

Government College for Women(A), Guntur

OUT COMES

- A. Program Outcomes
- B. Program Specific Outcomes
- C. Course Outcomes

**GOVERNMENT COLLEGE FOR WOMEN(A),
GUNTUR**

Programmes Offered

S.No	Name of the Programme	Programme Code	Programme details		
1	B.A (H.E.P.)	101	HISTORY	ECONOMICS	POLITICS
2	B.A (H.P.FE)	106	HISTORY	POLITICS	FINANCIAL ECONOMICS
3	B.A (E.P.CE)	103	ECONOMICS	POLITICS	COMMUNICATIVE ENGLISH
4	B.A(E.P.Psy)	105	ECONOMICS	POLITICS	PSYCHOLOGY
5	B.A(H.ST.Soc)	102	HISTORY	SPECIAL TELUGU	SOCIOLOGY
6	B.A(H.SE.TTM)	104	HISTORY	SPECIAL ENGLISH	TRAVEL & TOURISM MANAGEMENT
7	B.Com(General)	201	COMMERCE	COMMERCE	COMMERCE
8	B.Com(Computer Applications)	202	COMMERCE	COMMERCE	COMPUTER APPLICATIONS
9	B.Com(BFI)	203	COMMERCE	COMMERCE	BANKING AND FINANCIAL INSURANCE
10	B.Com (Accounting Taxation)	204	COMMERCE	COMMERCE	COMMERCE
11	B.Sc(M.P.C)	301	MATHEMATICS	PHYSICS	CHEMISTRY
12	B.Sc (M.P.Cs)	302	MATHEMATICS	PHYSICS	COMPUTERS
13	B.Sc(M.E.Cs)	305	MATHEMATICS	ELECTRONICS	COMPUTERS
14	B.Sc(M.St.Cs)	303	MATHEMATICS	STATISTICS	COMPUTERS
15	B.Sc(M.Cs.Mm)	306	MATHEMATICS	COMPUTERS	MULTIMEDIA
16	B.Sc(M.Cs.Cc)	307	MATHEMATICS	COMPUTERS	CLOUD COMPUTING
17	B.Sc(B.Z.C.(TM))	401	BOTANY	ZOOLOGY	CHEMISTRY
18	B.Sc(B.Z.C.(EM))	409	BOTANY	ZOOLOGY	CHEMISTRY
19	B.Sc(B.Bt.C)	406	BOTANY	BIOTECHNOLOGY	CHEMISTRY
20	B.Sc(B.Bc.C)	404	BOTANY	BIOCHEMISTRY	CHEMISTRY
21	B.Sc(Z.Bc.C)	405	ZOOLOGY	BIOCHEMISTRY	CHEMISTRY
22	B.Sc(Bt.Bc.C)	407	BIOTECHNOLOGY	BIOCHEMISTRY	CHEMISTRY
23	B.Sc(Mb.B.C)	402	MICROBIOLOGY	BOTANY	CHEMISTRY

24	B.Sc(Mb.Z.C)	403	MICROBIOLOGY	ZOOLOGY	CHEMISTRY
25	B.Sc (Ft.Mb.Bc)	411	FOOD TECHNOLOGY	MICROBIOLOGY	BIOCHEMISTRY
26	B.Sc (Z.C.At)	410	ZOOLOGY	CHEMISTRY	AQUACULTURE TECHNOLOGY
27	B.Sc (M.P.E)	309	MATHS	PHYSICS	ELECTRONICS
28	B.Sc (Ds.St.Cs)	308	DATASCIENCE	STATISTICS	COMPUTERS
29	B.Sc (Home Science)	408	CLINICAL NUTRITION & DIETETICS		
30	B.Voc (Multimedia & Animation)	601	VOCATIONAL COURSE		
31	B.Voc (Software Development)	602	VOCATIONAL COURSE		
PG Program Details					
32	M.A. English	PGTL	M.A ENGLISH		
33	M.A. Economics	PGEC	M.A. ECONOMICS		
34	M.Sc Chemistry	PGCH	M.SC CHEMISTRY		
35	M.Sc Zoology	PGZO	M.SC ZOOLOGY		

Program Outcomes

Program Specific Outcomes

UG Programmes

BA-100: B A Programmes

After completing the B A Programme, the student

1. 101:History-Politics-Economics

P Os:

- Develops into a political critique
- Develops historical outlook in all aspects
- Learns to participate in economical surveys

P S O: Develops Critical Thinking and awareness about society and its transactions

2. 102: Sociology-Special Telugu-History

P Os:

- Develops historical outlook in all aspects
- Understands the importance of Telugu language & about them in writing prose, poetry.
- Knows the importance of

Society P S O: Develops holistic history

3. 103: Economics-Politics-Communicative English

P Os:

- Develops Functional English Language Skills
- Provides Higher Order Thinking skills
- Prepares for higher education: Extended principles of economics in day today life.

P S O: Develops professional skills to become a news reporter or a teacher or an administrator/Economist.

4. 104: History-Special English-Tourism and Travel Management

P Os:

- Creates an interest and love towards English language by exposing the learner to the richness and glory of English Language
- Develops cross-disciplinary perspective of global issues
- Prepares them for various career prospects available to the students PSO:

Develops professional skills to become a journalist/writer/teacher

5. 105: Psychology-Economics-Political Science

P Os:

- Understands the value of Economics
- Knows how to assess people
- Develops insights about political

conditions P S O: Develops professional skills of acounselor

6. 106: History-Politics-Financial Economics

P Os:

- Develops Historical knowledge by analyzing multiple cultures
- Understands Political process and critically examines the society.
- Knows about Financial instruments and Finance markets

PSO: Develops skills to become financial advisor, administrator

B Com-200: B Com Programmes

After completing the B Com Programme, the student

1. 201: B Com(General)

P Os:

- Understands the qualities of an Entrepreneur
- Develops the skills of an Accountant
- Knows how to be a Tax consultant

P S O: Develops skills to become an expert in Business and Consultancy Services

2. 202: B Com(Computer Applications)

P Os:

- Understands the qualities of an Entrepreneur
- Develops the skills of an Accountant
- Uses computer background for accounting purpose

P S O: Develops skills to opt Chartered Accountant, Institute of Cost and Works Management /Institute of Company Secretaries / Financial analyst.

3. 203 : B.Com (Banking and Financial Services, Insurance and Exim trade)

P Os:

- Promoting Student to become a startup member in Business community.
- Comprehend the basic structure and process of Financial Systems, Financial Structure.
- Analyze the Financial scenario and problems and formulate Financial Decision making Policies.Uses computer background for accounting purpose

P S O: Develops skills to become an expert in specific fields of Banking, and service sector.

4. 204 : B.Com (Accounting & Taxation)

P Os:

- Understands the fundamental aspects of Accounting, Business and Management.
- Apply methods appropriate for accumulation and interpreting data applicable to the discipline of Commerce
- Accounting Standards and Taxation System of the Government and SEBI, RBI guidelines.

P S O: Develops skills to become an expert in Accounts and Tally

BSC-300,400: B Sc Programmes

After completing the B Sc Programme, the student

1. 301:Mathematics-Physics-Chemistry

P Os:

- Solves Mathematical problems
- Develops scientific outlook
- Analyzes different chemical compositions in medicines and nature

P S O: Develops skills to become a scientist or a teacher

2. 302:Mathematics-Physics-Computers

P Os:

- Develops Mathematical skills
- Practices Computer Programming
- Analyzes Physical concepts

P S O: Solves mathematical and physical problems by becoming a computer programmer/teacher

3. 303:Mathematics-Statistics-Computers

P Os:

- Develops Analytical and Mathematical skills
- Applies Statistics in different fields
- Practices Computer Programming

P S O: Helps to become a statistician or a computer programmer

4. 305:Mathematics-Electronics-Computers

P Os:

- Develops Mathematical skills
- Practices Computer Programming
- Designs circuits for different purposes

P S O: Develops skills to become a computer programmer

5. 306:Mathematics-Computers-Multimedia

P O:

- Develops Mathematical skills
- Practices Computer programming
- Practices Computer graphic designing
- Use and apply tools for image processing, video, sound and animation

P S O: Becomes a Computer Programmer or Graphic Designer

6. 307: Mathematics-Computers-Cloud Computing

P Os:

- Develops Mathematical skills
- Applies Cloud computing techniques
- Practices Computer programming

P S O: Develops skills to become a data analyst

7. 409&401: Botany-Zoology-Chemistry (E.M & T.M)

P Os:

- Develops Seed technology and Agro farms
- Practices Aqua culture and adapts management techniques in Dairy and Poultry farms
- Applies practical knowledge in chemical laboratories

P S O: Becomes an agricultural scientist or pharmaceutical scientist

8. 402: Microbiology-Botany-Chemistry

P Os:

- Understands scientific methods.

- Develops observation and critical analysis skills
- Demonstrates practical skills in the use of tools, technologies and methods common to microbiology, Botany and chemistry.

P S O:

- Learns skills required for pharmaceutical & bio processing industries and in the field of Agriculture
- Encourages to pursue higher education in the fields of applied life sciences.
- Becomes a microbiologist

9. 403: Microbiology-Zoology-Chemistry

P Os:

- Understands scientific methods which help them to develop observation and critical analysis skills
- Demonstrates practical skills in the use of tools, technologies and methods common to microbiology, Zoology and chemistry.

P S O:

- Learns skills required for pharmaceutical & bio processing industries and in the field of health care.
- Encourages to pursue higher education in the fields of applied life sciences.
- Becomes a microbiologist

10. 404: Botany-Biochemistry-Chemistry

P Os:

- Develops seed technology and agro farms
- Analyses samples and carryout biochemical and molecular diagnostics.
- Evaluates chemical compositions of compounds

P S O: Becomes a chemical analyst

11. 405: Zoology-Biochemistry-Chemistry

P Os:

- Develops clinical techniques in diagnostic investigations
- Analyses samples and carryout biochemical immunological and molecular diagnostics.
- Practices mechanism for chemical reactions and demonstrates them in laboratory

P S O: Becomes a Lab scientist.

12. 406: Botany-Biotechnology-Chemistry

P Os:

- Understands scientific methods and develops observation and critical thinking
- Demonstrates practical skills in the use of tools, technologies and methods common to Botany-Biotechnology chemistry.
- Able to work in Plant Biotechnology and Plant breeding laboratories.

P S O: Inspires to pursue higher education in Biotechnology and interdisciplinary courses

13. 407: Biotechnology-Biochemistry-Chemistry

POs:

- Understands scientific methods and develops observation and critical thinking
- Demonstrates practical skills in the use of tools, technologies and methods common to Biochemistry –Biotechnology chemistry.
- Able to work in Molecular Diagnostics laboratories

P S O: Inspires to pursue higher education in Biotechnology and interdisciplinary courses

14. 408: Home Science

P Os:

- Analyses Child psychology
- Understands the role of dietitian in society
- Improves small scale Entrepreneurship skills

P S O: Becomes a nutritional guide and child care specialist/ entrepreneur.

15. 411: Food Technology-Microbiology-Biochemistry

P Os:

- Analyzes Food as per standards & Submits the data
- Developing a novel Food Product
- Investigate & Interprets different Lab tests
- Perform Microbial investigations

P S O: Becomes a Food Analyst / Food Safety Officer / Quality Manager / Biochemist /Microbiologist / Researcher

16. 410: Zoology-Chemistry-Aquaculture Technology

P Os:

- Understands vertebrate and invertebrate zoology, genetics, molecular and cellular biology, as well as physiological processes and anatomy, whole animals, populations, and their ecology
- Practices mechanism for chemical reactions and demonstrates them in laboratory
- Understands the basic principles of Aquaculture, Aquaculture management

P S O: Becomes a Animal breeder, wildlife educator, researcher, Fishery officer

17. 309: Maths-Physics-Electronics

P Os:

- Develops Mathematical skills
- Analyzes Physical concepts
- Designs circuits for different purposes
- Develops scientific outlook

P S O: Becomes a Mathematician, Research scientist, Electronics engineer

18. 308: Data Science- Statistics-Computer Science

P Os:

- Develops relevant programming abilities
- Demonstrates proficiency with statistical analysis of data
- Analyze very large data sets in the context of real world problems
- Develops the ability to build and assess data-based models
- Executes statistical analyses with professional statistical software

P S O: Becomes a data analyst or database developer or data scientist or analytics-enables role like a functional business analyst or a data driven manager

BVOC-600: B.Voc Programmes

After completing the B Voc Programme, the student

1. 601: Multimedia and Animation

P Os:

- Uses and applies tools for image processing, video, sound and animation
- Practices Computer graphic designing
- Applies methodology to develop a multimedia system

P S O: Develops skills to become a Graphic Designer or a Film maker

2. 602: Software Development

P Os:

- Develops complex Programs for real world needs
- Designs and analyses automated systems
- Identifying, designing, installing and testing a software system

P S O: Develops skills to become a software developer or a tester

PG Programs

After completing the PG Programme, the student

1. PGCH: M. Sc. Chemistry

P Os:

- Develops knowledge about fundamental aspects of all the elements of chemistry such as Organic, Inorganic, Physical and Quantum chemistry.
- Learns the practical skills which are useful in scientific research and industrial field.
- Demonstrates an understanding of major concepts of organic chemistry

P S O: Develops skills to become a teacher or researcher in chemistry/pharmaceutical/food products/material industries.

2. PGZO: M. Sc. Zoology

P Os:

- Expands their knowledge with respect to Animal diversity and various branches of applied zoology
- Inculcates awareness and concern towards surroundings, environment and biodiversity
- Develops the practical skills involved in biological techniques and scientific investigation so as to work in related fields

P S O: Develops skills required to work in aquaculture industry, school/Intermediate/UG colleges, and Diagnostic laboratories.

