	Data Engineering	IT 308		No Change	0
48	Object Oriented Analysis & Design	IT 309		No Change	0
49	Cryptography & Network Security	IT 310		No Change	0
50	Artificial Intelligence	IT 311(A)		Major changes in all units	90
51	Principles Of Programming Languages	IT 311(B)		Newly Introduced	100
52	Multimedia Systems	IT 311(C)		No Change	0
53	Mobile Computing	IT 311(D)		Major changes in all units	90
54	Embedded Systems	IT 312(A)		No Change	0
55	Adbms	IT 312(B)		Changes in UNIT I	20
56	Graph Theory	IT 312©		Newly Introduced	100
57	Mobile Application Development	IT 312(D)		Newly Introduced	100
58	Network Programming Lab	IT 354		Six experiments are changed	50
59	Data Engineering Lab	IT 355		Some experiments are changed	70
60	Object Oriented Analysis & Design Lab	IT 356		No Change	0
61	Distributed Systems	IT 401		Part of UNIT V is changed	10
62	Web Services	IT 402		No Change	0

63	Moocs	IT 403		Newly Introduced	100
64	Basic Surveying	CE 404(A)		Newly Introduced	100
65	Building Materials & Estimation	CE 404(B)		Newly Introduced	100
66	Energy Engineering	CH 404(A)		No change	0
67	Bio-Fuels	CH 404(B)		Unit III 80% change Unit IV seond topic 20% changed , 80 % Unit V	22
68	Applied Electronics	EC 404(A)		80% Unit IV and Unit V newly added	36
69	Basic Communication	EC 404(B)		Unit V added	20
70	Non-Conventional Energy Sources	EE 404(A)		Newly Introduced	100
71	Utilization Of Electrical Energy	EE 404(B)		Seond part in Unit II and Unit III are added	20
72	Robotics	ME 404(A)			
73	Operations Research	ME 404(B)			
74	Interactive Computer Graphics	IT 405		Changes in unit IV	10
75	Open Source Systems	IT 406 (A)		No Change	0
76	.Net Technologies	IT 406 (B)		No Change	0
77	Programming With Python	IT 406 (C)		No Change	0
78	Internet Of Things	IT 406 (D)		Newly Introduced	100
79	Term Paper	IT451		No Change	0
80	Web Services Lab	IT 452		No Change	0
81	Open Source Systems Lab	IT 453 (A)	programs on Ajax	some experiments are intrd	50
82	.Net Technologies Lab	IT 453 (B)		No Change	0
83	Programming With Python Lab	IT 453 (C)		Newly Introduced	100
84	Internet Of Things Lab	IT 453 (D)		Newly Introduced	100
85	Industrial Engineering & Management	IT 407		No Change	0
86	Distributed & Cloud Computing	IT 408		Newly Introduced	100
87	Parallel Algorithms	IT 409 (A)		Newly Introduced	100
88	Digital Image Processing	IT 409 (B)		changes in UNIT II	10
89	Natural Language Processing	IT 409 (C)		Newly Introduced	100
90	Cyber Security	IT 409 (D)		Newly Introduced	100
91	Machine Learning	IT 410 (A)		Newly Introduced	100
92	Semantic Web	IT 410 (B)		Newly Introduced	100
93	Big Data Analytics	IT 410 (C)		Newly Introduced	100
94	Industry Related Subject	IT 410 (D)		Newly Introduced	100
95	Distributed & Cloud Computing Lab	IT 454		Newly Introduced	100
96	Project Work	IT 455		No Change	0

36.893617

Dr. A. Srikrishna
Prof., & HOD, IT

R.V.R.& J.C COLLEGE OF ENGINEERING, CHOWDAVARAM::GUNTUR-522019
DEPARTMENT OF INFORMATION TECHNOLOGY

1.1.2 % Changes proof wih HOD signature (B.Tech R16 - R18)

S.No	SUBJECT NAME	SUBJECT CODE	CONTENT ADDED/ REPLACED	Summary	% OF SYLLAB US CHANG E
1	Mathematics – I (Calculus & Linear Algebra)	IT 111		Major changes in All units	50
2	Engineering Physics	IT 112		Major changes in All units	90
3	Basic Electrical Engineering	IT 113		Major changes in All units	80
4	Introduction To Computing	IT V002		Newly Introduced	100
5	Physics Lab	IT 151		Some experiments are changed	50
6	Basic Electrical Engineering Lab	IT 152		Some new experiments are added	40
7	Engineering Graphics And Designlab	IT 153		No Change	0
8	Mathematics – II	IT 121		Major changes in All units	60
9	Engineering Chemistry	IT 122		Major changes in All units	80
10	Programming For Problem Solving	IT 123		No Change	0
11	English For Communication Skills	IT 124		Some new topics are added	50
12	Environmental Science	MC 002		Minor changes in all units	20
13	English Competency Development Program	IT V001		Newly Introduced	100
14	Spoken English & Etiquette	ITV003		Newly Introduced	100
15	Chemistry Lab	IT161		Some new experiments are added	30
16	Programming For Problem Solving Lab	IT 162		Some new experiments are added	20
17	Workshop Practices Lab	IT 163		Newly Introduced	100
18	English Language Communication Skillslab	IT 164		Major changes in All units	90
19	Mathematics-III	IT 211		Major changes in All units	80
20	Life Sciences For Engineers	IT 212		Newly Introduced	100
21	Digital Electronics	IT 213		Minor changes in unit II	10
22	Discrete Mathematics	IT214		Minor changes in unit II	20
23	Data Structures	IT215		Minor changes in unit II,III and UNIT IV	30
24	Object Oriented Programming	IT216		Minor changes in all units	90
25	Constitution Of India	MC001		Newly Introduced	100
26	Design Thinking And Product Innovation	MC004		Newly Introduced	100
27	Digital Electronics Lab	IT251		Newly Introduced	100
28	Data Structures Lab	IT252		Newly added some experiments Problems related Balanced Trees,Problems related B-Trees	30
29	Object Oriented Programming Lab	IT253		New experiments are added like Static Member, Static Method And Static Block,Method Overloading And Method Overriding etc	90
30	Humanities (Elective-I)	IT221			0
31	Computer Organization	IT222		Minor changes in unit II and UNIT III :Basic Input/ Output,PCI Bus, SCSI Bus	30
32	Operating Systems	IT223		Minor changes in unit II,III and UNIT IV	40
33	Database Management Systems	IT224		Minor changes in unit III	10
34	Formal Languages & Automata Theory	IT225		No change	0
35	Open Elective-I	IT226			0
36	Programming With Python	ITV004		Major changes in UNIT II, UNIT III AND UNIT IV	70
37	Essence Of Indian Traditional Knowledge	MC003		Newly Introduced	100
38	Operating Systems Lab	IT261		Newly Introduced	100
39	Database Management Systems Lab	IT262		New experiments are added	10
40	Computer Networks	IT311		No change	0
41	Design & Analysis Of Algorithms	IT312		No change	0

42	Web Technologies	IT313		Minor changes in unit IV like JSP	20
43	Software Engineering	IT314		No change	0
44	Professional Elective-I	IT315			0
45	Open Elective-II	IT316			0
46	Design & Analysis Of Algorithms Lab	IT351		No change	0
47	Web Technologies Lab	IT352		Two new programs are added	10
48	SE Lab	IT353		No change	0
49	Compiler Design	IT321		No change	0
50	Data Engineering	IT322		New concepts added in UNIT IV:Data Mining Trends	10
51	Artificial Intelligence	IT323		Major changes in all UNITS	80
52	Cryptography & Network Security	IT324		No change	0
53	Professional Elective-II	IT325			0
54	Open Elective-III	IT326			0
55	Artificial Intelligence Lab	IT361		Newly Introduced	100
56	Data Engineering Lab	IT362		No change	0
57	Term Paper	IT363		No change	0
58	Humanities (Elective-II)	IT411			0
59	Machine Learning	IT412		Newly added UNIT III AND UNIT IV	50
60	Neural Networks	IT413		Newly Introduced	100
61	Professional Elective- III	IT414			0
62	Professional Elective- IV	IT415			0
63	Machine Learning Lab	IT451		Newly Introduced	100
64	Project-I	IT452		Newly Introduced	100
65	Professional Elective V(Moocs)	IT421		Newly Introduced	100
66	Open Elective-Iv(Moocs)	IT422		Newly Introduced	100
67	Project-II	IT461		No change	0
OPEN ELECTIVE COURSES					
68	Data Structures And Algorithm	ITO101		Newly Introduced	100
69	Operating Systems	ITO102		Newly Introduced	100
70	Bigdata Analytics	ITO103		Newly Introduced	100
71	Web Technologies	ITO104		Minor changes in UNIT V	20
Professional Elective- III					
72	Unix Programming	ITEL01		No change	0
73	Interactive Computer Graphics	ITEL02		New concept added in UNIT IV: Computer animation	10
74	Big Data Analytics	ITEL03		UNIT IV added Understanding Analytics and Big Data,Exploring R,Reading Dataset and Exporting Data from R	20
75	Embedded Systems	ITEL04		No change	0
76	Open Source Systems	ITEL05		II,UNIT III & UNIT IV:PHP	50
77	Digital Image Processing	ITEL06		Minor changes in unit I and unit IV	20
78	Network Programming	ITEL07		No change	0
79	Mobile App Development	ITEL08		No change	0
80	Internet Of Things	ITEL09		Major changes in UNIT II, UNIT III AND UNIT IV	90
81	Object Oriented Analysis And Design	ITEL010		No change	0
82	Distributed Computing	ITEL011		Newly Introduced	100
83	Principles Of Programming Languages	ITEL012		New concepts are added	30
84	Industry Related Subject	ITEL013		requirements	

			Professional Elective- IV			
85	Advanced Computer Architecture	ITEL14		Newly Introduced	100
86	Design And Analysis Of Parallel Algorithms	ITEL15		Newly Introduced	100
87	.Net Technologies	ITEL16		Newly Introduced	100
88	Semantic Web	ITEL17			0
89	Wireless Networks	ITEL18		Newly Introduced	100
90	Cloud Computing	ITEL19		Newly Introduced	100
91	Quantum Computing	ITEL20		Newly Introduced	100
92	Natural Language Processing	ITEL21		Major changes in UNIT III & UNIT IV	50
93	Virtual Reality	ITEL22		Newly Introduced	100
94	Cyber Security	ITEL23		Major changes in all units	9000
95	Block Chain Technology	ITEL24		Newly Introduced	100
96	Multicore Technologies	ITEL25		Newly Introduced	100
97	Industry Related Subject	ITEL26		To be decided based on industry requirements	
		Humanities Elective Courses (OFFERED BY MANAGEMENT DEPARTMENT)				
98	Introduction To Industrial Management	HSEL 01		Newly Introduced	100
99	Fundamentals Of Management For Engineers	HSEL 02		Newly Introduced	100
100	Economics For Engineers	HSEL 03		Newly Introduced	100
101	Project Management And Entrepreneurship	HSEL 04		Newly Introduced	100
102	Human Resources Behaviour And Organization Behaviour	HSEL 05		Newly Introduced	100

51.5

Dr. A. Srikrishna
Prof., & HOD, IT

Department of Mechanical Engineering
R.V.R. & J.C. College of Engineering (A), Guntur – 522019.

The Following are the curriculum changes in R16 stream

S.No	SUBJECT NAME	SUBJECT CODE	Summary	% OF SYLLABUS CHANGE
1	Differential Equations and Statistics	ME101	IV UNIT COMPLETELY CHANGED	20
2	Engineering Physics	ME102	ONE TOPIC IN I UNIT ; IV UNIT COMPLETELY CHANGED	20
3	Applied Chemistry	ME103	UNIT III AND IV CHANGED	40
4	English For Communication	ME104	UNIT II, UNIT III , IV AND SOME PARTS OF UNIT 5	70
5	Problem Solving With C	ME105	NO CHANGE	0
6	Engineering Mechanics - I	ME106	NO CHANGE	0
7	Chemistry Laboratory	ME151	NO CHANGE	0
8	C- Programming Lab	ME152	EXPERIMENT Numbers 7,8,12 CHANGED	25
9	Graphics Laboratory	ME153	NEWLY INTRODUCED	100
10	Calculus and Numerical Methods	ME107	UNIT IV AND V ADDED	40
11	Physics of Materials	ME108	UNIT I , II AND III ADDED	60
12	Chemistry of Engineering Materials	ME109	UNIT II ADDED	20
13	Environmental Studies	ME110	NO CHANGE	0
14	Engineering Drawing	ME111	NO CHANGE	0
15	Engineering Mechanics II	ME112	UNIT V ADDED	20
16	Physics Laboratory	ME154	NO CHANGE	0
17	Communication Skills Lab	ME155	UNIT V ADDED	20
18	Workshop Practice	ME156	NO CHANGE	0
19	Complex Analsyis and Numerical Solutions	ME201	UNIT III ADDED	20
20	Mechanics of Materials I	ME202	NO CHANGE	0
21	Electrical Technology	ME203	NO CHANGE	0
22	Basic Thermodynamics	ME204	NO CHANGE	0
23	Theory of Machines and Mechanisms	ME205	NO CHANGE	0
24	Fluid Mechanics & Hydraulic Machines	ME206	IV AND V ADDED	40
25	SM & FM LAB	ME251	NO CHANGE	0
26	Machine Drawing and Computer Aided Drafting Lab	ME252	NO CHANGE	0