3. PGTE: M. A. English

P Os:

- Master various language aspects like structure, pronunciation, phonetic linguistic features of English Language.
- Understand and apply various genres of literature and their features in the appreciation of great works of literature
- Read and appreciate the greatest classics and writers of English and other world literatures
- Acquire LSRW skills and use them in their presentation of the appreciation of the literature
- Get the introductory aspects of ELT
- Get and use report writing skills
- Know the basics of research aspects

P S O: Develops professional skills to become lecturer/teacher/writer/editor/news reader and for becoming entrepreneur like event manager

4. PGEC: M. A. Economics

P Os:

- Understands core economic terms, concepts and theories
- Develops in-depth knowledge about functioning of domestic and global economics
- Improves skills to perform economic analysis for both micro and macroeconomics

P S O: Applies economic analysis to everyday problems in real life, understands current events and evaluate specific policy

Course Outcomes

Government College for Women(A), Guntur

S.No	Program me & Code	Course	Sem	Course Code	Course Name
1	BA-100	History	I	HIS1101	Ancient Indian History And Culture(From Indus Valley Civilization To 13th Century A.D)
2			II	HIS2101	Medieval Indian History And Culture
3			III	HIS3101	Late MedievalAnd Colonial History Of India
4			IV	HIS4101	Social Reform Moment And Social Struggle
5			V	HIS5101	Early Modern World History
6				HIS5101E1	History And Culture Of Andhra Pradesh
7			VI	HIS6101	History Of Modern World
8				HIS6101E1	History Of Modern Andhra Pradesh
9				HIS8101A1	Cultural Tourism In Andhra Pradesh
10				HIS8101A2	Popular Movements In Andhra Desa(1848 To 1956 Ad)-
11				HIS8102A3	Contemporary History Of Andhra Pradesh (1956-2014)
12		Economics	I	ECO1103	Micro Economics - Consumer Behavior
13			II	ECO2103	Economics
14			III	ECO3103	Macro Economics-I
15			IV	ECO4103	Macro Economics-Ii
16			V	ECO5103	Economic Development
17				ECO5103E1	India & AP Economy
18			VI	ECO6103	Indian Economy
19				ECO6103E1	Quantitative Techniques
20				ECO8103A1	Agribusiness Environment In Andhra Pradesh
21				ECO8103A2	Agricultural Output Marketing
22				ECO8403A3	Agricultural Input Marketing
23		Financial Economics	I	FE1105	Economic Theory
24			II	FE2105	Macro Economic Theory
25			III	FE3105	Quantitative Techniques-1
26			IV	FE4105	Quantitative Techniques-Ii
27			V	FE5105	Financial Institutions And Markets
28				FE5105 E1	Economics Of Insurance
29			VI	FE6105	Financial Institutions And Markets
30				FE6105 E1	Essentials Of General Insurance
31				FE8105A1	Central Banking

32				FE8105A2	Rural And Farm Credit
33				FE8105A3	Project Work
34		Political Science	I	POL1102	Introduction To Political Science
35			II	POL2102	Basic Organs Of The Government
36			III	POL3102	Indian Political System
37			IV	POL4102	Dynamics Of Indian Government
38			V	POL5102	Political Thought
39				POL5102 E1	Introduction And Approaches Of Public Administration
40			VI	POL6102	Western Political Thought
41				POL6102 E1	Principles Of Public Administration
42				POL8102 C1	International Relations
43				POL8102 C2	Indian Foreign Policy
44				POL8102 C3	Contemporary Global Issues
45		Sociology	I	SOC1109	Basic Concepts In Sociology
46			II	SOC2109	Sociology Of Indian Society
47			III	SOC3109	Selected Sociological Theories
48			IV	SOC4109	Methods Of Social Research
49			V	SOC5109	Modern India Social Changes And Development, Issues
50				SOC5109 E1	Applications Of Sociology
51			VI	SOC6109	Social Change Legislation In Modern India
52				SOC6109 E1	Advanced Applications Of Sociology
53		Psychology	I	PSY1110	General Psychology-I
54			II	PSY2110	General Psychology-II
55			III	PSY3110	Social Psychology
56			IV	PSY4110	Social Psychology
57			V	PSY5110	Educational Psychology
58				PSY5110 E1	Abnormal Psychology
59			VI	PSY6110	Educational Psychology
60				PSY6110 E1	Abnormal Psychology
61				PSY8110A1	Abnormal Psychology-II
62				PSY8110A2	Developmental Psychology
63				PSY8110A3	Project Work
64		Communicative English	I	CE1104	Introduction To Language And Language Skills-I
65			II	CE2104	Communicative English

66			III	CE3104	Functional Grammar For Effective Writing And Speaking
67			IV	CE4104	Writing Skills And Strategies
68			V	CE5104	An Introduction To The History Of The English Language
69				CE5104 E1	An Introduction To English Language Teaching
70			VI	CE6104	English Language Teaching: Communicative Approach
71				CE6104E1	An Introduction To The Genres Of English Literature
72				CE8104A1	Introduction To The Genres Of English Literature
73				CE8104A2	Introduction To The Study Of English Literature
74				CE8104A3	Appreciation Of Literature - Project Work
75		Special English	I	SE1107	An Introduction To English Literature(600-1500)
76			II	SE2107	An Introduction To Elizabethan and Jacobean Literatures
77			III	SE3107	An Introduction To English Literature - III
78			IV	SE4107	An Introduction To English Literature -IV
79			V	SE5107	An Outline Of 20th Century Literature
80				SE5107 E1	Glimpses Of World Literature
81			VI	SE6107	An Introduction To The Genres Of English Literature
82				SE6107 E1	American Literature-I
83				SE8107A1	American Literature-II
84				SE8107A1	American Literature-III
85				SE8107A3	Project Work
86		Special Telugu	I	ST1106	PrachinaKavithvamu, Natakamu
87			II	ST2106	PraachinaKavithvamu, AadhunikaKavithvamu
88			III	ST3106	Kavi Yugamulu (Pragnannaya To Prabandha)
89			IV	ST4106	Kavi Yugamulu(Dakshinaandhra)
90			V	ST5106	Bala Vyakaranam-I
91				ST5106E1	Bala Vyakaranam-II
92			VI	ST6106	Literary Criticism-I
93				ST6106E1	Literary Criticism-II
94				ST8106A1	Journalism
95				ST8106A2	Aadhunika Telugu BhashaaNirmanam

96				ST8106A3	Telugu Anuvadam
97		Travel & Tourism	I	TTM1108	Tourism Principles And Practices
98			II	TTM2108	Tourism Resources Of Andhra Pradesh
99			III	TTM3108	Tourism Policy Planning And Development
100			IV	TTM4108	Travel Management
101			V	TTM5108	Travel Agency And Tourism Development-I
102				TTM5108 E1	Geography For Tourism
103			VI	TTM6108	Travel Agency And Tourism Development-II
104				TTM6108 E1	AP Tourism
105				TTM8108A1	Accommodation Management-II
106				TTM8108A2	Eco Tourism And Sustainable Development
107				TTM8108A3	Package Tours
108	B.Com-200	Commerce	I	BOM1201	Business Organization And Management (Gen, CA, FB,A&T)
109				FA1217	Fundamentals Of Accounting (Gen, FB, CA and A&T)
110				BEN1203	Business Environment(Gen, A&T)
111			II	BE2201	Business Economics
112				BEN2203	Business Environment-II
113				FA2202	Financial Accounting-II
114			III	CA3201	Corporate Accounting
115				BS3202	Business Statistics
116				BAN3203	Banking Theory And Practice
117			IV	BL4201	Business Law
118				ASO4202	Accounting For Service Organization
119				IT4205	Income Tax
120			V	BL5201	Business Law
121				CMA5202	Cost And Management Accounting
122				AUD5203	Auditing
123				CA5204	Corporate Accounting
124				ACA5205	Advanced Corporate Accounting
125				MA5206	Management Accounting
126			VI	BL5201	Business Law
127				CMA5202	Cost And Management Accounting
128				AUD5203	Auditing
129				CA5204	Corporate Accounting
130				ACA5205	Advanced Corporate Accounting
131				MA5206	Management Accounting
132				CB5212	Central Banking
133				RFC5213	Rural Form Credit
134				PW5502	Project Work

135		Banking and Financial Services, Insurance and Exim trade	I	CAR1204	Computer Fundamentals & Data Analytics
136			II	BAN2203	Banking Theory And Practice
137				CAR2204	Tally
138			VI	PBI5209	Practice of Banking, Insurance and Exim trade
139				PFS5210	Procedure of Financial Services
140				PW5502	Project Work
141		Computer Applications	I	CAR1212	Information Technology
142			II	FA2213	Financial Accounting
143				EC&W2214	E-Commerce & Web Designing
144			III	CAR3207	OAT
145			IV	CAR4207	E-Commerce-1
146			V	CAR5207	Multimedia With Photoshop
147				CAR5207E1	E-Commerce -2
148			VI	CAR6207	HTML And Dream Weaver
149				CAR6207E1	Flash
150				CAR5209	Programming in C
151				CAR5210	Database Management System
152				CAR5211	Web Technology
153		Accounting and Taxation	II	BE2010	Business Communication
154	Languages	Telugu	I	TEL1002	Old Poetry, Modern Poetry And Story
155			II	TEL2002	Telugu
156			III	TEL3002	PracheenaKavithvamu, Natakamu
157		English	I	ENG1001	General English-I
158			II	ENG2001	English
159			III	ENG3001	General English-II
160		Hindi	I	HIN1004	Non Detailed Grammar, Translation & Letter Writing
161			II	HIN2004	Hindi
162			III	HIN3004	History Of Hindi Literature, Kavyadeep, General Essay
163		Urdu	I	URD1005	Urdu-1
164			II	URD2005	Urdu-2
165			III	URD3005	Urdu-3
166		Sanskrit	I	SAN1003	Prose, Poetry And Grammar-1
167			II	SAN2003	Prose, Poetry And Grammar-II
168			III	SAN3003	Drama, Upanishad, Prose, Alankaras, History Of Sanskrit Literature And Grammar

169	BSC-300,400	Botany	I	BOT1306	Fundamentals Of Microbes And Non-Vascular Plants
170			II	BOT2306	Vascular Plants and PhytoGeograpy
171			III	BOT3306	Plant Taxonomy And Embryology
172			IV	BOT4306	Plant Physiology And Metabolism
173			V	BOT5306	Cell Biology And Genetics
174				BOT5306E1	Seed Technology And Horticulture
175			VI	BOT6306	Plant Physiology.
176				BOT6306E1	Environmental Biology And Biodiversity
177				BOT8306A1	Plant Diversity And Human Welfare
178				BOT8306A2	Ethnobotany And Medicinal Botany
179				BOT8306A3	Pharmacognosy And Phyto Chemistry
180		Computer Science	I	CS1304	Problem Solving in C
181			II	CS2304	Data Structures Using C
182			III	CS3304	Programming In Java
183			IV	CS4304	Data Structures
184			V	CS5304E1	Operating Systems
185				CS5304	Database Management System
186			VI	CS6304	PHP MySQL, Apache
187				CS6304E1	Software Engineering
188				CS8304C1	Php Mysql&Wordpress
189				CS8304C2	Advanced Web Technologies (Java Script Jquery/Ajax/Json/Angular Js)
190				CS8304C3	Project Work
191		Multimedia	I	MUL 1314	Graphic Designing
192			II	MUL 2314	Web Designing Basics
193			III	MUL 3314	2d Animation
194			IV	MUL 4314	Working On Maya
195			V	MUL 5314	Character Animation
196				MUL 5314E1	Advanced Character Animation
197			IV	MUL 6314	Facial Animation And Blend Shapes
198				MUL 6314E1	3D Animation Project
199				MUL8314A1	Multi Media Cluster-I
200				MUL8314A2	Multi Media Cluster-II
201				MUL8314A3	3d Animation
202		Cloud Computing	I	CC1317	Basics And Services Of Cloud Computing
203			II	CC2317	SaaS, PaaS, IaaS In Cloud Computing
204			III	CC3317	Sales force – PaaS : Developing Applications on Cloud through GUI
205			IV	CC4317	Programming Basics through Salesforce.com APEX & Visual force

206			V	CC5317	Advanced JavaScript :jQuery, JSON with Visual force
207				CC5317E1	Business Intelligence
208			IV	CC6317	Sales force marketing & sales
209				CC6317E1	Sales force customer services
210				CC8317A1	Soap Integration
211				CC8317A2	Rest Integration
212				CC8317A3	Project Work
213		Data Science	I	DS1320	Introduction to Data Science and R Programming
214			II	DS2320	Data Mining Concepts and Techniques
215		Mathematics	I	MAT1301	Differential Equations
216			II	MAT2301	Three-Dimensional Geometry
217			III	MAT3301	Groups, Differentiation Of Vectors, Differential Operators
218			IV	MAT4301	Real Analysis
219			V	MAT5301	Rings, Vector Space, Basis and Dimension, Transformation, Inner Product
220				MAT5301E1	Numerical Analysis-A
221			VI	MAT6301	Inner Product Spaces and Vector Integration
222				MAT6301E1	Numerical Analysis-B
223				MAT8301A1	Integral Transforms
224				MAT8301A2	Advanced Numerical Analysis
225				MAT8301A3	Project Work
226		Statistics	I	STA1305	Descriptive Statistics
227			II	STA2305	Probability Theory and Distributions
228			III	STA3305	Theory Of Estimation
229			IV	STA4305	Testing Of Hypothesis
230			V	STA5305	Sampling And Design of Experiment
231				STA5305E1	Operation Research
232			VI	STA6305	Applied Statistics
233				STA6305E1	Quality And Reliability
234				STA8305A1	Optimization Techniques
235				STA8305A2	Operation Research
236				STA8305A3	Project Work
237		Physics	I	PHY1302	Mechanics, Waves & Oscillations
238			II	PHY2302	Wave Optics
239			III	PHY3302	Thermodynamics
240			IV	PHY4302	Optics
241			V	PHY5302	Electricity, Magnetism And
242				PHY5302E1	Solid State Physics
243			VI	PHY6302	Elements Of Modern Physics
244				PHY6302E1	Analog And Digital Electronics
245				PHY8302A1	Fiber Optic Communication

246				PHY8302A2	Electronic Instrumentation
247				PHY8302A3	Power Electronics
248		Electronics	I	ELE1315	Basic Circuit Theory
249			II	ELE2315	Digital Electronics-I
250			III	ELE3315	Digital Electronics-II
251			IV	ELE4315	Analog And Digital Applications
252			V	ELE5315	Micro Processor -1
253				ELE5315E1	Embedded Systems-1
254			VI	ELE6315	Microprocessors-II
255				ELE6315E1	Embedded Systems-II
256				ELE8315A1	Embedded System Design
257				ELE8315A2	Electronic Instrumentation
258				ELE831A3	Power Electronics
259		Chemistry	I	CHE1303	Inorganic And Physical Chemistry
260			II	CHE2303	Organic And General Chemistry
261			III	CHE3303	General And Organic Chemistry
262			IV	CHE4303	Inorganic And Physical Chemistry
263			V	CHE5303	Inorganic, Organic And Physical Chemistry-1
264				CHE5303E2	Molecular Spectroscopy And Macromolecules
265			VI	CHE6303	Inorganic, Organic And Physical Chemistry-2
266				CHE6303E1	Qualitative And Quantitative Aspect Analysis, Separation Techniques, Spectrophotometry
267				CHE8303B1	Fuel Chemistry And Batteries
268				CHE8303B2	Inorganic Materials Of Industrial Importance
269				CHE8303B3	Analysis Of Applied Industrial Products
270		Zoology	I	ZOO1307	Animal Diversity - Non Chordates
271			II	ZOO2307	Animal Diversity - Chordates
272			III	ZOO3307	Cell Biology , Genetics And Evolution
273			IV	ZOO4307	Embryology, Physiology And Ecology
274			V	ZOO5307	Animal Physiology , Evolution And Zoogeography
275				ZOO5307E1	Fisheries& Aqua Culture
276			VI	ZOO6307	Animal Physiology & Genetics
277				ZOO6307E1	Clinical Science And Animal Biotechnology
278				ZOO8307A1	Principles Of Aquaculture
279				ZOO8307B2	Aquaculture Management
280				ZOO8307A3	Post Harvest Technology
281		Biochemistry	I	BC1309	Biomolecules
282			II	BC2309	Bioenergetics and Bioanalytical Techniques

283			III	BC3309	Bioenergetics And Biochemical Techniques
284			IV	BC4309	Intermediary Metabolism
285			V	BC5309	Molecular Biology
286				BC5309E1	Endocrinology And Clinical Biochemistry
287			VI	BC6309	Immunology
288				BC6309E1	Genetic Engineering And Bioinformatics
289				BC8309A1	Clinical Biochemistry & Microbiology
290				BC8309A2	Protein Purification and Separation
291				BC8309A3	Fundamental Of Bioinformatics And Protein Modeling
292		Biotechnology	I	BT1310	Bio-Molecules & Analytical Techniques
293			II	BT2310	Microbiology, Cell and Molecular Biology
294			III	BT3310	Biophysical Techniques
295			IV	BT4310	Fundamentals Of Microbiology And Immunology
296			V	BT5310	Molecular Biology
297				BT5310E1	Plant And Animal Biotechnology
298			VI	BT6310	Genetic Engineering
299				BT6310E1	Industrial And Environmental Biotechnology
300				BT8310B1	Basics Of Fermentation
301				BT8310B2	Fermenter Design And Down-Stream Processing
302				BT8310B3	Bioprocess Technology
303		Microbiology	I	MB1308	Introduction To Microbiology And Microbial Diversity
304			II	MB2308	Microbiology
305			III	MB3308	Microbial Psychology And Metabolism
306			IV	MB4308	Microbial Genetic And Molecular Biology
307			V	MB5308	Immunology
308				MB5308E1	Environmental And Agricultural Microbiology
309			VI	MB6308	Medical Microbiology
310				MB6308E1	Food And Industrial Microbiology
311				MB8308A1	Diagnostic Microbiology
312				MB8308A2	Microbial Quality Control In Food And Pharmaceutical Industries
313				MB8308A3	Bioinformatics
314		Home science	I	HS1311	Basic Nutrition
315				HS1312	Human Physiology
316				HS1313	Food Microbiology

317			II	HS2311	Food Science
318				HS2312	Fundamentals Of Family Nutrition
319				HS2313	Growth And Development During Life Span
320			III	HS3311	Nutritional Biochemistry
321				HS3312	Food Preservation
322				HS3313	Extension Education
323			IV	HS4311	Housing And Interior Decoration
324				HS4312	Community Nutrition
325				HS4313	Diet Therapy-1
326			V	HS5311	Diet Therapy -2
327				HS5312	Diffusion And Adoption
328				HS5313	Textile Science
329				HS5314E1	Bakery And Confectionery
330				HS5315E1	Early Childhood Education
331				HS5316E1	Entrepreneurship Development
332			VI	HS6311	Diet Counseling
333				HS6312	Training And HRD
334				HS6313	Tye And Dye
335				HS6314E1	General Psychology
336				HS6315E1	Counseling Psychology
337				HS6316E1	Resource Management
338				HS6314C1	Retail Marketing And Merchandising
339				HS6315C1	Resource Management
340				HS8316C1	Project Work
341		Aquaculture Technology	I	AT1918	Basic Principles Of Aquaculture
342			II	AT2318	Basic Principles of Aquaculture
343		Food Technology	I	FT1319	Fundamentals of Food Technology
344			II	FT2319	Food Technology
345	BVOC-600	Multimedia and Animation	I	CSS1008	Communication Soft skills-I (MA and SD)
346				FOC1401	Fundamentals of Computers-I (MA and SD)
347				CK1403	Color Key Artist
348				PST1503	Problem Solving Techniques (MA and SD)
349				GD1502	Graphic Designing (MA and SD)
350				SOS1501	Science of Sound
351			II	FOC1401	Fundamentals of Computers-II (MA and SD)
352				T2405	Tally
353				WD2505	Web Designing
354				N2506	Nuendo
355				BOA2507	Basics of Animation
356		Software Development	I	FA1402	Financial Accounting
357				PC1504	Programming in C

358			II	OS2508	Operating Systems
359				DSU2509	Data Structures using C
360	Extra Courses	Life Skill Courses	I	HV1007	Human Values And Professional Ethics(LSC)
361				CA1006	Basic Computer Applications(LSC)
362				TG1009	Tourism Guidance(SDC)
363				PR1010	Public Relations(SDC)
364				ENT1008	Entrepreneurship(LSC)
365				IP1010	Insurance Promotion(SDC)
366				EA1009	Electrical Appliances(SDC)
367				PN1010	Plant Nursery(SDC)
368			II	ICT2006	Information & Communication Technology(LSC)
369				JRW2009	Journalistic Reporting(SDC)
370				ES2008	Elementary Statistics(LSC)
371				AD2011	Advertising(SDC)
372				ICS2007	Indian Culture And Science(LSC)
373				FA2010	Food And Adulteration(SDC)
374				SE2013	Solar Energy(SDC)
375				DT2009	Dairy Techniques Basic Principles of Aquaculture(SDC)
376				FVP2011	Fruit and Vegetable Preservation(SDC)
377				CSS2008	Communication Soft Skills(SDC)
378			III	CSS	Communication Skills And Soft Skills – II
379				ICT3006	ICT
380			IV	CSS	Communication Skills And Soft Skills – III
381				LSE	Leadership Education
382				ENT	Entrepreneurship
383				AS	Analytical Skills
384		Certificate Courses		CC417OWC	Organic Waste Composting (Zoology)
385				CC4110F	Ornamental Fishes (Zoology)
386				CC409MC	Mushrooms Cultivation (Microbiology)
387				CC120WA	Water Analysis (Chemistry)
388				CC108AFM	Computational Biology (Biotechnology)
389				CC	Website Design with advanced Technologies
390	M.Sc.	Zoology	I	Z101	Structure And Function Of Invertebrates And Vertebrates
391				Z102	Biodiversity And Systematics
392				Z103	Developmental Biology
393				Z104	Molecular Cell Biology
394			II	Z201	Genetics And Evolution
395				Z202	Comparative Animal Physiology

396				Z203	Principles Of Ecology
397				Z204	Tools And Techniques In Biology
398				NCZ 205	Concepts Of Animal Science
399			III	Z301	Animal Biotechnology
400				Z302	Ichthyology
401				Z303	Limnology
402				Z304	Aquatic Toxicology
403				NCZ 305	Applied Zoology
404			IV	Z401	Fish Pathology
405				Z402	Immunology
406				Z403	Aquaculture
407				Z404	Aquacultural Management
408	M.A.	Economics	I	EC1.1	Micro Economic Theory-1
409				EC1.2	Microeconomics
410				EC1.3	Public Finance
411				EC1.4	Evaluation Of Economics Doctrines
412				NCEC1.5	Mathematical Methods
413			II	EC2.1	Micro Economic Theory-II
414				EC2.2	Monetary Economics
415				EC2.3	International Economics
416				EC2.4	Public Finance Administration
417				EC2.5	Statistical Methods
418				NCEC2.6	Indian Constitution And Welfare Administration
419			III	EC3.1	Economic Growth And Development
420				EC3.2	Indian Economy
421				EC3.3	Environmental Economics
422				EC3.4	Computer Applications In Economics
423				EC3.5	Labor Economics
424				EC3.6	Indian Government And Politics
425			IV	EC4.1	Indian Foreign Trade
426				EC4.2	Industrial Economics
427				EC4.3	Agricultural Economics
428				EC4.4	Economics Of Infrastructure
429				EC4.5	Financial Markets And Analysis
430	M.Sc.	Chemistry	I	CH101	General Chemistry
431				CH102	Inorganic Chemistry
432				CH103	Organic Chemistry
433				CH104	Physical Chemistry
434			II	CH201	General Chemistry
435				CH202	Inorganic Chemistry
436				CH203	Organic Chemistry
437				CH204	Physical Chemistry
438			III	CH301	Organic Spectroscopy-1

439				CH302	Organic Synthesis, Mechanism And Nano Chemistry
440				CH303	Alkaloids And Phenothiazines
441				CH304	Chemistry And Natural Products
442			IV	CH401	Organic Spectroscopy-2
443				CH402	Organic Synthesis, Mechanism And Green Chemistry
444				CH403	Antibiotics And Drugs
445				CH404	Techniques For Modern Industrial Applications

UG COURSE OUTCOMES
DEPARTMENT OF ENGLISH

GENERAL ENGLISH

ENG1001: General English

A student who studies this course

- Understand the need for developing LSRW skills
- Use the tools of communication effectively
- Acquire ability to use Soft Skills in professional and daily life

ENG2001: General English

A student who studies this course

- Use reading skills effectively
- Comprehend different texts
- Interpret different types of texts
- Build up a repository of active vocabulary
- Use good writing strategies.

ENG3001: General English

A student who studies this course

- Speak fluently and accurately in English
- Participate confidently in any social interaction
- Enhance conversational skills by observing the professional audio podcasts

COMMUNICATIVE ENGLISH

CE1104: An Introduction to Language and Language Skills-I

A student who studies this course

- Know and understand the origins of language and Linguistic theories
- Apply the mechanics of speaking with focus on phonetic theory
- Understand traits of listening, know barriers to listening
- Know good reading habits, acquire reading strategies and know types of questions
- Know good reading habits, acquire reading strategies and know types of questions
- Know different language functions for speaking, know and use formal and informal conversations and acquire bottom up speaking skills

CE2104: An Introduction to Language and Language Skills-II

A student who studies this course

- Know the basics of linguistic terminology
- Know and use the supra segmental features that influence pronunciation
- Know and employ spelling rules; employ idiomatic expressions
- Know and use vocabulary for every day conversations and workplace

- Use basic grammar components to frame meaningful sentences

CE3104: Functional Grammar for Effective Writing and Speaking

A student who studies this course

- Know and use grammar in framing sentences for speaking and writing
- Develop speaking skills for different purposes in real life situations.
- Enhance speaking skills needed in professional environment,
- Acquire and use note making, summarizing and paraphrasing strategies
- Acquire writing skills and strategies needed for various social and professional contexts

CE4104: Writing Skills and Strategies

A student who studies this course

- Know and use five steps (pre writing, drafting, editing, revision, final draft) of writing process
- Acquire and use writing skills for workplace
- Acquire writing for specific purposes of developing an idea and report writing
- Know and use the language needed for writing reviews and write different types of reviews
- Know the strategies for descriptive and narrative essays and write these two types of essays

CE5104: An Introduction to the History of the English Language

A student who studies this course

- know the origin of language and the emergence of language families
- Know and analyze different influences on English Language
- understand and observe language varieties
- understand the features of Modern English
- Assess the influence of the literary writers on English Language

CE5104E1: An Introduction to English Language Teaching

A student who studies this course

- Know and apply the implications of theories on second language Teaching
- analyze and evaluate the benefits of different methods of Teaching Language
- apply different learning styles and intelligences for self learning and classroom teaching
- know and use various features of lesson plan
- understand and differentiate testing and evaluation

CE6104: English Language Teaching: Communicative Approach

A student who studies this course

- know and apply the theories on English language Teaching
- analyze and evaluate the benefits of Communicative Language Teaching
- know and apply classroom management strategies for teaching
- know and use various features of lesson plan
- analyze the importance of fluency, motivation and feedback in language teaching

CE6104E1: An Introduction to the Genres of English Literature

A student who studies this course

- Know and understand the concept of literature and different historical periods in English literature, the basic genres of literature, the origin and development of English poetry.
- Evaluate the growth of drama from the religious plays to modern drama
- Understand and trace the origin and growth of the prose form
- Understand and trace the origin and growth of Fiction in English
- Know and trace different concepts of literary criticism and its history

SPECIAL ENGLISH

SE1107: An Introduction to English Literature -I

A student who studies this course

- Identify the characteristics in Poetry, Drama and Literary Criticism
- Interpret literature of these periods critically

SE2107: An Introduction to English Literature -II

A student who studies this course

- Identify the features of Elizabethan and Jacobean periods
- Review the aspects of romantic comedy, and the evolution of prose as a genre
- Distinguish the characteristics that evolved in Poetry, Drama, Prose and Literary Criticism
- Assess literature of these periods critically

SE3107: An Introduction to English Literature -III

A student who studies this course

- Know about the features of Elizabethan and Jacobean periods
- Recognise the aspects of different literary genres, forms and terms
- Identify the characteristics in literature that reflected the changing trends in society
- Interpret literature of these periods critically

SE4107: An Introduction to English Literature -IV A

student who studies this course

- Understand the characteristic features of different ages
- Analyse how language changes
- Interpret the ways that led to the formation of Standard English

SE5107: An Outline of 20th century Literature

A student who studies this course

- Understand the aspects of literature belonging to 20th century
- Analyse the nature of various literary forms
- Interpret the works of representative writers of the age

SE5107E1: Glimpses of World Literature

A student who studies this course

- Understand the aspects of literature belonging to the World Literature

- Analyse the nature of various literary forms
- Interpret the works of representative writers of the age

SE6107: An Introduction to the Genres of English Literature

A student who studies this course

- Understand the aspects of different genres of literature
- Analyse the nature of various genres and their development through examples
- Interpret the works of representative writers of the age in the light of the genres

SE6107E1: American Literature-I

A student who studies this course

- Understand the aspects of American literature
- analyse the nature of various literary forms and their development in America
- interpret the works of representative writers of the age

Foundation Courses / Value Added Courses:

CSS2008: Communication and Soft skills-I

A student who studies this course

- Improves in grammar and vocabulary
- Knows about Listening and Reading as Language Skills

CSS3008: Communication and Soft skills-II

A student who studies this course

- Demonstrates good speaking skills with correct pronunciation, stress and intonation
- Knows about and participates in Group Discussion, Role-play using target language
- Performs better in Public Speaking

CSS4008: Communication and Soft skills-III

A student who studies this course

- Internalizes soft skills such as Positive Thinking, Emotional Intelligence, and aspects of Body Language
- Practises writing skills such as Paragraph writing, Paraphrasing, Summarizing and Report Writing