27	Professional Communication Skills Lab	ME253	UNIT IV AND V ADDED	40
28	Transformation Techniques and Distributions	ME207	UNIT IV AND V ADDED	40
29	Mechanics of Materials II	ME208	NO CHANGE	0
30	Casting , Welding and Metal Working Process	ME209	NO CHANGE	0
31	Applied Thermodynamics	ME210	NO CHANGE	
32	Engineering Metallurgy	ME211	UNIT I CHANGED AND A CHAPTER IN UNIT III	25
33	Basic Electronics and Micro Controllers	ME212	NO CHANGE	0
34	Basic Manufacturing Process LAB	ME254	NO CHANGE	0
35	Computer Applications in Mechanical Engineering LAB	ME255	NO CHANGE	0
36	Basic Electrical and Electronics Lab	ME256	EXPERIMENTS ON MICRO CONTROLLERS ADDED	20
37	Professional Ethics and Human Values	ME301	NO CHANGE	0
38	Design of Machine Elements	ME302	NO CHANGE	0
39	Metal Cutting and Machine Tools	ME303	NO CHANGE	0
40	IC Engines and Gas Turbines	ME304	NO CHANGE	0
41	Operations Research	ME305	NO CHANGE	0
42	Dynamics of Machines and Vibrations	ME306	NO CHANGE	0
43	Machine Shop Practice	ME351	NO CHANGE	0
44	Fuels and I.C. Engines Lab	ME352	NO CHANGE	0
45	Modelling Lab	ME353	NO CHANGE	0
46	Manufacturing Engineering	ME307	NO CHANGE	0
47	Design of Trasnmission Elements	Me308	TWO CONCEPTS IN UNIT V ARE ADDED	2
48	Heat Transfer	ME309	CHAPTER IN UNIT III	10
49	Finite Element Analysis	ME310	ONE CHAPTER IN UNIT III	10
50	Nano Technology	ME311/A	SOME TOPICS IN UNIT III AND IV CHANGED	20
51	Tribology	ME311/B	MAJOR CHANGE IN UNIT I , UNIT III AND UNIT IV	50

52	Automobile Engineering	ME311/C	NO CHANGE	0
53	Industry Based Elective (Air Craft Systems and Design)	Me311/D	NEWLY INTRODUCED	100
54	Measurements and Control Systems	ME312/A	NO CHANGE	0
55	Mechanics of Composte Materials	ME312/B	NO CHANGE	0
56	Refrigiration and Air Conditioning	ME312/C	NO CHANGE	0
57	Industry Based Elective (PLM)	ME312/D	NEWLY INTRODUCED	100
58	Engineering Metrology	ME401	NO CHANGE	0
59	Advacned Machine Design	ME402	NO CHANGE	0
60	MOOCS	ME403	NEWLY INTRODUCED	100
61	Basic Surveying	CE404	NEWLY INTRODUCED	100
62	Building Materials and Estimation	CE404	NEWLY INTRODUCED	100
63	Energy Engineering	CHE404	NO CHANGE	0
64	Bio- Fuels	CHE404	UNIT III 80% CHANGE ; UNIT IV SEOND TOPIC 20% CHANGED AND 80 % IN UNIT V	22
65	JAVA Programming	CS404	NO CHANGE	0
66	Data Base Management Systems	CS404	NO CHANGE	0
67	Applied Electronics	EC404	80% UNIT IV AND UNIT V NEWLY ADDED	36
68	Basic Communication	EC404	UNIT V ADDED	20
69	Non-conventional Energy Sources	EE404	NEWLY INTRODUCED	100
70	Utilization of Electrical Energy	EE404	SEOND PART IN UNIT II ; UNIT III ARE ADDED	20
71	Software Engineering	IT404	UNIT IV AND V ADDED	40
72	WEB Technologies	IT404	UNIT V ADDED	20
73	Operations Management	ME405	NO CHANGE	0
74	Mechatronics	ME406/A	NO CHANGE	0
75	Design for Manufacturign and Assembly	ME406/B	UNIT V ADDED	20
76	Energy Resources and Utilization	ME406/C	NO CHANGE	0
77	Safety Management	ME406/D	NEWLY INTRODUCED	100
78	Term Paper	ME451	NO CHANGE	0
79	Simulation Lab	ME452	NEWLY INTRODUCED	100

80	Design and Metrology Lab	ME453	NO CHANGE	0
81	Industrial Engineering and Management	ME407	UNIT IV 2ND CHAPTER 50% CHANGE ; UNIT V - 30 % CHANGE	17
82	Automation & CAM	ME408	NO CHANGE	0
83	FMS & GT	ME409/A	NEWLY INTRODUCED	100
84	CAD	ME409/B	UNIT III - CHAPTER AND UNIT IV CHPATER	20
85	CFD	ME409/C	UNIT III AND IV	40
86	TQM	ME409/D	NEWLY INTRODUCED	100
87	Robotic Engineering	ME410/A	2 TOPICS IN UNIT IV	2
88	Advanced Concepts in Mechanical Engineering	ME410/B	UNIT I REVISED,COMPLETE II AND III CHANGE	50
89	Solar Radiation and Energy Conservation	ME410/C	NEWLY INTRODUCED	100
90	Industrial Administration	ME410/D	NEWLY INTRODUCED	100
91	CAM LAB	ME454	NO CHANGE	0
92	Project Work	ME455	NO CHANGE	0
			Average	24.38462

[Dr. K. RAVINDRA]
Prof & HoD - ME
Dean - Academics

Department of Mechanical Engineering

R.V.R. & J.C. College of Engineering (A) , Guntur – 522019.

The Following are the curriculum changes in R18 stream:

S.No	SUBJECT NAME	SUBJECT CODE	Summary	% OF SYLLABUS CHANGE
1.	Mathematics-I	ME 111	UNIT –I,II,III,IV COMPLETELY CHANGED	100
2.	Engineering Chemistry	ME112	UNIT I completely changed, UNIT-II WITH minor changes, UNIT-III complete changed, UNIT-IV one part changed	60
3.	English for Communication Skills	ME113	UNIT I- NO CHANGE UNIT-II major changes UNIT-III-NO CHANGE UNIT-IV Minor changes	30
4.	Chemistry Lab	ME 151	PARTIAL CHANGES	30
5.	English Language Communication Skills Lab	ME152	MAJOR CHANGES	60
6.	Workshop Practice Lab	ME153	MAJOR CHANGES	60
7.	Environmental Science	MC 002	NO Change	0
8.	Mathematics-II	ME 121	MINOR CHANGES	25
9.	Engineering Physics	ME122	Completely change	100
10.	Programing for Problem Solving	ME123	MINOR CHANGES	40
11.	Basic Electrical Engineering	ME124	Completely change	100
12.	Physics Lab	ME161	MAJOR CHANGES	80
13.	Programing for Problem Solving Lab	ME162	MINOR CHANGES	30
14.	Engineering Graphics & Design Lab	ME163	NO CHANGE	0
15.	Basic Electrical Engineering Lab	ME164	Major changes	50
16.	Constitution of India	MC001	NEW COURSE	100
17.	Engineering Mechanics	ME211	Minor changes	20
18.	Life Sciences for Engineers	ME212	New course	100
19.	Manufacturing Processes	ME213	Major changes	50
20.	Basic Thermodynamics	ME214	minor	20
21.	Theory of Mechanisms & Machines	ME215	NO CHANGE	0
22.	Fluid Mechanics & Hydraulic Machines	ME216	Minor changes	20
23.	Machine Drawing Lab	ME251	NO CHANGE	0
24.	Communicative English Lab	ME252	New course	100
25.	Basic Electronics Lab	ME253	Major changes	50
26.	Essence of Indian Traditional Knowledge	MC 003	New course	100
27.	Mathematics - III (PDE, Probability & Statistics)	ME221	UNIT-I,II,III minor changes, UNIT-IV major changes	40
28.	Strength of Materials	ME222	NO CHANGE	0
29.	Manufacturing Technology	ME223	UNIT-II,III major changes	40
30.	Applied Thermodynamics	ME224	NO CHANGE	0
31.	Material Science and Metallurgy	ME225	UNIT-I,UNIT_IV minor changes	20