DEPARTMENT OF TELUGU

GENERAL TELUGU

TEL1002: Old poetry, Modern Poetry and Story

A student who studies this course

- Enjoys the classic “Mahabharatham”, observes the values hidden in the stories and also in the language aspect that vary by the ages/poets/writers
- Learns about genres of time reflecting different issues of the society
- Becomes familiarised to different styles of writers and different dialects of the language

TEL2002: Old poetry, Modern Poetry and Story, Navala

A student who studies this course

- Understands qualities of prabandhayugam and effect of the luxurious living of 16th century/Sri Krishnadevarayayugam
- Appreciates Telugu literature and understands the reflection of social issues in writings

of modern poetry and short stories

TEL3002: Pracheena Kavithvamu, Natakamu

A student who studies this course

- Familiarizes to poets like pothana and koravi Goparaju and analyses the uniqueness of their poetry
- Understands all the aspects of our mother tongue and its importance for our existence

SPECIAL TELUGU

ST1106: Classical poetry and Drama

A student who studies this course

- Builds personality through study of old/classical poetry
- Develops social awareness through study of plays
- Appreciates sweetness of poetic form of literature

ST2106: Modern poetry and Satakas

A student who studies this course

- Appreciates sweetness of poetic form of literature
- Promotes awareness of moral values through study of

Satakas ST3106: History of Telugu literature (Pragnannaya to

Prabandhayuga) A student who studies this course

- Analyses the changes in literature with changing time
- Familiarizes with the writings of various writers and poets
- Understands the social milieu of the relevant times and influences of writer's creation on the social environment

ST4106: History of Telugu literature (Dakshinandhra yuga and modern literature)

A student who studies this course

- Improves the thinking towards reformations in the society, social changes, humanism and equality
- Promotes social alertness by the demonstrating various progressive and revolutionary literary work of various writers
- Understands the emergence of new aspects through the development and evolution of various forms like novels, short stories and plays

ST5106: Balavyakaranam and Alankaras

A student who studies this course

- Learns the basic concepts of grammar
- Knows about

Alankaras ST5106E1: Literary

criticism A student who studies

this course

- Knows definitions of kaavya given by Indian and western Critics
- Learns about Rasa swarupam and Rasanishta

ST5106E2: Principles of literary Criticism, Modern literary forms and Alankaras

A student who studies this course

- Improves knowledge among the students about criticism theories
- Learns about modern literary forms
- Familiarizes with Alankaras

ST6106: Linguistics and Prosody

A student who studies this course

- Understands the evolution of Telugu language
- Insights into Dravidian languages
- Develops awareness about Prosody

ST6106E1: Literary criticism

A student who studies this course

- Acquires knowledge about fine arts and modern literary forms
- Develops awareness about Dasavidharoopakalu
- Understands the genesis of Kavya and its benefits

ST6106E2: Art of translation/Practical translation

A student who studies this course

- Practices translations with naturalness, accuracy and clarity
- Imparts practical training in translation

DEPARTMENT OF SANSKRIT

SAN1003: Prose, Poetry and Grammar-I

A student who studies this course

- Should be able to understand Sanskrit Grammar

SAN2003: Prose, Poetry and Grammar-I

A student who studies this course

- Should be able to understand and reproduce main results and proof of these courses

SAN3003: Drama, Upanishad, prose, Alankaras, History of Sanskrit Literature and Grammar

A student who studies this course

- Should be able to know the meaning of new words
- Should be able to apply the concepts they learned
- LSRW skills should be improved

DEPARTMENT OF URDU

URD1005: Urdu-1

A student who studies this course

- Develops Listening, Speaking, Reading and Writing skills in Urdu
- Appreciates Urdu literature and recites them
- Gets introduced to Navya Shivala and Faiz Ahmad Faiz poetry
- Knows about religious equality in society

URD2005: Urdu-2

A student who studies this course

- Develops fluency in writing and speaking
- Practices accuracy in prose by analyzing BehesvoJkrar

URD3005: Urdu-3

A student who studies this course

- Gets introduced to *Dasthaan* by Shuru Khissa
- Develops positive attitude and habituate to maintain positivity in every suitable situation
- Appreciates Urdu literature and recites them

DEPARTMENT OF HINDI

HIN1004: Non Detailed Grammar, Translation & Letter writing

A student who studies this course

- Develops the skills of Hindi language
- Expands the knowledge of vocabulary
- Practices drafting personal letters

HIN2004: Non Detailed Grammar, Translation & Letter writing

A student who studies this course

- providing
- quality education
- able to become good officers , Research scholars, teachers, and artists.
- As the prescribed syllabus is Skill based students get proficiency in all skills like speaking, writing, understanding, and expressing.

HIN3004: History of Hindi literature, Kavya-Deep, General Essay

A student who studies this course

- Acquires the knowledge of Hindi Literature, Poets and Poetry
- Develops the knowledge of history of Hindi literature
- Inculcates the habit of thinking on general issues through essays
- Translates Hindi to English and vice-versa
- Practices drafting of official letters

DEPARTMENT OF PSYCHOLOGY

PSY1110: General Psychology-I

A student who studies this course

- Acquires knowledge about historical context of psychological study
- Provide a survey of the fields of psychology and apply psychological methods whenever necessary
- Understands the basic concepts of attention, perception, learning and personality

PSY2110: General Psychology-II

A student who studies this course

- Understands the scientific reasoning and problem solving skills
- Demonstrates fundamental knowledge and comprehension of the major concepts, theoretical perspectives, historical trends, and empirical findings to discuss how psychological principles apply to behavioral problems
- Gets aware of various concepts like Intelligence, Aptitudes, learning theories and Memory

PSY3110: Social Psychology -I

A student who studies this course

- Acquisition of knowledge that goes beyond mere memorization of facts and moves to an understanding human behavior

- An awareness of major problems and issues in the society and the capacity to Understand the forces that create group differences

PSY4110: Social Psychology-II

A student who studies this course

- Develops competency in writing and in oral and maintain good interpersonal communication skills
- Understands the dynamics of intergroup relationships, conflict, and cooperation
- Apprehends to various leadership styles, Formation of groups and how the rumors spread

PSY5110: Educational Psychology

A student who studies this course

- To help the student of education and the teacher in understanding human nature so that he may be able to motivate and direct the learning and growth and conduct.
- Gives knowledge in providing a better background for understanding the teaching in all its intricacies and a sympathetic attitude towards children
- Students aware of decision-making skills, problem solving skills

PSY5110E1: Abnormal Psychology

A student who studies this course

- Students get knowledge and awareness about the mind's subconscious, the mind's consciousness and the reasons for human behavior.
- Abnormal Psychology is essential to study some kinds of mental disorders and for identifying and treating mental disorders, other biological diseases.

PSY6110: Educational Psychology

A student who studies this course

- To help the student of education and the teacher in understanding human nature so that he may be able to motivate and direct the learning and growth and conduct.
- Gives knowledge in providing a better background for understanding the teaching in all its intricacies and a sympathetic attitude towards children
- Students aware of decision-making skills, problem solving skills

PSY6110E1: Abnormal Psychology

A student who studies this course

- Assists psychologists in some kinds of therapeutic role, clinical practicing, counseling, or school settings
- Practices various therapeutic measures and implement in the society where ever necessary

DEPARTMENT OF SOCIOLOGY

SOC1109: Basic Concepts of Sociology

A student who studies this course

- Gains the basic knowledge on concepts in sociology that helps them analyse different sociological problems and resolve them
- Helps in decision making

SOC2109: Sociology of Indian Society

A student who studies this course

- Student will be able to identify social issues and challenges like caste system, gender equality, child labour, illiteracy and religious conflicts etc. from social and economic aspect

SOC3109: Selected Sociological Theories

A student who studies this course

- Student learns:
 1. Gains knowledge of different social theories
 2. Learns the concept like division of labour, suicides, bureaucracy and authority

SOC4109: Methods of Social Research

A student who studies this course

- Student will be able to
 1. Analyse the gaps in social research and find problems existing in the society and give possible solutions.

SOC5109: Modern India: Social Changes and Development, Issues

A student who studies this course

- Knows the impact of British Rule on Social Change
- Expertises at the trends of Social Change in Modern India

SOC5109E1: Applications of Sociology

A student who studies this course

- Applies the participatory techniques and Counseling skills

SOC6109: Social Change – Legislations in Modern India

A student who studies this course

- Understands the Legislations in Modern India leading to Social Change
- Evaluates the Intervention Programmes and Social Issues

SOC6109E1: Advanced Applications of Sociology

A student who studies this course

- Knows the social research, Methods of Data Collection and Report Analysis

DEPARTMENT OF POLITICAL SCIENCE**POL1102: Basic Concepts of Political Science**

A student who studies this course

- Recalls the basic concepts of Political Science
- Explains the theories of the origin of the state, Sovereignty, Law, Liberty and Equality, Rights and Duties etc.

POL2102: Concepts Theories and Institutions

A student who studies this course

- Summarizes concepts, theories and institutions deals with democracy, ideology
- Classifies the organs of Government

POL3102: Indian Political System

A student who studies this course

- Knows the Indian political system and salient features of Indian Constitution, Federal Government

- Analyses Centre-State relations, fundamental Rights and Duties, Parliament.

POL4102: Dynamics of Indian Government

A student who studies this course

- Identifies the Socio-economic factors in Indian Politics
- Explains the functions of Election Commission, National and Regional Political parties
- Identifies the factors of National Integration, Communalism and Terrorism etc.

POL5102: Political Thought

A student who studies this course

- Explains the features of Ancient Indian Political Thought, Manu-Varna System etc.
- Knows Kautilya's Kingship, Mandala Theory, Buddha Dharma, Sangha
- Analyses Gandhi – Non violence, Nehru's foreign policy and Dr Ambedkar – champion of weaker Sections etc.

POL5102E1: Introduction and Approaches of Public Administration

A student who studies this course

- Analyses the approaches of Public Administration deals with in nature, e-Governance approaches and Globalization, privatization and Liberalization etc.

POL6102: Western Political Thought

A student who studies this course

- Studies different Western political thoughts like Greek political thought, Social Contract Theories and Karl Marx Theory of Scientific Socialism etc.

POL6102E2: Principles of Public Administration

A student who studies this course

- Learns the principles of public administration, principles of organization
- Becomes skilled at Financial Administration, Public Relation and Administrative Accountability

DEPARTMENT OF ECONOMICS

ECONOMICS

ECO1103: Micro Economics-I

A student who studies this course

At the end of the course, the student is expected to demonstrate the following cognitive abilities and psychomotor skills.

- Remembers and states in a systematic way (Knowledge)
 - a. the differences between microeconomic analysis and macroeconomic analysis
 - b. various laws and principles of microeconomic theory under consumption
- Explains (understanding)
 - a. various terms and concepts relating to microeconomic analysis with the help of examples of real life
 - b. consumer's equilibrium and consumer's surplus using indifference curve analysis.
 - c. various laws and principles of consumption, production, and income distribution
 - d. determination of price and output discriminating different market conditions in short term and long term
- Critically examines using data and figures (analysis and evaluation)
 - a. various laws and principles of microeconomic analysis and market conditions
 - b. application of the concept of demand elasticity and its relation with Average and Marginal Revenue
 - c. the relationship between average and marginal cost/revenue both in long term and

- Draws critical diagrams and graphs to explain and examine the application of various laws and principles of microeconomic analysis

ECO2103: Micro Economics-II

A student who studies this course

At the end of the course, the student is expected to demonstrate the following cognitive abilities and psychomotor skills.

- Remembers and states in a systematic way (knowledge)
 - a. Various concepts, definitions, laws and principles of macroeconomic theory with reference to income, employment, money, banking and finance
- Explains (understanding)
 - a. the difference between various concepts and components of national income with illustrations and methods of measuring national income
 - b. various terms, concepts, laws and principles, theories relating to income, employment, consumption, investment, money, price-level and phases of trade cycles
 - c. functions of commercial banks and central bank, creation and control of credit
- Critically examines using data and figures (analysis and evaluation)
 - a. in order to understand the interrelationship between various components of national income
 - b. the theories of macroeconomics with reference to their assumptions, implications and applicability
 - c. Empirical evidences of Consumption and Investment Functions and factors influencing them
- Draws critical formulae, diagrams and graphs.
 - a. consumption and investment functions; concepts of multiplier and accelerator
 - b. price indices, inflation and trade cycles

ECO3103: Macro Economics-I

A student who studies this course

- Understands the outlook of macro economics and its importance
- Analyses different concepts of National income
- Gets an idea about RBI and its functioning

ECO4103: Macro Economics-II

A student who studies this course

- Recognizes Trade cycles
- Reviews the present banking system
- Identifies defects in Indian money market

ECO5103: Economic Development & Indian

Economy A student who studies this course

- Knows the basic concepts of economic growth and development
- Identifies the basic features of Indian economy
- Creates solutions for the problems like poverty, economic inequalities, unemployment and food security

ECO5103E1: India and AP Economy

A student who studies this course

- Knows the importance of agriculture in India
- Acquires knowledge about FEMA and five-year plans
- Analyzes the problems in agriculture, infrastructure, crop insurance, gender inequalities etc.

ECO5103E2: Agricultural Economics

A student who studies this course

- Understands the nature and scope of agricultural economics
- Develops the knowledge about concept of production function
- Outlines system of farming

ECO6103: Indian Economy

A student who studies this course

- Recognize the nature of agriculture in India
- Knows about types of industries
- Outlines the planning in India and develops the knowledge for competitive exams

ECO6103E1: Quantitative Techniques

A student who studies this course

- Practices quantitative techniques in Mathematics and Statistics
- Solves different problems using the learned techniques and formulae

ECO6103E2: Public Finance

A student who studies this course

- Recognizes the use of public finance
- Knows the collection of taxes and public expenditure
- Identifies the necessity for public welfare

FINANCIAL ECONOMICS

FE1105: Economic Theory

A student who studies this course

- Learns the theoretical concepts and the importance of Economics
- Outlines diminishing marginal utility
- Understands the production function

FE2105: Macro Economics

A student who studies this course

- Analyzes the concept of national income
- Understands about money multiplier
- Recognizes inflation and trade cycles

FE3105: Quantitative Techniques-I

A student who studies this course

- Learns quantitative techniques in mathematics and statistics
- Solves different problems in central tendency and regression

FE4105: Quantitative Techniques-II

A student who studies this course

- Knows basic concepts of Calculus
- Acquires knowledge about basic components of computers
- Solves different problems using the learned techniques and formulae with computer basics

FE5105: Financial Institutions and Financial Markets

A student who studies this course

- Gets introduced to finance and capital

- Acquires knowledge about commercial banks
- Recognizes the applications of financial systems

FE5105E1: Economics of Insurance

A student who studies this course

- Learns about essentials of life and health insurance
- Gets basic knowledge of premier construction
- Acquires knowledge about insurance and major risk factors

FE5105E2: The Economics of Finance

A student who studies this course

- Understands the concept of financial ratios
- Recalls security analysis
- Identifies different sources of investments

FE6105: Financial institutions and markets

A student who studies this course

- Familiarizes with banking sector of RBI
- Understands the functioning of financial institutions like IDBI, ICICI, SIDBI, IIBI, NABARD etc.
- Knows about non-banking institutions like LIC, UTI etc.

FE6105E1: Essentials of General Insurance

A student who studies this course

- Knows about the concept of insurance
- Understands the risk factors and features involved
- Constructs retirement planning

FE6105E2: Economics of Finance

A student who studies this course

- Identifies the use of public finance
- Recognizes the intro-rotational trade
- Identifies the instruments of attaining certain social objectives by means of redistribution of wealth and their reducing in equalities

DEPARTMENT OF ENVIRONMENTAL STUDIES

ES2008: Environmental Studies

A student who studies this course

- Classifies Natural resources, pollutions
- Familiarizes with Biodiversity, Environmental management, Policy, Acts, and Sustainable Development etc.
- Identifies local, national, regional, global level issues and their solutions
- Analyses cross cutting issues relevant to social issues, women and child welfare, Value education, Human rights, economic development etc.
- Identifies the measures to be taken for sustainable development by using appropriate Eco- friendly technology

DEPARTMENT OF COMMERCE

BE1201: Business Economics

A student who studies this course

- Outlines the basic principles of business Economics

FA1202: Fundamentals of Accounting

A student who studies this course

- Recalls the basics in accounting knowledge

BO1203: Business Organization

A student who studies this course

- Classifies various types of business organization and its management

BE2201: Business Economics

A student who studies this course

- Learns the basic principles of business Economics

FA2202: Fundamentals of Accounting

A student who studies this course

- Expertises at basics in accounting knowledge

BEN2203: Business Environment

A student who studies this course

- Analyses micro and macro environment in which organizations are functioning

CA3201: Corporate Accounting

A student who studies this course

- Learns about Companies Equity, Bonus shares and goodwill and their valuations

BS3202: Business Statistics

A student who studies this course

- Knows basic business data analysis and its measurements

BAN3203: Banking Theory and Practice

A student who studies this course

- Analyses functioning of Commercial Banking System and RBI

BL4201: Business Law

A student who studies this course

- Differentiates agreements and contracts, sale of goods act, consumer protection act etc.

ASO4202: Accounting for Service Organizations

A student who studies this course

- Identifies the specific accounting principles and procedures followed in various service organizations viz, electricity supply company, banking and insurance

IT4205: Income Tax

A student who studies this course

- Applies principles of taxation and its calculations in solving the problems

BL5201: Business Law

A student who studies this course

- Analyzes critical business law agreements and contracts, sale of goods act, consumer protection act etc.

CMA5202: Cost and Management Accounting

A student who studies this course

- Identifies the issues of material in factories, wages, overheads, contract accounts and process accounts

AUD5203: Auditing

A student who studies this course

- Analyzes the auditing principles and practices in various types of business organizations and to impart skills of report writing and business correspondence

CA5204: Corporate Accounting

A student who studies this course

- Defines companies' equity, bonus shares and goodwill and their valuations

ACA5205 E1: Advanced Corporate Accounting

A student who studies this course

- Differentiates human resource accounts, social responsibility accounting, inflation accounts, winding up of company

MA5206E1: Management Accounting

A student who studies this course

- Identifies management techniques like ratio analysis, funds flow, cash flow statements, capital budgeting etc.

BL6201: Business Law

A student who studies this course

- Becomes familiar with sources of business law agreements and contracts, sale of goods act, consumer protection act etc.

CMA6202: Cost and Management Accounting

A student who studies this course

- Analyses issues of material in factories, wage policies, overheads, contract accounts and process accounts

AUD6203: Auditing

A student who studies this course

- Summarizes auditing principles and practices in various types of business organizations
- Develops skills of report writing and business correspondence

CA6204: Corporate Accounting

A student who studies this course

- Analyses Companies Equity, Bonus shares and goodwill and their valuations

ACA6205 E1: Advanced Corporate Accounting

A student who studies this course

- Distinguishes human Resource Accounts, Social Responsibility Accounting, Inflation Accounts

MA6206E1: Management Accounting

A student who studies this course

- Develops skills in management techniques like ratio analysis, funds flow, cash flow statements, capital budgeting etc.

DEPARTMENT OF MATHEMATICS

MAT1301: Differential Equations

A student who studies this course

- Solves differential equations by different methods
- Identifies orthogonal trajectories

MAT2301: Analytical Solid Geometry

A student who studies this course

- Identifies skew lines and shortest distance between the lines

- Illustrates enveloping cone of a sphere
- Demonstrates inscribed sphere of a cone

MAT3301: Abstract Algebra

A student who studies this course

- Analyses nature of functions and relations
- Practices permutation groups

MAT4301: Real Analysis

A student who studies this course

- Knows about increasing sequence, decreasing sequence
- Classifies infinite series by Cauchy's test De 'Alembert ratio test

MAT5301: Linear Algebra

A student who studies this course

- Labels linear independent vectors and dependent vectors
- Recognizes orthogonal vectors and operates Matrices

MAT5301E1: Numerical Analysis Part-1

A student who studies this course

- Knows interpolation of functions
- Employs data to fit Curve

MAT6301: Laplace Transform

A student who studies this course

- Defines Laplace transform and solves by integration
- Explains methods of Integration to solve Laplacetransform

MAT6301E1: Numerical Analysis Part-2

A student who studies this course

- Recalls oiler's Method
- Recognizes Rangi-Kutta method to solve orderly differentialequation

DEPARTMENT OF PHYSICS

PHYSICS

PHY1302: Mechanics

A student who studies this course

- Recalls the mechanics principles, Physical quantities, their representation and relations among them
- Identifies the principle of mechanics
- Solves the problems relating to mechanics
- Applies the principles in different fields like rockets

PHY2302: Waves and Oscillations

A student who studies this course

- Explains the Optics variables and potentials
- Learns the principles experiments related to wave nature of light
- Tests the learned principles in their daily life

PHY3302: Thermodynamics

A student who studies this course

- Explains thermo dynamical variables and potentials
- Specifies principles, experiments related to thermo dynamics
- Uses the learned principles in their daily life

PHY4302: Optics

A student who studies this course

- Explains the Optics variables and potentials
- Learns the principles experiments related to wave nature of light
- Tests the learned principles in their daily life

PHY5302: Electricity, Magnetism & Electro magnetic

A student who studies this course

- Explains the principles and formulae in electricity Magnetism and electromagnetic
- Solves the problems related to above topics
- Tests learned principles and formulae in their daily life

PHY5302E1: Solid State Physics

A student who studies this course

- Designs the structural arrangement of crystals
- Discriminates different solids and their internal arrangement of atom
- Uses the learned concept in daily life

PHY6302: Modern Physics

A student who studies this course

- Designs Raman experiments, Explains DE Broglie Hypothesis and other Modern developments in Physics
- Summarizes different theories and developments in modern physics like Raman effect, Uncertainty principle

PHY6302E1: Analog and Digital Electronics

A student who studies this course

- Identifies different number systems, logic gates
- Designs different combinations of logic gates and their outcomes
- Develops electronic circuits by their own

ELECTRONICS

ELE1315: Basic Circuit Theory

A student who studies this course

- Designs basic electronic circuits
- Identifies different components involved in electronic circuit connections

ELE2315: Electronic Devices and Circuits

A student who studies this course

- Constructs the basic electronic devices used for circuit connections
- Chooses correct electronic devices as per their requirement

ELE3315: Digital Electronics

A student who studies this course

- Identifies different number systems, logic gates, registers, memory devices etc.
- Constructs different digital electronic devices involved in circuits
- Chooses correct memory devices and logic gates as per their requirement

ELE4315: Analog and Digital Applications

A student who studies this course

- Knows Op-Amps, Timers, Converters and Counters etc.
- Chooses correct applications of different Op-amps timers, Converters and Counters

ELE5315: Microprocessors-I

A student who studies this course

- Explains the Microprocessors, their internal parts and working
- Demonstrates the applications of different Microprocessors

ELE5315E1: Embedded Systems and Microcontrollers

A student who studies this course

- Differentiates Embedded Systems and Micro Controllers
- Chooses correct applications of Embedded Systems and Micro Controllers
- Designs Micro Controllers as per their requirement

ELE6315: Microprocessors-II

A student who studies this course

- Writes the programming with Microprocessors and Interrupts that occur
- Applies different Microprocessors at different situations
- Writes correct programming as per their requirement

ELE6315E1: Embedded Systems-II

A student who studies this course

- Tests the programming of Embedded Systems
- Chooses correct Programme and correct controllers as per their requirement

DEPARTMENT OF CHEMISTRY

CHE1303: Inorganic and Organic chemistry

A student who studies this course

- Enables the learner to analyze simple inorganic salts
- Elaborates the basic concepts of inorganic and physical chemistry
- Improves clarity on different types of matter

CHE2303: Physical and general chemistry

A student who studies this course

- Develops in-depth knowledge in Basic organic chemistry and some general chemistry topics
- Creates awareness on various types of titrations

CHE3303: Inorganic and organic chemistry

A student who studies this course

- Enables the learner to know about various types of organic reactions
- Develops fundamental knowledge on spectroscopic techniques and their applications in analysis of compounds
- Introduces the experience in the preparation of organic compounds

CHE4303: Spectroscopy and physical chemistry

A student who studies this course

- Understands the techniques behind the characterization of a compound
- Knows about colligative properties of dilute solutions
- Constructs electro chemical cells

CHE5303: Inorganic, organic and physical chemistry-1

A student who studies this course

- Elaborates knowledge on various bioorganic molecules and organic molecules
- Enables the learner to know importance of light in the chemical reactions

CHE5303 E1: Molecular Spectroscopy and Macromolecules

A student who studies this course

- Learns spectroscopic techniques for molecules
- Gains knowledge about macromolecules

CHE5303E2: Drugs, Formulations, Green Chemistry and Material Science

A student who studies this course

- Identifies the formulation of drugs
- Understands the concepts of green chemistry and material science

CHE6303: Inorganic, Organic and Physical Chemistry-2

A student who studies this course

- Summarizes and Analyses the advanced concepts of chemistry
- Applies basic theoretical and practical knowledge in understanding the structure and reactions of Carbohydrates, Amino acids and Proteins
- Gets trained in studying the kinetics of a chemical reaction
- Familiarizes with different types of photochemical reactions

CHE6303E1: Qualitative and Quantitative Aspects Analysis, Separation Techniques, Spectrophotometry, Thermogravimetry

A student who studies this course

- Analyses qualitative and quantitative techniques
- Classifies different separation techniques
- Becomes skilled at spectrophotometry and thermogravimetry

CHE6303E2: Pesticides, Soil Chemistry, Petrochemicals

A student who studies this course

- Recognizes different pesticides
- Analyzes different types of soils
- Identifies petrochemicals

CERTIFICATE COURSES

CC112WA: Water Analysis

A student who studies this course

- Analyze various water samples and estimate various parameters in them and report the same

CC112SA: Soil Analysis

A student who studies this course

- Becomes skilled in testing the quality of soil
- Estimates the fertility of the soil

GENERAL ELECTIVE

GE401EC: Everyday Chemistry

A student who studies this course

- Develops analytical skills and laboratory techniques
- Uses the basic principles of chemistry in daily life

DEPARTMENT OF BIO TECHNOLOGY

BT1310: Microbiology & Cell Biology

A student who studies this course

- Specifies the general characteristics, cultural conditions of microorganisms
- Outlines functions of organelle functions
- Explains transportations through cell membrane
- Draws cell structure
- Explains DNA technology, Animal and Plant biotechnology

BT2310: Macromolecules, Enzymology and Bioenergetics

A student who studies this course

- Designs structure and explains the properties of biomolecules
- Classifies the Enzymes
- Uses the principles of Bioenergetics in designing the experiments

BT3310: Bio Analytical Techniques

A student who studies this course

- Demonstrates working of spectrometry, chromatography
- Identifies the use of Radio isotopes in diagnosis and treatment of diseases

BT4310: Fundamentals of Microbiology & Immunology

A student who studies this course

- Explains Microbial physiology, cellular and molecular components of immune system
- Designs experiments to evaluate underlying causes of diseases

BT5310: Molecular Biology

A student who studies this course

- Explains Nucleic acids and their properties, transcription, translation, protein sorting,
- Identifies gene expression of prokaryotes as well as eukaryotes which gives strong foundation for gene manipulations

BT5310E1: Animal Biotechnology & Plant Biotechnology

A student who studies this course

- Analyzes the need and procedures involved in production of transgenic animals and plants for enhancing the quality food, pharmaceuticals and healthcare
- Practices commercialization of plant tissue cultures and Animal reproduction and breeding

BT5310E2: Entrepreneurship Development

A student who studies this course

- Develops entrepreneurship to meet the global demand for food, chemicals and pharmaceuticals
- Identifies the inputs in the form of project formation and assessment
- Lists various funding agencies available, inventory direct and indirect raw materials and its management etc.

BT6310: Genetic Engineering

A student who studies this course

- Chooses various vectors and host systems to producer combinants
- Examines PCR and Hybridization techniques to develop various strategies of gene cloning for lab as well as to the field

BT6310E1: Industrial Biotechnology & Environmental Biotechnology

A student who studies this course

- Identifies various methods of isolation and engineering of industrially useful micro organisms for mass production of chemicals and Pharmaceuticals
- Uses genetically modifies organisms for bioremediation, Genetic engineering for conservation of biodiversity and Ecosystems
- Identifies more research problems prevailing in the society

BT6310E2: Industrial Fermentation

A student who studies this course

- Develops skills of bio precarious technology, use of genetically engineered microorganisms for mass production of chemicals, therapeutics on commercial scale to meet the global demand
- Examines various productions at laboratory level

DEPARTMENT OF MICROBIOLOGY

MB1308: Introductory Microbiology

A student who studies this course

- The student will appreciate the contribution of renowned microbiologists and importance of microbiology in human life.
- The learns will acquire knowledge of diversified groups of microbes and skills in different microbiological techniques

MB2308: Microbial Biochemistry and Metabolism

A student who studies this course

- The students will be provided with basic theoretical and practical knowledge of the principal methodologies and techniques for the investigation of biomolecules which can be applied to the investigation and measurement of cell functions.
- Students understand about the microbial growth and physiology in order to exploit potential micro organism in industry.