32.	Fluid Mechanics & Strength of Materials Lab	ME261	NO CHANGE	0
33.	Manufacturing Lab - 1	ME262	NO CHANGE	0
34.	Modelling Lab	ME263	TWO MODULUS ADDED	20
35.	Design Thinking and Innovation	MC004	NEW COURSE	100
36.	Design of Machine Elements	ME311	NO CHANGE	0
37.	Advanced Strength of materials	ME312	NO CHANGE	0
38.	Machine Dynamics and Vibrations	ME313	NO CHANGE	0
39.	Operations Research	ME314	NO CHANGE	0
40.	Thermal Engineering Laboratory	ME351	NO CHANGE	0
41.	Professional Communication Skills Lab	ME352	NO CHANGE	0
42.	Design of Transmission Elements	ME321	NO CHANGE	0
43.	Finite Element Method	ME322	NO CHANGE	0
44.	Heat Transfer	ME 323	No change	0
45.	Heat transfer laboratory	ME361	No change	0
46.	Analysis & Simulation Lab	ME362	No change	0
47.	Automation in Manufacturing	ME411	Minor changes	30
48.	Fundamentals of Industrial Engineering	ME412	New course	100
49.	Metrology and Mechanical Measurements	ME413	No change	0
50.	Manufacturing Lab II (CAM)	ME451	No change	0
51.	Design and Metrology Lab	ME452	No change	0
52.	Internship	ME 453		0
53.	Mini Project	ME454		0
54.	Project	ME 461		0
55.	Computer Aided Design	MEEL01	No change	0
56.	Mechatronic System Design	MEEL02	Minor changes	30
57.	Fluidics and control systems	MEEL03	No change	0
58.	Industrial Robotics	MEEL04	No change	0
59.	I C Engines and Gas Turbines	MEEL05	New course	100
60.	Gas Dynamics and JET Propulsion	MEEL06	New course	100
61.	Refrigeration and Air Conditioning	MEEL07	No change	0
62.	Automobile Engineering	MEEL08	No change	0
63.	Power Plant Engineering	MEEL09	NEW COURSE	100
64.	Energy Conservation and Management	MEEL10	NEW COURSE	100
65.	Product Lifecycle Management	MEEL11	NEW COURSE	100
66.	Industrial Management	MEEL12	NEW COURSE	100
67.	Process Planning and Cost Estimation	MEEL13	NEW COURSE	100
68.	Total Quality Management	MEEL14	NEW COURSE	100
69.	Composite Materials	MEEL15		0
70.	Design Of Experiments	MEEL16	NEW COURSE	100
71.	Farm Machinery and Equipment	MEEL17	NEW COURSE	100
72.	Computional Fluid Dynamics	MEEL18		0
73.	Introduction to Aircraft Industry and Systems	MEEL19		0
74.	Production planning and control	MEEL20	NEW COURSE	100
75.	English Competency Development Programme	ME V01	NEW COURSE	101
76.	AI Tools , Techniques & Applications	ME V02	NEW COURSE	100
77.	Advanced Modeling lab (DELMIA)	ME V03	NEW COURSE	100
78.	Advanced Modeling lab (SIMULIA)	ME V03	NEW COURSE	100
79.	Automotive Engineering	MEOL01	Change in ivth unit	10

80.	Robotic Engineering	MEOL02	no change	0
81.	Introduction to Operations Research	MEOL03		
82.	Mechatronics	MEOL04	change in IV unit	20
83.	Applied Mechanics & Mechanical Engineering	MEOL05	NEW COURSE	100
84.	Building Materials and Construction	CEOL01	NEW COURSE	100
85.	Solid waste Management	CEOL02	NEW COURSE	100
86.	Remote Sensing and GIS	CEOL03	NO CHANGE	0
87.	Data Structures & Algorithms	ITOL01	NEW COURSE	100
88.	Operating Systems	ITOL02	NEW COURSE	100
89.	Big Data Analytics	ITOL03	NEW COURSE	100
90.	Web Technologies	ITOL04	NEW COURSE	100
91.	Applied Electronics	ECOL01	NO CHANGE	0
92.	Basic Electronics & Communication Engineering	ECOL02	NEW COURSE	100
93.	Microprocessors & Interfacing	ECOL04	NEW COURSE	100
94.	Digital Image Processing	ECOL05	NO CHANGE	0
95.	Renewable energy sources	EEOL01	NEW COURSE	100
96.	Utilization of Electrical Energy	EEOL02	NEW COURSE	100
97.	Power Converters	EEOL03	NEW COURSE	100
98.	Energy Conservation	EEOL04	NO CHANGE	100
99.	Introduction to Electric Vehicles and Storage Systems	EEOL05	NEW COURSE	100
100.	Programming with Java	CSOL01	NEW COURSE	100
101.	Relational Database Management Systems	CSOL02	NEW COURSE	100
102.	Programming with Python	CSOL03	NEW COURSE	100
103.	Internet of Things	CSOL04	NEW COURSE	100
104.	Energy Engineering	CHOL01	NEW COURSE	100
105.	Biofuels	CHOL02	NEW COURSE	100
106.	Pollution Control	CHOL03	NEW COURSE	100
107.	Nanoscience and Nanotechnology	CHOL04	NEW COURSE	100
108.	Industrial Management & Entrepreneurship	HSEL01	NEW COURSE	100
109.	Economics for Engineers	HSEL02	NEW COURSE	100
			Average	51.2593

[Dr. K. RAVINDRA]
Prof & HoD - ME
Dean - Academics

Dr. KOMMINENI RAVINDRA
Professor & HOD :: Dean - Academics
Department of Mechanical Engineering
R.V.R. & J. C. College of Engineering
(Autonomous)
Chowdavaram, GUNTUR-522019, A.P.