MB3308: Microbial Genetics and Molecular Biology

A student who studies this course

- Students were able to understand the genetic components, their functions and genetic recombination in bacteria.
- They acquire the knowledge about chemical and molecular processes that occur in and between cells so that they are able to describe and explain these processes and how they influence the life of living organisms

MB4308: Immunology and Medical Microbiology

A student who studies this course

- The student acquires the ability to recall the principles of immunology and its applications in diagnosis and research.
- They understand about the normal and common pathogenic organisms associated with human infectious diseases, pathogenesis and their diagnosis.

MB5308: Immunology

A student who studies this course

- Understands the cells, organs and mediators of immune system
- Applies basic principles of immunology in diagnosis and research.

MB5308 E1: Environmental and Agricultural Microbiology

A student who studies this course

- Recognizes the role of microbes in biogeochemical cycling, crop improvement by using bio fertilizers and bio pesticides, bioremediation of heavy metals, microbial degradation of natural substances and xenobiotics
- Specifies the role of microbes in solid waste and sewage management, microbial assessment of water quality

MB6308: Medical Microbiology

A student who studies this course

- Explains microbial virulence mechanisms and host response to infection
- Identifies the normal and common pathogenic organisms associated with human infectious diseases, pathogenesis and their diagnosis

MB6308E1: Food and Industrial Microbiology

A student who studies this course

- students will acquire the knowledge about food and dairy products, mushroom cultivation SCP and their uses. They also get in depth of knowledge about the combination, preservation and spoilage of food products.
- Students are well equipped with principles of exploitation of microorganisms industrially, strain improvement, production of antibodies, enzymes and industrial products like organic acids, vitamins, amino acids alcohol, alcoholic beverages and bioenergy.

DEPARTMENT OF ZOOLOGY

ZOO1307: Animal diversity- Biology of Non chordates

A student who studies this course

- Describe general taxonomic rules on animal classification
- Classify Protozoa to Coelenterata with taxonomic keys
- Classify Phylum Platyhelminthes to Annelida phylum using examples from parasitic adaptation and vermin composting
- Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Molluscs
- Describe Echinodermata to Hemi chordata with suitable examples and larval stages in relation to the phylogeny

ZOO2307: Animal Diversity- Biology of Chordates

A student who studies this course

- Describe general taxonomic rules on animal classification of chordates
- Classify Protochordata to Mammalia with taxonomic keys
- Understand Mammals with specific structural adaptations
- Understand the significance of dentition and evolutionary significance
- Understand the origin and evolutionary relationship of different phyla from Prochordata to mammalia.

ZOO3307: Cell biology, Genetics and Evolution

A student who studies this course

- Acquires knowledge about cell structure, functions and can identify various cell organelles
- Understands the fundamentals of genetics in day to day life and inheritance of characters from parents to off spring

Z004307: Embryology, physiology and ecology

A student who studies this course

- Knows about the gametes, Zygote and embryonic development in vertebrates
- Understands the structure and functioning of various systems of mammals, focusing of human physiology
- Interrelates different communities of the environment and student role in protecting the environment

Z005307: Animal Biotechnology

A student who studies this course

- Understands the fundamentals of Biotechnology and its applications in different fields of science
- Appreciates the concept of Genetically modified organisms, Gene Therapy, Stem Cells and their applications
- Learns the basics of practical aspects of simple molecular techniques

Z005307E1: Animal Husbandry

A student who studies this course

- Explains the concept of animal husbandry
- Demonstrates poultry management, dairy farm and different types of cattle breeds

Z006307: Animal husbandry

A student who studies this course

- Identifies and compare different breeds of poultry and cattle
- Acquires knowledge about the care and management techniques to be taken in Dairy and poultry farms
- Understands the importance of Dairy, Poultry and their importance as small scale entrepreneur units

Z006307E1: Animal Biotechnology

A student who studies this course

- Explains the concept of Biotechnology and its applications in modern age
- Identifies the role in gene manipulation and cloning and to learn the basics of molecular techniques

DEPARTMENT OF BOTANY**BOT1306: Microbial Diversity Algae and Fungi**

A student who studies this course

- Explain origin of life on the earth.
- Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.
- Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.
- Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat.

BOT2306: Diversity of Archegoniate and Plant Anatomy

A student who studies this course

- Classify Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycles.
- Justify evolutionary trends in tracheophytes to adapt for land habitat.

- Critically understand various taxonomical aids for identification of Angiosperms.
- Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.
- Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare.
- Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.

BOT3306: Plant Taxonomy and Embryology

A student who studies this course

- Understand on the organization of tissues and tissue systems in plants.
- Illustrate and interpret various aspects of embryology.
- Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities
- Appraise various qualitative and quantitative parameters to study the population and community ecology.
- Correlate the importance of biodiversity and consequences due to its loss.
- Enlist the endemic/endangered flora and fauna from two biodiversity hot spots

BOT4306: Plant Physiology and Metabolism

A student who studies this course

- Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.
- Evaluate the role of minerals in plant nutrition and their deficiency symptoms.
- Interpret the role of enzymes in plant metabolism.
- Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.
- Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.
- Evaluate the physiological factors that regulate growth and development in plants.
- Examine the role of light on flowering and explain physiology of plants under

BOT5306: Cell Biology and Genetics

A student who studies this course

- Show the understanding of techniques of demonstrating Mitosis and Meiosis in the laboratory and identify different stages of cell division.
- Identify and explain with diagram the cellular parts of a cell from a model or picture and prepare models
- Solve the problems related to crosses and gene interactions.
- Demonstrate plant breeding techniques such as emasculation and bagging

BOT5306E1: Seed Technology and Horticulture

A student who studies this course

- Practices Seed technology which defines with the methods of improving physical and genetical characteristics of Seed production, processing, certification, testing and storage
- Applies horticulture techniques to develop an attitude to produce garden crops, fruits, vegetables and ornamental plant

BOT6306: Plant Physiology

A student who studies this course

- Demonstrates the physical chemical and biological functioning of plants
- Compares different patterns and habitats of plants with animals

BOT6306E1: Ecology and Environmental Biology

A student who studies this course

- Explains ecological relationships between organisms and their environment
- Identifies present day major threats to biodiversity and knows the methods of bio - diversity conservation

DEPARTMENT OF BIOCHEMISTRY

BC1309: Bio molecules

A student who studies this course

- Communicate and discuss the various methods available to analyze carbohydrates, AAs & Lipids based on their physical and chemical properties.
- Choose from the various methods available for characterizing biological molecules
- Organize the lab results, discuss the obtained results on the basis of their knowledge and write a formal lab report.

BC2309: Proteins & Enzymes

A student who studies this course

- The basic understanding of energy changes occurring in our body and energy production used in various reactions
- The basic understanding of bioanalytical techniques enhance the students to design experiments to evaluate underlying causes of research
- Students were able to understand isolation, separation and identification of the biomolecules without altering their molecular structure

BC3309: Bioenergetics and Bioanalytical Techniques

A student who studies this course

- The basic understanding of energy changes occurring in our body and energy production used in various reactions
- The basic understanding of bioanalytical techniques enhance the students to design experiments to evaluate underlying causes of research
- Students were able to understand isolation, separation and identification of the biomolecules without altering their molecular structure

BC4309: Intermediary Metabolism

A student who studies this course

- The basic understanding of metabolisms occurring in our body and energy production used in various reactions
- Students were able to understand the function of biological molecules through the study of their metabolic reactions
- Students were able to analyse the cause of metabolic disorders used for the diagnosis

BC5309: Molecular biology

A student who studies this course

- Explain the basic mechanisms of Replication, Transcription and Translation.
- Understand the concepts of history and scope of Microbiology and could deal with different techniques used for the growth of bacteria.
- Determine various important practical aspects starting from isolating DNA to restriction digestion and from growth media to staining of bacteria.

BC5309E1: Endocrinology and Clinical Biochemistry

A student who studies this course

- The basic understanding of cellular and molecular components of immune system, will help the students to design experiments to evaluate underlying causes of diseases.
- Students were able to understand the function of biological molecules through the study of their molecular structure.
- The principles and mechanisms of metabolic control of molecular signalling by hormones.

BC5309E2: Physiology and Nutrition

A student who studies this course

- Lists, summarizes & identifies the functioning of various organs in our body.
- Analyzes the importance of biomolecules, minerals, vitamins and their role in balanced diet.

BC6309: Immunology and Microbiology

A student who studies this course

- Designs experiments to evaluate underlying causes of diseases
- Relates and outline the concepts of history and scope of Microbiology and could deal with different techniques used for the growth of bacteria

BC6309E1: Genetic Engineering and Bioinformatics

A student who studies this course

- Understands the steps in cloning, importance of cloning vectors, introduction into host cells and various techniques
- Acquire knowledge of various biological databases related to bioinformatics and design experiments to retrieve genes, proteins.

BC6309E2: Infectious and Non Infectious Diseases

A student who studies this course

- Identifies various diseases caused by microorganisms which are infectious
- Acquires knowledge in identifying and preventing various diseases caused by lifestyle disorders

DEPARTMENT OF HOME SCIENCE

HS1311: Basic Nutrition

A student who studies this course

- Differentiates the macro and micro nutrients in terms of their composition and functions
- Recognizes the requirements of food sources and deficiencies

HS1312: Human Physiology

A student who studies this course

- Knows anatomical features of all the major human organ systems
- Identifies different human organs

HS1313: Microbiology

A student who studies this course

- Explains the morphological, growth and reproductive features of various microorganisms

HS2311: Food Science

A student who studies this course

- Knows the structure, composition of cereals, pulses, milk, egg and fleshy foods
- Identifies nutritional importance of various food groups

HS2312: Fundamentals of Family Nutrition

A student who studies this course

- Recognizes the relationship between nutrient requirements, recommended dietary allowances
- Identifies dietary modifications under different physiological conditions

HS2313: Growth & Development during Life Span

A student who studies this course

- Knows various areas of growth and development from conception to adolescence

HS3311: Nutritional Biochemistry

A student who studies this course

- Analyzes the relationship between the effect of nutrients on metabolism

HS3312: Food Preservation

A student who studies this course

- Develops practical skills in various preservation methods like high concentration of sugar, salt etc.

HS3313: Extension Education for Rural Development

A student who studies this course

- Demonstrates various extension methods useful for approaching different sections of community

HS4311: Housing and Interior Decoration

A student who studies this course

- Explains fundamentals of house planning and apply skills in interior decoration

HS4312: Community Nutrition

A student who studies this course

- Develops the skills to assess the nutritional status of the community

HS4313: Diet Therapy-I

A student who studies this course

- Develops skills in planning and management of diets for the different age groups under normal/ physiological conditions keeping in mind the dietary guidelines

HS5311: Diet Therapy II

A student who studies this course

- Applies the general principles and objectives of diet therapy
- Practices disease specific dietary management guidelines and principles

HS5312: Diffusion & Adoption

A student who studies this course

- Knows various homestead technologies with reference to home science

HS5313: Textile Science

A student who studies this course

- Applies different clothing construction and surface ornamentation techniques

HS5314: Bakery & Confectionary/Food Service Management

A student who studies this course

- Understands various baking techniques
- Applies skills in baking

HS5315: Early Childhood Education/ Marriage & Family Dynamic

A student who studies this course

- Prepares Curriculum in ECE-process
- Designs different play activities in ECE centers

HS5316: Entrepreneurship Development/ Fashion

Designing A student who studies this course

- Explains different concepts in entrepreneurship
- Develops skill in formulation of project proposals

HS6311: Diet Counseling

A student who studies this course

- Identifies the problems of diet
- Suggests diet counseling for various diseases

HS6312: Training and HRD

A student who studies this course

- Appreciates the role of training objectives in planning, designing and evaluation of a programme

HS6313: Tie & Dye

A student who studies this course

- Illustrates the basic types of dyes and their methods of application

HS6314: Sociology/General Psychology

A student who studies this course

- Analyzes the basic psychological processes
- Applies these processes in everyday life

HS6315: Counseling Psychology/ Family Attire and Consumer Education

A student who studies this course

- Identifies the problems in areas of psychology by application of various tests
- Acquires the basic skills of counseling process

HS6316: Resource Management/ Event

Management A student who studies this course

- Explains the basic concepts of resource management and their management in everyday life

DEPARTMENT OF COMPUTERS

CSC1304: Problem Solving in C

A student who studies this course

- Becomes an efficient Software developer for any Software Company
- Uses IDEs (Integrated Development Environments) for developing different Programs
- Designs, implements, tests, debugs, and documents Programs in C

- Works with any type of data structure to store data in the format the application demand

CSC2304: Data Structures using C

A student who studies this course

- Utilizes different data structures in developing and implementing efficient algorithms
- Exploits various Data Structures like arrays, linked lists, stacks, queues, trees, and graphs in representing memory allocation algorithms
- Uses different traversal techniques for developing Search Engines

CSC3304: Data Base Management system

A student who studies this course

- Becomes skilled in designing and developing database for large volumes and varieties of data with optimized data processing techniques
- Works as a database administrator in many back-end development Projects
- Applies normalization techniques for efficient data storage techniques in various applications

CSC4304A: Object Oriented Programming through Java

A student who studies this course

- Understand the benefits of a well-structured program
- Understand different computer programming paradigms
- Understand underlying principles of Object-Oriented Programming in Java
- Develop problem-solving and programming skills using OOP concepts
- Develop the ability to solve real-world problems through software development in high-level programming language like Java

CSC4304B: Operating Systems

A student who studies this course

- Know Computer system resources and the role of operating system in resource management with algorithms
- Understand Operating System Architectural design and its services.
- Gain knowledge of various types of operating systems including Unix and Android.
- Understand various process management concepts including scheduling, synchronization, and deadlocks.
- Have a basic knowledge about multithreading.
- Comprehend different approaches for memory management.
- Understand and identify potential threats to operating systems and the security features design to guard against them.
- Specify objectives of modern operating systems and describe how operating systems have evolved over time.
- Describe the functions of a contemporary operating system

CSC5304: Data Base Management System

A student who studies this course

- Becomes skilled in designing and developing database for large volumes and varieties of data with optimized data processing techniques
- Works as a database administrator in many back-end development Projects
- Applies normalization techniques for efficient data storage techniques in various applications

CSC6304: Software Engineering

A student who studies this course

- Apply the Project management practices in real life projects
- Work in a team as well as independently for software projects
- Apply design and development principles in producing software systems of varying complexities using various project management tools
- Practice to identify, formulate and solve innovative engineering problems

CSC7304A: Operating Systems

A student who studies this course

- Effectively Use different algorithms for Scheduling in various business processes
- Works in teams to develop operating systems
- Applies virtual memory in various front-end applications as well as in designing processes
- Solves Deadlock situations in various software processes

CSC7304B: Computer Networks

A student who studies this course

- Identify the different components in a Communication System and their respective roles.
- Describe the technical issues related to the local Area Networks
- Identify the common technologies available in establishing LAN infrastructure.

CSC7304C: Web Technologies

A student who studies this course

- Accomplishes in using client side and server side scripting to develop web-based information systems
- Designs interactive and dynamic web sites
- Connects to databases as per the need of the application

CSC8304A1: Foundations of Data Science

A student who studies this course

- Able to apply fundamental algorithmic ideas to process data.
- Learn to apply hypotheses and data into actionable predictions.
- Document and transfer the results and effectively communicate the findings using visualization techniques.

CSC8304A2: Big Data Technology

A student who studies this course

- Learn tips and tricks for Big Data use cases and solutions.
- Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop.
- Able to apply Hadoop ecosystem components.

CSC8304B1: Distributed Systems

A student who studies this course

- Create models for distributed systems.
- Apply different techniques learned in the distributed system.

CSC8304B2: Cloud Computing

A student who studies this course

- Compare the strengths and limitations of cloud computing
- Identify the architecture, infrastructure and delivery models of cloud computing
- Apply suitable virtualization concept.
- Choose the appropriate cloud player , Programming Models and approach.
- Address the core issues of cloud computing such as security, privacy and interoperability

- Design Cloud Services and Set a private cloud

CSC8304C1: P H P- MySQL

A student who studies this course

- Gains the PHP programming skills needed to successfully build interactive, data-driven sites
- Creates Dynamic websites
- Builds interactive, data-driven pages for many front-end and back-end applications
- Designs effective search engines using cookies and sessions

CSC8304C2: Angular JS and JSON

A student who studies this course

- Create a dynamic website using advanced features of JavaScript and create a website with good and attractive design

CLOUD COMPUTING

CC1317: Basics & Services of Cloud Computing

A student who studies this course

- know how the Cloud Computing is changing software industry with different services and cost saving

CC2317: Cloud Computing Services

A student who studies this course

- the student would be able to understand the sales force environment.

CC3317: Application development on Cloud Computing

A student who studies this course

- having knowledge on various standard elements provided in salesforce user interface
- having knowledge on creating various custom components in salesforce environment
- as per the business requirements
- able to provide organization security and data security in salesforce cloud
- able to develop applications which can be used effectively for customer relationship management

CC4317: APEX & Visual force Programming

A student who studies this course

- having knowledge on Apex core concepts
- having knowledge on various tags of Visual force and usage of controllers
- able to write apex classes and triggers and visual force code
- able to develop UI design (view) and Business logic(controller) of MVC architecture using Visual force and Apex Programming.

CC5317: Business Intelligence

A student who studies this course

- Working with Wave Analytics in Desktop and Mobile Environments
- Business Intelligence using which they can convert raw data into pictorial format
- Analyzing the information to predict the future business.
- having knowledge on various standard elements provided in salesforce user interface

CC5317: Advanced JavaScript : JQuery, JSON with Visual force

A student who studies this course

- the student would be having knowledge on advanced web technologies which are

needful to create a web application.

- Students will be able to work with JavaScript functions, JQuery Selectors, Widgets, AJAX Methods, and Angular JS

CC6317: Business Intelligence

A student who studies this course

- Working with Wave Analytics in Desktop and Mobile Environments
- Business Intelligence using which they can convert raw data into pictorial format
- Analyzing the information to predict the future business.

CC7317A: Sales force marketing & sales

A student who studies this course

- CRM functionality in Salesforce.com with different domains and its landscape.
- Administration using SFDC CRM Objects

CC7317B: Sales force customer services

A student who studies this course

- different standard SObjects,
- converting the leads,
- tracking and managing customer purchase,
- creating online communities

CC8317A1: SOAP INTEGRATION

A student who studies this course

- Able to work on SOAP API
- able to create Web services in the process of integration
- able to handle Security management and session management in SOAP API

CC8317A2: REST INTEGRATION

A student who studies this course

- Able to Understand Integration concepts and perform integration
- Able to understand how to perform integration using Curl Tool and Workbench platform
- Able to fetch Sales force org data and can perform various operations by integrating
- able to handle Security management and session management in SOAP API

CC8317B1: Sales force Lightning (Client Controller)

A student who studies this course

- Lightning Components creation
- Styling the components using CSS
- handling events with client-side controllers consisting of JavaScript.

CC8317B2: Sales force Lightning (Server controller)

A student who studies this course

- would understand how to create Apex methods that can be called remotely from Lightning Components code, Make calls from Lightning Components to remote methods, and handle server responses asynchronously using callback functions

MULTIMEDIA

MUL1314: Graphic Designing

A student who studies this course

- will be able to create text document, Photo editing, Color correction, photo editing , photo editing with filters, creating illustration designs, creating documents.

MUL2314: Web Designing Basics

A student who studies this course

- will be able to create HTML, creating video audio files for web, able to work on css forms, css counters, css responsive.
- Accomplishes in using client side and server side scripting to develop web-based information systems
- Designs interactive and dynamic websites
- Connects to databases as per the need of the application

MUL3314: Introduction AV & 2D Animation

A student who studies this course

- will get keen knowledge about principals of animation,creates their own story board, able to work create TV ads, they will handle cameras and lenses, students can create their own video presentation, students getting basic knowledge of DAW software's.

MUL4314: Introduction to 3D Animation.

A student who studies this course

- will get keen knowledge about CG production workflow, basic film making, getting knowledge of software and hardware, and will be able to create final rendered output

MUL5314: Character Animation

A student who studies this course

- Will be able to create layouts for animation, works on key frame animation, famelier with animation workflow, cand work on non linear animation, can work on modifying, blending and modifying clips.

MUL6314: Advanced 3D Animation

A student who studies this course

- Will be able to create character animation, coil and uncoil poses, timing and spacing, and be able to work on breakdowns, getting familiraty in motion curvs.

MUL8314A1: Facial and Blend Modes

A student who studies this course

- will be able to work on facial rigging process, morphology behaviour

MUL8314A2: Maya live integration

A student who studies this course

- will be able to work on Autodesk match mover, working on 3D & 2D cameras, problum solving in 2D tracking, understanding the core concepts of camera calibration.

MUL8314A3: Character Animation

A student who studies this course

- will be able to create character animation, coil and uncoil poses, timing and spacing, and be able to work on breakdowns, getting familiraty in motion curvs.

DATA SCIENCE

DS1320: Maths for Data science

A student who studies this course

- learn Fundamental properties of matrices, their norms, and their applications.

- Differentiating/integrating multiple variable functions, and the role of the gradient and the hessian matrix.
- Basic properties of optimization problems involving matrices and functions of multiple variables.

DS2320: Introduction to Data science With R

A student who studies this course

- Identify and use available R packages and associated Open Source software to meet given Scientific objectives
- Design and write efficient programs using R (and similar high-level languages) to perform routine and specialized data manipulation/management and analysis tasks
- Document, share, and collaborate on code development using a suite of Open Source Standards and tools

B.Voc MULTIMEDIA & SOFTWARE DEVELOPMENT

FOC1401: Fundamentals of computers-I

A student who studies this course

- Students will create documents that demonstrate proficiency in the use of word processing, spreadsheet,
- database, and present/action applications

PST1503: Problem Solving Techniques

A student who studies this course

- will know about Analysis, Decision making , code development.

GD1502: Graphic designing

A student who studies this course

- will be able to create text document, Photo editing, Color correction, photo editing , photo editing with filters, creating illustration designs, creating documents.

FOC2401: Fundamentals of computers-II

A student who studies this course

- understand some of the benefits of internet and some social media
- students can understand why technology is so attractive to people
- students can understand the positive uses of social media and online.

T2405: Tally

A student who studies this course

- the student can prepare Financial reports.

WD2505: Web designing basics

A student who studies this course

- the student can learn how to develop web Application.

OS2508: Operating Systems

A student who studies this course

- Effectively Use different algorithms for Scheduling in various business processes
- Works in teams to develop operating systems

- Applies virtual memory in various front-end applications as well as in designing processes
- Solves Deadlock situations in various software processes

DSU2509: Data Structures using “C”

A student who studies this course

- Utilizes different data structures in developing and implementing efficient algorithms
- Exploits various Data Structures like arrays, linked lists, stacks, queues, trees, and graphs in representing memory allocation algorithms
- Uses different traversal techniques for developing Search Engines

CKA1403: Colour Key Artist

A student who studies this course

- the student will be able to art for animation

SOS1501: Science of Sound

A student who studies this course

- The student will be able to understand construction of the recording studio, equipment used in audio production, and getting sound knowledge on sound engineering.

N2506: Nuendo

A student who studies this course

- the student will be able to work on DAW, students can able to record, edit, and final mix for output the recorded audio.

BOA2504: Basics of Animation

A student who studies this course

- the student will be able to understand history of animation, technology behind the animation, types of animation, getting familiar with animation workflow

B.COM COMPUTER APPLICATIONS

CAR1204: Information Technology

A student who studies this course

- the student will prepare Documents, PPT and create databases.

EC&W2214: E-Commerce and Web Designing

A student who studies this course

- the student can learn online business through E learning

CAR3204: Programming with C and C++

A student who studies this course

- the students can become code developer

CAR4204: Database Management System

A student who studies this course

- Becomes skilled in designing and developing database.
- Works as a database administrator in many back-end development Projects
- Applies normalization techniques for efficient data storage techniques in various applications

CAR5209: Programming in C

A student who studies this course

- the students can become code developer

CAR5210: Database Management System

A student who studies this course

- Becomes skilled in designing and developing database.
- Works as a database administrator in many back-end development Projects
- Applies normalization techniques for efficient data storage techniques in various applications

CAR5211: Web Technology

A student who studies this course

- the student can learn how to develop web Application.

CAR6209C: Tally

A student who studies this course

- the student can prepare Financial reports, can learn Accounting principles.

CAR6210C: E-Commerce

A student who studies this course

- the student can learn online business through E-learning

CAR6211C: PHP and My SQL

A student who studies this course

- Gains the PHP programming skills
- Creates Dynamic websites
 - Designs effective search engines using cookies and sessions

PG COURSE OUTCOMES
DEPARTMENT OF CHEMISTRY

CH101: General chemistry

A student who studies this course

- Recalls fundamental aspects of General chemistry
- Acquires knowledge about analytical data, titrimetric analysis, visible spectro photometry, potentiometry and Programming in FORTRAN77
- Understands the concept of primary standard solutions and secondary standard solutions

CH102: Inorganic Chemistry

A student who studies this course

- Recalls fundamental aspects of inorganic chemistry
- Gets knowledge about Quantum Mechanical Results, Chemistry of non- transition elements, and Metal–ligand bonding.
- Sketches periodic table and acquires knowledge about hybridization, clathrate compounds & hydrogen bonding etc.

CH103: Organic Chemistry

A student who studies this course

- Develops in-depth knowledge in organic reactions & and writing mechanism
- Elaborates the concepts of aromaticity, heterocyclic compounds, conformational analysis and stereo chemistry
- Expertise in writing stereochemistry of carbon compounds

CH104: Physical Chemistry

A student who studies this course

- Outlines Thermodynamics, Surface phenomena, phase equilibria and Electrochemistry
- Develops in-depth knowledge about BET Equation, measurement of EMF etc.
- Elaborates the concepts of energy changes, thermodynamic laws and different thermodynamic processes.

CH201: General chemistry

A student who studies this course

- Introduces SPECTROSCOPY both in theory and practical, which is the recent technique to analyze molecules.
- Creates awareness on Symmetry and Group theory in Chemistry.
- Understands the principle and functioning of Raman spectra and Nuclear Magnetic Resonance Spectroscopy

CH202: Inorganic Chemistry

A student who studies this course

- Knows about Non metal cages, metal clusters, and organometallic complexes.
- Learns the mechanism of transition metal complex reactions & Electronic spectra of transition metal complexes
- Understands the concepts of Chiroptical properties, Cotton effect and Faraday effect.

CH203: Organic Chemistry

A student who studies this course

- Practices reactions and Aliphatic Nucleophilic substitutions, Eliminations and

- understands the role of protecting agents
- Creates awareness on various analytical tools used in chemical analysis and develops hands on experience in the lab courses.

CH204: Physical Chemistry

A student who studies this course

- Improves clarity on concepts of Thermodynamic laws, Statistical thermodynamics- Nernst Heat theorem, Polymer chemistry and Electrode potentials at the interface
- Introduces to Chemical kinetics and photochemistry
- Develops skills to determine Quantum yield -Actinometry

CH301: Organic Spectroscopy-I

A student who studies this course

- Applies the knowledge of Ultraviolet spectroscopy, Infrared spectroscopy, NMR spectroscopy in structural determination of organic molecules
- Predicts IR, NMR spectral data for simple organic compounds
- Practices designing problems and characterization of compounds using spectral data

CH302: Organic Synthesis, Mechanisms and Nano Chemistry

A student who studies this course

- Introduces to the concept of Nano chemistry.
- Proposes Reaction mechanisms and appreciates the role of Oxidation-Reduction reactions in organic synthesis

CH303: Alkaloids and Phenothiagines

A student who studies this course

- Learns about the synthesis of Cinchona alkaloids, Isoquinoline alkaloids, Ipecac alkaloids, phenothiagines etc.
- Understands the structural elucidation of alkaloids

CH304: Chemistry of Natural Products

A student who studies this course

- Develops insight into Chemistry and synthesis of Terpenoids, Steroids, Vitamins and Hormones
- Identifies the structures and functioning of vitamins, hormones Terpenoids and Steroids

CH401: Organic Spectroscopy-II

A student who studies this course

- Learns the concepts of CMR spectroscopy, Mass spectrometry and 2D NMR spectroscopy
- Exercises elucidating structure of natural products by applying CMR, 2D NMR etc

CH402: Organic Synthesis, Mechanisms and Green Chemistry

A student who studies this course

- Introduces to eco-friendly topic GREEN CHEMISTRY which comprises environment friendly reactions
- Develops in-depth knowledge in Photochemistry and Pericyclic reactions
- Predicts the feasible pericyclic reaction and possible stereochemistry

CH403: Antibiotics and Drugs

A student who studies this course

- Understands the concepts of Cell wall biosynthesis, inhibitors, Drugs, Medicinal chemistry and Chemotherapy
- Analyses the advanced techniques in chemotherapy of brain and cancer.