RVR & JC College of Engineering, Chowdavaram
Department of Management Sciences

NAAC CRITERIA: 1.1.2: Percentage of Programmes where Syllabus Revision was carried out during the last five years

The following are the curriculum changes in
R17 Regulations (Autonomous) from University regulations 2016-17

S.No	Subject Name	Subject Code	Summary of changes in Units I-V	% of Syllabus Change
1	Perspectives Of Management	MS111	Unit I – V overall change	25%
2	Quantitative Techniques For Management	MS112	Unit I – V overall change	20%
3	Managerial Economics	MS113	Unit V partial change	20%
4	Business Environment And Legislation	MS114	Unit I, Unit II partial change	10%
5	Accounting For Managers	MS115	Unit I-V overall change	30%
6	Organisational Behaviour	MS116	Unit II,III,IV,V partial change	20%
7	Managerial Communication	MS117	Unit I,II,V partially change	20%
8	Entreprenuership And Small Business Management	MS121	Unit I,II,III partial change	30%
9	Research Methodology And Business Analytics	MS122	Unit II,III,IV partial change	15%
10	Human Resource Management	MS123	Unit III,Unit V partial change	30%
11	Financial Management	MS124	Unit I - V overall change	22%
12	Marketing Management	MS125	Unit I - V overall change	20%
13	Production And Operations Management	MS126	Unit I,III partial change	10%
14	Information Technology For Managers	MS127	Unit III,IV,V partial change	30%
15	Strategic Management	MS211	Unit I,III,V partial change	30%
16	Business Ethics And Corporate Governance	MS212	Unit I partial change	5%
17	Logistics And Supply Chain Management	MS213	Unit I-V partial change	25%
18	Financial Markets And Services	MS214F	Title & overall change	50%
19	Financial Derivatives And Risk Management	MS215F	Unit II,III,IV partial change	30%
20	Banking And Insurance Management	MS216F	New Subject	100%
21	Product And Brand Management	MS214M	New Subject	100%
22	Consumer Behaviour And Customer Relationship Management	MS215M	Unit I,II partial change	40%
23	Advertising And Media Management	MS216M	Unit III,IV partial change	30%
24	Management Of Industrial Relations	MS214H	Unit I partial change	5%
25	Organisational Change And Development	MS215H	New Subject	100%
26	Training And Development	MS216H	Partial change in Unit I-V	10%
27	Innovations And Startup Management	MS214ED	New Subject	100%
28	Micro,Small & Medium Enterprises Management	MS215ED	New Subject	100%
29	Entreprenuerial Eco-System	MS216ED	New Subject	100%
30	Banking Theory Law And Practices	MS215BT	New Subject	100%
31	Rural Banking And Financial Inclusion	MS216BT	New Subject	100%
32	Treasury And Derivatives Management	MS217BT	New Subject	100%
33	International Business	MS221	Unit I,III & IV partial change	30%

34	Talent And Knowledge Management	MS222	Unit I,II major change & title	40%
35	International Financial Management	MS223F	Unit III partial change	5%
36	Security Analysis And Portfolio Management	MS224F	Unit I & II partial change	10%
37	Foreign Exchange Management	MS225F	New Subject	100%
38	Financial Engineering	MS226F	New Subject	100%
39	International Marketing Management	MS223M	Unit II,III,IV,V	40%
40	Sales Promotion And Distribution Management	MS224M	New Subject	100%
41	Services And Retail Marketing	MS225M	New Subject	100%
42	Social Media And E-Marketing	MS226M	New Subject	100%
43	International Human Resource Management	MS223H	Unit V partial change	5%
44	Performance And Compensation Management	MS224H	Unit I partial change	10%
45	Human Resource Development: Strategies And Systems	MS225H	Unit V partial change	5%
46	Cross Culture Management	MS226H	New Subject	100%
47	Social Entreprenuership	MS223ED	New Subject	100%
48	Women Entreprenuership	MS224ED	New Subject	100%
49	Entreprenuerial Leadership	MS225ED	New Subject	100%
50	Venture Capital & Private Equity	MS226ED	New Subject	100%
51	Management Of Bank Operations	MS223BT	New Subject	100%
52	Bank Customer Relatiosnhip Management	MS224BT	New Subject	100%
53	Services Marketing For Banks And Financial Institutions	MS225BT	New Subject	100%
54	Credit Risk Management For Banks	MS226BT	New Subject	100%

Prof.B.K.Surya Prakasha Rao
(Head,Dept of M.S)

S.No	Subject Name	Subject Code	Summary	% of Syllabus Change
1	Perspectives Of Management	MS111	Unit - I & II	25%
2	Quantitative Techniques For Management	MS112	Queueing	20%
3	Managerial Economics	MS113	Unit V	20%
4	Business Environment And Legislation	MS114	Unit I, II, Unit-III	10%
5	Accounting For Managers	MS115		20%
6	Organisational Behaviour	MS116	Unit-II, V-III, Q, V	20%
7	Managerial Communication	MS117	Unit-I, II, V	20%
8	Entrepreneurship And Small Business Management	MS121	Unit-I, V, Unit-III	20%
9	Research Methodology And Business Analytics	MS122		
10	Human Resource Management	MS123	Unit-III, Unit V	30%
11	Financial Management	MS124	U-I & II	20%
12	Marketing Management	MS125	Unit I, II, III, IV, V	20%
13	Production And Operations Management	MS126	Unit-I, III	10%
14	Information Technology For Managers	MS127	Unit-I, III, IV, V	30%
15	Strategic Management	MS211	Unit-I, III, IV, V	20%
16	Business Ethics And Corporate Governance	MS212	Unit I	
17	Logistics And Supply Chain Management	MS213	Unit I, II, III, IV, V	25%
18	Financial Markets And Services	MS214F		50%
19	Financial Derivatives And Risk Management	MS215F	Unit-I, II, III, IV	30%
20	Banking And Insurance Management	MS216F	NEW	100%
21	Product And Brand Management	MS214M	NEW	100%
22	Consumer Behaviour And Customer Relationship Management	MS215M	UNIT-I, II	40%
23	Advertising And Media Management	MS216M	UNIT-III, IV	50%
24	Management Of Industrial Relations	MS214H	UNIT-I	50%
25	Organisational Change And Development	MS215H	NEW	100%
26	Training And Development	MS216H	Entirely change	100%
27	Innovations And Startup Management	MS214ED	NEW	100%
28	Micro,Small & Medium Enterprises Management	MS215ED	NEW	100%
29	Entrepreneurial Eco-System	MS216ED	NEW	100%
30	Banking Theory Law And Practices	MS215BT	NEW	100%
31	Rural Banking And Financial Inclusion	MS216BT	NEW	100%
32	Treasury And Derivatives Management	MS217BT	NEW	100%
33	International Business	MS221	Unit I, III, IV, V	30%
34	Talent And Knowledge Management	MS232	Unit I, III, IV, V	20%
35	International Financial Management	MS223F	UNIT III	
36	Security Analysis And Portfolio Management	MS224F	U-I & II	10%
37	Foreign Exchange Management	MS225F	Newly introduced	100%

No.	Course Name	Code	Notes	%
54	Credit Risk Management For Banks	MS226BT		
53	Services Marketing For Banks And Financial Institutions	MS225BT	NEW	100%
52	Bank Customer Relationship Management	MS224BT	NEW	100%
51	Management Of Bank Operations	MS223BT	NEW	100%
50	Venture Capital & Private Equity	MS226ED	NEW	100%
49	Entreprenuerial Leadership	MS225ED	NEW	100%
48	Women Entreprenuership	MS224ED	NEW	100%
47	Social Entreprenuership	MS223ED	NEW	100%
46	Cross Culture Management	MS226H	NEW	100%
45	Human Resource Development: Strategies And Systems	MS225H	UNIT II	5%
44	Performance And Compensation Management	MS224H	UNIT I	18%
43	International Human Resource Management	MS223H	Unit V	
42	Social Media And E-Marketing	MS226M	NEW	100%
41	Services And Retail Marketing	MS225M	NEW	100%
40	Sales Promotion And Distribution Management	MS224M	NEW	100%
	International Marketing Management	MS223M	Unit I, II, III, IV, V	
	Financial Engineering	MS226F	NEW	100%

Department of Master of Computer Applications
R.V.R. & J.C. College of Engineering (A), Guntur – 522019.

The Following are the curriculum changes in R17 stream.

S.No	SUBJECT NAME	SUBJECT CODE	Summary	% OF SYLLABUS CHANGE
1.	Problem Solving with C	CA111	In UNIT I and UNIT IV new content added	5
2.	Computer Organization	CA112	No Change	0
3.	Operating Systems Principles	CA113	In UNIT V new Content added	5
4.	Discrete Mathematical Structures	CA114	In UNIT IV new Content added	5
5.	Accountancy and Financial Management	CA115	In UNIT I new Content added	3
6.	PC Software Lab	CA151	New experiments added: Computer Hardware and Software, Adobe Photoshop	40
7.	C Programming Lab	CA152	No Change	0
8.	Communication Skills Lab	CA153	No Change	0
9.	Data Structures in Python	CA121	NEWLY INTRODUCED	100
10.	Data Base Management Systems	CA122	No Change	0
11.	Computer Networks	CA123	No Change	0
12.	Probability & Statistics	CA124	New Content added in each Unit V	30
13.	Management Information Systems	CA125	NEWLY INTRODUCED	100
14.	Data Structures in Python Lab	CA161	NEWLY INTRODUCED	100
15.	DBMS Lab	CA162	NO Change	0
16.	UNIX Shell Programming Lab	CA163	No Change	0
17.	Object Oriented Programming through JAVA	CA211	In Unit II and Unit V new content added	13
18.	Web Technologies	CA212	Moved from HTML 4.1 to HTML 5	30
19.	Cryptography and Network Security	CA213	New content added in Unit II	5
20.	Operations Research	CA214	New content added in Unit III	10
21.	Software Engineering	CA215	Content added as per the new Edition	20
22.	Java Programming Lab	CA251	New experiments	5

			added: Network Program	
23.	Web Technologies Lab	CA252	Use HTML 5 to implement the experiments	30
24.	Technical Seminar & Report Writing Lab	CA253	NEWLY INTRODUCED	100
25.	.Net Programming	CA221	Text book changed	80
26.	Web Services	CA222	NEWLY INTRODUCED	100
27.	Design and Analysis of Algorithms	CA223	No Change	0
28.	Artificial Intelligence	CA224(A)	No Change	0
29.	Computer Graphics & Multimedia	CA224(B)	In Unit 5 new content added: Multimedia	20
30.	Software Project Management	CA224(C)	NEWLY INTRODUCED	100
31.	Logistics & Supply Chain Management	CA224(D)	NEWLY INTRODUCED	100
32.	Open Source Systems	CA224(E)	NEWLY INTRODUCED	100
33.	Embedded Systems	CA225(A)	New content added in Unit II, Unit V	40
34.	Image Processing using MATLAB	CA225(B)	NEWLY INTRODUCED	100
35.	Object Oriented Modeling and Design using UML	CA225(C)	No Change	0
36.	Advanced DBMS	CA225(D)	NEWLY INTRODUCED	100
37.	Cyber Security	CA225(E)	NEWLY INTRODUCED	100
38.	.Net Programming Lab	CA261	Experiments changed as per the syllabus	60
39.	Web Services Lab	CA262	NEWLY INTRODUCED	100
40.	Soft Skills Lab	CA263	No Change	0
41.	Data Mining and Big Data	CA311	No Change	0
42.	Mobile Application Development using Android	CA312	NEWLY INTRODUCED	100
43.	Cloud Computing	CA313	No Change	0
44.	Machine Learning using R	CA314(A)	NEWLY INTRODUCED	100
45.	Soft Computing	CA314(B)	NEWLY INTRODUCED	100
46.	Software Testing and Quality Assurance	CA314(C)	NEWLY INTRODUCED	100
47.	Enterprise Resource Planning	CA314(D)	NEWLY INTRODUCED	100
48.	Information Retrieval Systems	CA314(E)	NEWLY INTRODUCED	100
49.	Internet of Things	CA315(A)	NEWLY INTRODUCED	100
50.	Bioinformatics	CA315(B)	NEWLY INTRODUCED	100
51.	DevOps	CA315(C)	NEWLY INTRODUCED	100
52.	E-Commerce	CA315(D)	NEWLY INTRODUCED	100
53.	Social Network Analysis	CA315(E)	NEWLY INTRODUCED	100
54.	**MOOCs**	CA316	NEWLY INTRODUCED	100

55.	Data Mining and Hadoop Lab	CA351	No Change	0
56.	Mobile Application Development using Android Lab	CA352	NEWLY INTRODUCED	100
57.	Mini Project Work	CA353	NEWLY INTRODUCED	100
58.	Major Project Work	CA361	No change	0
			Average	**51.7413793**

(Dr. K.KarteekaPavan)
Prof., & H.O.D

Department of Civil Engineering:: RVR&JC College of Engineering

Criteria 1.1.2 Percentage of program where syllabus revision was carried out during the last five years

S.No	Semester	Name of subjects in R-15	No of subjects	Name of subjects in R-17	No of subjects
1	I-I	Theory of Elasticity and Plasticity Dynamics of structures Matrix methods of structural analysis	3	Ground Improvement Techniques Adv. Design of Steel Structures	2
2	I-II	Finite Element Analysis of Structures Theory of Plates and Shells	2	Stability of Structures Advanced Theory & Design of RCC Structures Earthquake Resistant Design of Structures	3

For R15 Regulations:
No. of subjects in where syllabus content added or replaced= 5
Total no. of subjects= 16
Percentage of program where syllabus revision was carried out during the last five
years = 5/16*100 = 37.5
For R17 Regulations:
No. of subjects in where syllabus content added or replaced=5
Total no. of subjects= 17
Percentage of program where syllabus revision was carried out during the last five years
=5/17*100=29.4

M.Rama Rao
HOD-CE

Dr. M. RAMA RAO, B.Tech., M.E., Ph.
Professor & Head of Civil Engineering
R.V.R. & J.C. College of Engineering
Chowdavaram, Guntur-522 019 A P India

R.V.R. & J. C. COLLEGE OF ENGINEERING (Autonomous)
Chandramoulipuram, Chowdavaram, Guntur – 522019
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Following are the contents added/ modified in R17 curriculum revised in 2017.