- Identifies the structure and functioning of antimalarial drugs

CH404: Techniques for Modern Industrial Applications

A student who studies this course

- Elaborates on various analytical techniques available for chemical analysis
- Learns about the Classical Methods of purification, Partition Chromatography, Gas Chromatography, Ion Exchange Chromatography and Electrophoresis.
- Classifies different separation techniques and becomes skilled at Spectrophotometry and chromatography

DEPARTMENT OF ZOOLOGY

Z101: Structure and Function of Invertebrates and Vertebrates

A student who studies this course

- Acquires knowledge about invertebrate and vertebrate organization, structure and function and Phylogeny of various invertebratephyla
- Demonstrates the importance of individual organisms and their larvae in the process of evolution

Z102: Biology and Systematics

A student who studies this course

- Acquires knowledge about Systematics, Biodiversity Hotspots, phylogeny of various vertebratephyla
- Identifies different vertebrate animals basing on their characters

Z103: Developmental Biology

A student who studies this course

- Acquires knowledge about embryonic development and its significance in Animal evolution
- Learns about larval formation and metamorphosis in animals

Z104: Molecular Cell Biology

A student who studies this course

- AcquiresknowledgeaboutstructureandfunctionofdifferentBiomoleculesandVitamins.
- Differentiates stages of cell division takes place in growth of the animals

Z201: Genetics and Evolution

A student who studies this course

- Understand the concepts of inheritance and variations from parents to children.
- Develops knowledge on the concepts of blood group inheritance and interaction of genes

Z202: Comparative Animal Physiology

A student who studies this course

- Acquires knowledge about physiological processes occur in humans and othervertebrates
- Understands the role of endocrine glands and their importance in homeostasis of human health

Z203: Principles of Ecology

A student who studies this course

- Learns the sustainable development about the environment and Biodiversity
- Analyses the population densities and their influence on economy of the countries

Z204: Tools and techniques in Biotechnology

A student who studies this course

- Knows about various types of tools and techniques like microscopy, Spectroscopy,

- Chromatography, Electrophoresis etc.,
- Understands DNA fingerprinting, its significance and forensic analysis

Z301: Animal Biotechnology and Microbiology

A student who studies this course

- Learns about genetic engineering, r DNA technology, invitro fertilization and transgenic animals.
- Creates awareness on Gene therapy for some genetical diseases like muscular dystrophy, hemophilia, phenylketonuria and thalassemia etc.,

Z302: Ichthyology

A student who studies this course

- Learns about structure and Classification of fishes
- Identifies fish species and their structure and physiology

Z303: Limnology

A student who studies this course

- Acquires knowledge about different types of water environments and lakes
- Appreciates the significance of plankton, nekton, benthos in ponds and rivers and anthropogenic effect on lakes, their consequences and control mechanism

Z304: Aquatic Toxicology

A student who studies this course

- Develops insight into implications of various types of pollutions such as industrial, thermal, pesticide and radiation pollution
- Knows about Pollution control acts and laws existing in India

Z401: Fish pathology

A student who studies this course

- Learns about several bacterial, viral and fungal diseases of fishes
- Understands water quality and disease management in fishpond

Z402: Immunology

A student who studies this course

- Understands the role of immune system and its response to the disease causing agent
- Differentiates different types of immune cells present in our body and the reactions with antigens

Z403: Aquaculture

A student who studies this course

- Understands the scope of aquaculture in Andhra Pradesh and India
- Learns about fish and shrimp culture methods, intensive and integrated fish culture and recent development in fish culture

Z404: Aquaculture

A student who studies this course

- Learns to maintain the physical and chemical parameters and pond management in aquaculture
- Understands the techniques involved in processing and preservation of fish on various analytical techniques available for chemical analysis

DEPARTMENT OF ENGLISH

EG1.1 (17): Structure Of Modern English (17) – I

It enables the students to

- Acquaint them with International Phonetic Alphabet; identify phonemic symbols and; practice phonetic transcription.
- Recognize the organs involved in producing speech; classify vowels and consonants and; learn consonant clusters.
- Understand the concepts of syllable and word-accent; practice accent and rhythm in connected speech, and intonation.
- Have an understanding of the basic features of human language and animal, communication, the field of linguistics and its branches and learn linguistic theories in studying language. Learn about basic assumptions of modern linguistics ,language varieties, and notions of correctness and acceptability.

EG1.2 (17): Poetry - I

It enables the students to

- Acquaint the students with the different forms of subjective and objective poetry.
- Provide an insight into the classics in British poetry from the Renaissance to the Victorian Age
- Acquaint the students with the key concepts and trends in British poetry during the period of their foundation, consolidation and expansion.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the poets of the period.

EG1.3 (14): Drama – I

It enables the students to

- Learn the origin and evolution of English drama.
- Understand the background of the Renaissance Period.
- Understand the importance of Greek drama.
- Learn different types of dramas like Historical Drama, Tragedy, Comedy etc.
- Learn the importance of University Wits.

EG1.4 (14): Prose & Fiction – I

It enables the students to

- Acquaint the students with the different forms of Fiction and Non-Fiction.
- Provide an insight into the classics of Elizabethan Age to the Victorian Age.
- Acquaint the students with the key concepts and trends in British literature with reference to Fiction and Non-Fiction.
- Appreciate and analyze the various thematic and stylistic aspects in the works of prose writers.

EG1.5 B (14): Twentieth Century Literature – I

It enables the students to

- To acquaint the students with the different forms of literary works of Twentieth Century.
- To provide an insight into the social issues, Values and Norms in Twentieth Century.
- To acquaint the students with the key concepts and trends in Twentieth Century.
- To enable students to appreciate and analyze the various thematic and stylistic aspects in the works of the writers of the Twentieth Century period.

EG 2.1 (19): Structure Of Modern English – II

It enables the students to

- Realize the different varieties of English language according to region, education, social status etc.
- Learn elements of grammar, and grammatical categories such as verbs, tense, nouns, pronouns, adjectives, adverbs and prepositions at an advanced level.
- Acquire knowledge of common errors in sentences with reference to the grammatical concepts learned

in the previous chapters.

- Understand the fundamental concepts of language teaching, differences between first language and second language and learn major methods of teaching English language.
- Learn further methods such as Audio-Lingual method, Situational Language Teaching and Communicative Approach teaching English.

EG 2.2 (17): Poetry - II

It enables the students to

- Acquaint the students with the major literary movements, figures, concepts and trends of the World War, Modern and Post-Modern periods.
- Acquaint the students with the key concepts and trends in British poetry after the advent of the modern age of industrial and technological development.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the poet of the period.

EG 2.3 (17): Drama - II

It enables the students to

- Acquaint the students with the major plays of Shakespeare.
- Acquaint the students with the key concepts in the major Plays of Shakespeare.
- Appreciate and analyze the various thematic stylistic aspects in the major Plays of Shakespeare.

EG 2.4 (17): Prose & Fiction - II

It enables the students to

- Acquaint the students with major literary movements: Modern and Post-Modern Periods.
- Acquaint the students with the key concepts and trends in British Prose works after the advent of modern age of industrial and technological development.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the Prose writers of the period.

EG2.5 b (17): Twentieth Century Literature II

It enables the students to

- Acquaint with different forms of literary works of Twentieth century.
- Provide an insight into the social issues, Values and norms in Twentieth century.
- Acquaint the students with the key concepts and trends in Twentieth century.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the writers of the Twentieth Century period.

EG3.1: Literary Criticism-I

It enables the students to

- Acquaint the students with the key concepts in Literary Criticism from the Classical period to Post-Modern times.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the great writers of different periods.

EG3.2: Communicative English - I

It enables the students to

- Obtain a basic understanding of the definition of communication, process and types.
- Grasp the distinction between verbal and non-verbal communication and their roles in various contexts.
- Learn major language skills and the sub-skills of listening, speaking, reading and writing.
- Understand the usage of words in different contexts in various forms and practice them for effective usage.

- Examine the categories of functional grammar for better understanding of language.

EG3.3: Indian Writing in English

It enables the students to

- Obtain a basic understanding of Indian Writing in English.
- Grasp the basic difference between Anglo-Indian and Indo-Anglian writers and their roles in Indian context.
- Learn major genres of Indian Novel, Poetry, Drama, Short Fiction and Essay.
- Understand the usage of Indian origin words and varied cultures of India.

EG3.4: American Literature - I

It enables the students to

- Acquaint the students with the history, growth, key concepts and trends in American Poetry, Prose and Novel from the Transcendentalists to Post-Modern times.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the great writers of the period.

EG3.5: English Language Teaching - I

It enables the students to

- Obtain a basic understanding of the definition of communication, process and types.
- Grasp the distinction between verbal and non-verbal communication and their roles in various contexts.
- Learn major language skills and the sub-skills of listening, speaking, reading and writing.
- Understand the usage of words in different contexts in various forms and practice them for effective usage.
- Examine the categories of functional grammar for better understanding of language.

EG4.1: Literary Criticism - II

It enables the students to

- Acquaint the students with the key concepts in Literary Criticism from Modern Period to Contemporary times.
- Appreciate and analyze the various thematic and stylistic aspects in the works of the great writers of Modern as well as newly emerging writers of the current periods.

EG4.2: Communicative English - II

It enables the students to

- Understand varieties of English in terms of different registers, dialect and styles.
- Comprehend the elements in an effective discourse such as coherence, cohesion, and paragraph structure and development.
- Obtain an understanding of the oral communication in various forms such as public speaking, debates, etc, and learn the need for stress and intonation for clarity and meaning.

EG4.3: Indian Literature in Translation

It enables the students to

- Understand different genres in English literature and appreciate and evaluate important literary writings.
- Improve the students' four skills of the English Language (Listening, Speaking, Reading, and Writing).
- Improve Critical analysis of the literary works by applying critical analysis Theories.
- Improve the skills in English Language Teaching.

EG4.4: American Literature - II

It enables the students to

- Acquaint the students with the key concepts and trends in American Poetry, Prose and Novel from the Modern to the Post-Modern times.

- Appreciate and analyze the various thematic and stylistic aspects in the work of the great writers of the period.

EG4.5: Colonial/Post Colonial Literature – II

It enables the students to

- Familiarize the students with history, development, different themes and cultures in Colonial/Post-Colonial period.
- Empower the students to acknowledge and analyze various thematic and stylistic aspects in the works of the famous writers of Colonial and Post-Colonial Era.

DEPARTMENT OF ECONOMICS

EC1.1: Micro Economics Theory-I

A student who studies this course

- Learns about the concept of individual decision makers
- Demonstrates the functions of consumers and producers in economic environment

EC1.2: Macro Economics

A student who studies this course

- Plans to ensure long term stable economic success
- Develops knowledge about macroeconomic goals that most central banks aim to achieve

EC1.3: Public Finance

A student who studies this course

- Understands the process of taxation with raising revenue
- Appreciates the concept of redistribution of wealth for reducing inequalities

EC 1.4: Evaluation of Economic Doctrines

A student who studies this course

- Knows about the history of Economic theories
- Develops knowledge about more specialized forms of Economic Theories

EC1.5: Mathematical Methods

A student who studies this course

- Acquires knowledge about the essential mathematical skills used in Economic Analysis
- Applies mathematical skills in formulating and analyzing economic problems

EC2.1: Micro Economics Theory-II

A student who studies this course

- Develops in-depth knowledge about the principles of Economics
- Demonstrates the functions of consumers and producers within the larger economic systems

EC2.2: Monetary Economics

A student who studies this course

- Understands the concept of Price stability
- Proposes schemes for sustainable economic growth, employment and for increasing economic welfare

EC2.3: International Economics

A student who studies this course

- Learns about the economic policies of developed countries
- Emphasizes the urge of improving trade relations between countries for economical growth

EC2.4: Public Finance Administration

A student who studies this course

- Learns about money management
- Understands about system budgeting for maximum control of public expenditure

EC2.5: Statistical Methods

A student who studies this course

- Develops skills in analysing and interpreting statistical data
- Relates statistical methodology to economic enquiry

EC3.1: Economic Growth and Development

A student who studies this course

- Knows about the government initiatives for full employment, price stability, economic growth and redistribution of income etc.
- Understands the need of improving living standards by raising per capita income

EC3.2: Indian Economy

A student who studies this course

- Learns about five year plans and government actions for economical growth
- Develops awareness for improving performance in agriculture

EC3.3: Environmental Economics

A student who studies this course

- Understands the relation between economic development and environmental quality
- Demonstrates various socio-economic possibilities to reduce pollution and to uplift the standards of living

EC3.4: Computer Applications in Economics

A student who studies this course

- Develops skills of using computer applications and software for solving economic problems
- Learns about quality assurance through critically evaluating procedures and results

EC3.5: Labour Economics

A student who studies this course

- Analyses individuals labour supply as the result of the optimum division of time between work and leisure
- Understands the importance of education as an investment and its influence on the current and future labour supply

EC4.1: India's Foreign Trade

A student who studies this course

- Develops insight into India's international trade policy
- Acquires knowledge about trade properties, economic growth and national development

EC4.2: Industrial Economics

A student who studies this course

- Identifies and explains economic concepts and theories related to the behavior of economic agents, markets, industry and firm structures, legal institutions, social norms and government policies

EC4.3: Agricultural Economics

A student who studies this course

- Differentiates industrial economics and agricultural economics
- Reflects economical, social and environmental considerations
- Understands the challenges in growth when public resources allocated to agriculture are being reduced

EC4.4: Economics of Infrastructure

A student who studies this course

- Learns basic infrastructure and services at the community level
- Promotes awareness about waste management, emergency services, social welfare transport and communication facilities etc.

EC4.5: Financial Markets and Analysis

A student who studies this course

- Demonstrates economic activities in improving standards of living
- Gains knowledge about stock markets

RI

Department of Mathematics

Orientation

on

General Elective Courses

26.02.2022

Course Outcomes

Numerical Analysis

Analyze various types of errors in numerical computations

Numerical solutions of transcendental equation

Various interpolating and methods.

Methods and data.

Laplace

- Know about the functions
- Differentiate first shifting theorem
- Understand Laplace and Bessel function
- Laplace and inverse Laplace function

Course Outcomes

All the Best

Numerical Analysis

- Analyze various types of errors in numerical computations
- Obtain numerical solutions of algebraic and transcendental equations
- Learn about various interpolating and extrapolating methods.
- Apply various interpolating methods to predict the data.

Laplace Transforms

- Know about the piecewise continuous functions
- Differentiate first shifting and second shifting theorem
- Understand Laplace transform of Bessel function
- Find inverse Laplace transform of a function



Woman in red saree on the left, wearing a blue face mask, standing with arms crossed.

Whiteboard and chalkboard with handwritten text in Telugu script.

Woman in red saree in the center, wearing a white face mask, standing near the whiteboard.

Audience of students seated in the foreground, mostly wearing red sarees.