Subject code in R16	Subject title	% of syllabus changed	Topics added
CS511	Advanced Data Structures & Algorithms	90	UNIT-I:HEAP SORTING UNIT II:BINOMIAL HEAPS UNIT III:DISJOINT-SET OPERATIONS UNIT IV,V:COMPLETE CHANGE
CS512	Multi-Core Architectures & Programming		New Subject
CS513	Data Science		New Subject
CS 5XX Elective-I,II,III	CS 571 - Artificial Intelligence & Agent Technologies	40	UNIT I:INTELLIGENT AGENTS UNIT II:PREDICATE LOGICS UNIT III:SYMBOLICREASONING, UNCERTIANITY,STATISTICAL REASOING,QUATIFYING UNCERTAINITY UNIT IV:ADVERSARIAL SEARCH
	CS 573 Advanced Databases		New Subject
	CS 574 Distributed Computing		New Subject
	CS 575 Wireless Networks & Mobile Computing	90	UNIT II:GSM AND OTHER 2G ARCHITECTURE,IP AND MOBILE I NETWORK LAYER UNIT III:TCP/IP TRANSPORT LAYER PROTOCOLS,DATABASEAND MOBILE COMPUTING UNIT IV:DATA DISSEMINATION NAD SYSTEMS FOR BROADCASTING,DATA SYNCHORONIAZTIONIN MOBILE COMPUTING SYSTEMS UNIT V:MOBILE DEVICES,MOBILE WIRELESS SHORT-RANGE NETWORKS AND MOBILE INTERNET
	CS 576 Agile Software Methodologies		New Subject
	CS 577 Information Security		New Subject
	CS 578 Design Thinking and Innovation		New Subject

	CS 579 Network Technologies		New Subject
	CS 580 Ethical Hacking & Computer Forensics(LBD)		New Subject
	CS 581 Scripting Languages (LBD)		New Subject
	CS 582 Mobile Application Development (LBD)	100	Complete Syllabus is revised
CS 551	Advanced Data Structures Lab	60	1.HASHING TECHNIQUES 2.DISJOINT OPERATIONS 3.BELLMAN-FORD Algorithm 4.DIJKSTARS ALGORITHM 5.FLOYD WARSHALLS Algorithm 6.String Matching algorithm
CS 552	Data Science Lab		New Subject
CS 521	Machine Learning		New Subject
CS 522	Cloud Computing	100	Complete Syllabus is revised
CS 523	Internet of Things		New Subject
CS 5XX Elective-IV,V,VI	CS 585 Soft Computing		New Subject
	CS 586 Human Computer Interaction		New Subject
	CS 587 Social Network & Semantic Web		New Subject
	CS 588 Multimedia Computing	100	Complete Syllabus is revised
	CS 589 Software Project Management	100	Complete Syllabus is revised
	CS 590 Software Defined Networks		New Subject
	CS 591 Advanced Data Mining		New Subject
	CS 592 Gaming Engineering		New Subject
	CS 593 Cyber Security		New Subject
	CS 594 Software Testing & Quality Assurance (LBD)		New Subject
	CS 595 Internet Technologies and Web Services (LBD)		New Subject
	CS 596 Visual Programming (LBD)		New Subject
CS 561	Machine Learning Lab		New Subject
CS 562	Internet of Things Lab		New Subject
CS 651	MOOCS	100	COMPLETE CHANGE(OTHER SUBJECT)
	Average % of Syllabus content added or replaced	22.94	Total number of subjects including labs: 34

Dr, M.Sreelatha
Head, Department of CSE
CHAIRMAN – BOS in CSE
R.V.R. & J.C. College of Engineering
Chandramoulipuram, Chowdavaram,
GUNTUR-522 019.

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

Dept.of E.C.E

R15		R17			Percentage of Syllabus content added or replaced
Subject Name	Subject Code	Subject Name	Subject Code	Remarks	
Advanced Digital Communication	CESP-511	Advanced Digital Communication	SP511	Change in unit iii	20
Coding Theory And Techniques	CESP-512	Coding Theory And Techniques	SP512	No change	0
Speech Signal Processing	CESP-513	Speech Signal Processing	SP513	Change in unit iii	20
Radar Signal Processing	CESP-613	Radar Signal Processing	SP572	Change in unit i and ii	30
Adaptive Signal Processing	CESP-618	Adaptive Signal Processing	SP576	Change in unit i and ii	30
Pattern Recognition	CESP-621	Pattern Recognition	SP577	Change in unit iv and v	40
Video Processing	CESP-611	Video Processing	SP578	Change in unit v	20
Microwave Measurements	CESP-619	Microwave measurements	SP580	No change	0
Communication Lab	CESP-551	Communication Lab	SP553	Change in some experiments	20
Real Time Signal Processing	CESP-514	Real Time Signal Processing	SP521	No change	0
Multirate Systems and Filter Banks	CESP-515	Multirate Systems and Filter Banks	SP522	Change in unit ii	20
Wireless Communication	CESP-516	Wireless Communication	SP523	Change in unit v	20
OFDM For Wireless Communication System	CESP-628	OFDM for Wireless Communication Systems	SP581	Change in unit iii and iv	30
Global Processing Systems	CESP-624	Global Processing Systems	SP582	No change	0
Satellite Communication Systems	CESP-623	Satellite Communication Systems	SP585	No change	0
Fiber Optic Communication	CESP-616	Fibre Optic Communication	SP586	No change	0
Embedded Systems	CESP-620	Embedded Systems	SP587	Change in unit ii and v	30
Optimization Techniques	CESP-627	Optimization Techniques	SP588	No change	0
Fuzzy Techniques	CESP-626	Fuzzy Techniques	SP590	Change in unit iii	20
Signal Processing Lab	CESP-553	Signal Processing Lab	SP561	Change in some experiments	20
				Percentage change in content	16

(Dr T. RANGA BABU)
Professor & Head

R.V.R. & J. C. COLLEGE OF ENGINEERING (Autonomous)
Chandramoulipuram, Chowdavaram, Guntur – 522019
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

18-04-2019

Following are the contents added/ modified in R17 curriculum revised in 2017.

Subject code in R17	Subject title	% of syllabus changed	Topics added
PS 513	Advanced Power System Protection	40	Static differential relays in unit 3. Unit 4 equipment protection. Basic principle of digital computer relaying in Unit 5.
PS 551	Power Systems Lab	25	5 new experiments are added in list of experiments
PS 521	Flexible AC Transmission Systems	10	Unit 3: variable impedance type series compensators, switching converter type series compensators ;
PS 611	MOOCS (Self Learning)	100	New Subject
PS 571	Optimization Techniques	100	New subject
PS 572	Power System Planning & Reliability	30	Unit 1 , IN Unit 2 : Deregulation of power systems, power system planning under uncertainty, risk based power system planning
PS 574	Power Electronic Converters	20	Unit 5 Multi level inverters
PS 575	Computer Networks	100	entire syllabus is revised
PS 576	High Voltage Engineering & Insulation	10	Liquid as Insulator, pure and commercial liquids, breakdown in pure and commercial liquids. Intrinsic breakdown, electromechanical breakdown, thermal breakdown, breakdown of solid dielectrics in practice, Breakdown in composite dielectrics, solid dielectrics used in practice.
PS 578	HVDC Transmission Systems	60	All the units are revised and many topics are added
PS 579	Power Quality analysis & Improvement		Complete Syllabus is revised
PS 581	Distribution Systems Planning & Automation	20	Distribution Automation topic is added
PS 584	Power System Deregulation		Complete Syllabus is revised
PS 585	Energy Conservation & Audit		Complete Syllabus is revised

Subject code in R17	Subject title	% of syllabus changed	Topics added
PS 586	Renewable energy driven power systems		New subject
PS 587	Gas Insulated Systems (GIS)		New subject
PS 588	Distributed Generation & Microgrid		New subject
PS 589	Advanced Digital signal Processing		New subject
PS 590	Electrical Transients in Power systems		New subject
	Average % of Syllabus content added or replaced	25.75%	Total number of subjects including labs: 20

Dr. K. Chandra Sekhar
Head, Department of Electrical & Electronics Engg.
CHAIRMAN – BOS in EEE

Dr. K. CHANDRA SEKHAR
Professor & HOD, EEE Dept.
R.V.R & J.C. College of Engg.
Chowdavaram, GUNTUR-522 019.

R.V.R.& J.C COLLEGE OF ENGINEERING, CHOWDAVARAM::GUNTUR-522019

DEPARTMENT OF INFORMATION TECHNOLOGY

1.1.2 % of Syllabus changes proof wih HoD signature (M.Tech CHOICE BASED CREDIT SYSTEM - R17)

S.No	SUBJECT NAME	SUBJECT CODE	CONTENT ADDED/ REPLACED	Summary	% OF SYLLABUS CHANGE
1	Advanced Data Structures and Algorithms	CT 511		UNIT I Some parts of UNIT IVand V	40
2	Data Base Technologies	CT 512		Newly Introduced	100
3	Advanced Operating Systems	CT 513		Minor changes in UNIT V	20
4	Cryptography & Network Security	CT 521		Newly Introduced	100
5	Distributed Systems	CT522		Newly Introduced	100
6	Machine Learning	CT 523		Newly Introduced	100
7	Advanced Programming Lab	CT 551		Newly Introduced	100
8	Data Base Technologies Lab	CT 552		Newly Introduced	100
9	Automata and Formal Languages	CT 571		No Change	0
10	Advanced Computer Architecture	CT 572		UNIT I , II and some parts of UNIT III and UNIT V	50
11	Advanced Web Technologies	CT 573		Minor changes UNIT V	20
12	Advanced Software Engineering	CT 574		UNIT I , II and some parts of UNIT III UNIT IV ,UNIT V	80
13	Machine Learning Lab	CT561		Newly Introduced	100
14	Web services Lab	CT562		Newly Introduced	100
15	Artificial Intelligence	CT575		Newly Introduced	100
16	Digital Image Processing	CT576		some parts of UNIT III , IV and UNIT V	30
17	Speech Processing and Synthesis	CT 577		Newly Introduced	100
18	Multimedia Systems	CT 578		Some parts of UNIT I,II,III AND V	40
19	Information Security	CT 579		Newly Introduced	100
20	Web Services	CT 580		Newly Introduced	100
21	Wireless Networks	CT 581		UNIT I,II,IV and v	70
22	Embedded Systems	CT582		Changes in UNIT I,II	30
23	Big Data Analytics	CT583		Newly Introduced	100

24	Cloud Computing	CT584		PARTS OF UNIT IV AND UNIT V	50
25	Internet of Things	CT585		Newly Introduced	100
26	Mobile Computing	CT586		UNIT I,II,III AND UNIT V	50
27	Agile Software Development	CT587		Newly Introduced	100
28	Data Engineering	CT588		UNIT I,III SOME PARTS OF UNIT IV AND UNIT V	40
29	Evolutionary Computation	CT 589		Newly Introduced	100
30	Cyber Security	CT 590		Newly Introduced	100
31	Fuzzy Set Theory and Applications	CT591		Newly Introduced	100
32	Natural Language Processing	CT 592		Minor changes in UNIT IV,V	20
33	Software Architecture	CT 593		Newly Introduced	100
34	Semantic Web	CT 594		Newly Introduced	100
35	Internship			No Change	0
36	Project Viva Voce Examination			No Change	0
					71.25

Dr. A.Srikrishna
Prof., & HOD, IT

The Following are the curriculum changes in R17 (P.G) stream

S.No	SUBJECT NAME	SUBJECT CODE	Summary	% OF SYLLABUS CHANGE
1	Theory of Elasticity and Plasticity	MD511	UNIT I, II and III and Some parts of Unit IV are Changed	70
2	Machinery Vibration And Control	MD512	Major changes in all units	80
3	Mechanisms and Robot Kinematics	MD513	No Change	0
4	Finite Element Methods	MD521	Some parts of UNIT 1 and 1st Part of Unit V	30
5	Optimization Techniques	MD522	Unit III added	20
6	Advanced Materials for Design	MD523	Newly Introduced	100
7	Computer aided Design LAB	MD551	No Change	0
8	Machine Dynamics and Simulation LAB	MD552	Experiments through Virtual lab were added	30
9	Analysis LAB	MD561	No Change	0
10	Seminar	MD562	No change	0
11	MOOCS	MD611	Newly Introduced	100
12	Dissertation Review	MD651	No Change	0
13	Internship	MD652	No Change	0
14	Project Viva Voce Examination	MD662	No Change	0
15	Design of Experiments	MD571	Unit IV added	20
16	Mechatronics System Design	MD573	Newly Introduced	100
17	Fluidics and Control System	MD572	No Change	0
18	CFD	MD574	Major changes in all units	80
19	Reliability Engineering	MD575	Unit I, IV and V are added	60
20	Mechanics of Composite Materials	MD576	Unit V second part introduced	10
21	Tribology	MD577	Major changes in all units	80
22	Product Design and Development	MD578	Newly Introduced	100
23	Rapid Prototyping	MD579	Newly Introduced	100
24	Fatigue Mechanics	MD580	Major changes in all units	80
25	Robotic Engineering	MD581	Major changes in all units	80
26	Signal Analysis and Condition Monitoring	MD582	Newly Introduced	100
27	Design for Manufacturing and Assembly	MD583	Major changes in all units	80
28	Vehicle Dynamics	MD584	Newly Introduced	100
29	Theory of Plates and Shells	MD585	Newly Introduced	100
30	Mechanics of Sheet Metal Forming	MD586	Newly Introduced	100
31	Research Methodology	MD587	Newly Introduced	100
32	Geometric Modelling	MD588	Newly Introduced	100
			Average Change	56.875

[Dr. K. RAVINDRA]
Prof & HoD - ME
Dean Academics