

SRI VENKATESWARA UNIVERSITY: TIRUPATI

SVU COLLEGE OF ARTS

MA. WOMEN'S STUDIES AND MANAGEMENT

(Syllabus Common for S. V. University College and affiliated by SVU Area)
(Revised Scheme of Instruction and Examination, Syllabus etc., with effect from the Academic
Year's 2021-22 for I and II Semesters and 2022-23 for III and IV Semesters)

Revised CBCS Pattern with effect from 2021-2022

SEMESTER-I

S.No	Components of Study	Paper Code SVUWS	Title of the paper	Contact hours	No. of Credits	IA Marks	End SEM Exam Marks	Total
1.	Core (Mandatory)	101	Introduction to Gender and Women's Studies	6	4	20	80	100
2.		102	Principles of Management with Gender Lens	6	4	20	80	100
3.		103	Gender, Patriarchy and Society	6	4	20	80	100
4.		104	Women's Movements: National and International Perspectives	6	4	20	80	100
5.	Compulsory Foundation Opt -1	105(a)	Environment: Gender and Livelihood Challenges	6	4	20	80	100
		105(b)	Social Process and Behavioral Issues: Gender Questions					
		105(c)	Education: Gender Achievements and Gaps					
6.	Elective Foundation Opt -1	106(a)	Gender Sensitization and Training: Needs and Strategies	6	4	20	80	100
		106(b)	Communication, Soft Skills and Etiquette					
			Total	36	24	120	480	600
	Audit course		Human Values and Professional Ethics –I	0	0	100	-	-

- ❖ All CORE Papers are Mandatory
- ❖ Compulsory Foundation- Choose one paper
- ❖ Elective Foundation - Choose one paper
- ❖ Audit course-100 Marks (Internal) Zero credits under self-study
- ❖ Interested Students may Register for MOOC with the approval of the concerned DDC but it will be considered for the award of the grade as open elective only giving extra credits

SEMESTER-II

S.No	Components of Study	Paper Code	Title of the paper	Contact hours	No. of Credits	IA Marks	End SEM Exam Marks	Total
1.	Core (Mandatory)	201	Development – Gender Perspectives	6	4	20	80	100
2.		202	Health and Nutrition: Gender Analysis	6	4	20	80	100
3.		203	NGO Management and Social Development	6	4	20	80	100
4.		204	Policies and Programmes for Women's Development	6	4	20	80	100
5.	Compulsory Foundation Opt -1	205(a)	Media and Governance: Gender Concerns	6	4	20	80	100
		205(b)	Gender Identity and Leadership: Needs and Strategies					
		205(c)	Gender Based Violence: Issues and Concerns					
6.	Elective Foundation Opt -1	206 (a)	Human Rights with Gender Lens	6	4	20	80	100
		206(b)	Financial Literacy and Management					
			Total	36	24	120	480	600
	Audit course		Human Values and Professional Ethics –II	0	0	100	-	-

- ❖ All CORE Papers are Mandatory
- ❖ Compulsory Foundation - Choose one paper
- ❖ Elective Foundation - Choose one paper

- ❖ Audit course- 100 Marks (Internal) Zero credits under self-study
- ❖ Interested Students may Register for MOOC with the approval of the concerned DDC but it will be considered for the award of the grade as open elective only giving extra credits

SEMESTER-III

S.No	Components of Study	Paper Code	Title of the paper	Contact hours	No. of Credit	IA Marks	End SEM Exam Marks	Total
1.	Core	301	Feminist Theories	6	4	20	80	100
2.		302	Research Methods and Statistics: Feminist Concerns	6	4	20	80	100
3	Generic Elective Opt -2	303(a)	Capacity Building and Leadership: Gender Questions	6	4	20	80	100
		303(b)	Guidance and Counseling with Gender Perspectives					
		303(c)	Human Resource Management : Gender Analysis	6	4	20	80	100
		303(d)	Women, Science and Technology: Gender Biases and Strategies					
4	Skill oriented course (Mandatory)	304	Computer Applications and Software Packages for Data Analysis	6	4	20	80	100
5.	Open Elective Opt -1	305(a)	Social Values and Ethics : Gender Concerns	6	4	20	80	100
		305(b)	Governance: Gender Issues and Challenges.					
			Total	36	24	120	480	600

- ❖ All CORE Papers are Mandatory
- ❖ Generic Elective- choose two
- ❖ Skill oriented course (Mandatory)
- ❖ Open Elective for the Students of other Departments. Minimum One Paper should be opted.
- ❖ Extra credits may be earned by opting for more number of Open Electives depending on the Interest of the student through self-study.
- ❖ Interested students may register for MOOC with the approval of the concerned DDC

SEMESTER-IV

S.No	Components of Study	Paper Code	Title of the paper	Contact hours	No. of Credit	IA Marks	End SEM Exam Marks	Total
1.	Core	401	Entrepreneurship Development: Gender Analysis	6	4	20	80	100
2..		402	Women's Legislations – Gender Concerns	6	4	20	80	100
3	Generic Elective Opt -2	403(a)	Participatory Learning, Methods and Extension Education	6	4	20	80	100
		403(b)	Social Structure: Gender Biases and Questions					
		403(c)	Women's Health: A Life Cycle Approach	6	4	20	80	100
		403(d)	Globalization: Gender Implications					
4	Multi-disciplinary Course/Project work	404	Project Work	6	4	20	80	100
5.	Open Elective Opt -1	405(a)	Media and Communication: Gender Concerns	6	4	20	80	100
		405(b)	Women and Work: Gender Questions					
			Total	36	24	120	480	600

- ❖ All CORE Papers are Mandatory
 - ❖ Generic Elective- choose two
- ❖ Skill oriented course (Mandatory)
- ❖ Open Elective for the Students of other Departments. Minimum One Paper should be opted.
- ❖ Extra credits may be earned by opting for more number of Open Electives depending on the Interest of the student through self-study.

❖ Interested students may register for MOOC with the approval of the concerned DDC

Evidences

1.2.2

ENV-106 ::BIODIVERSITY CONSERVATION AND MANAGEMENT

UNIT – I

Biodiversity: Definition and concept – Distribution of climatic regions of world and vegetation types – Patterns of species diversity – Species importance – Species area relationships – Theories of species diversity – Equilibrium theory – Biodiversity of tropical and temperate regions – Hot Spots of the world – Case Studies on Forests, Deserts, Coral Reef and Island Species.

UNIT – II

Measures of Biodiversity: Alfa, Beta and Gamma diversities – Indices of diversity and evenness – The Simpson Index Diversity of fully censured communities – Estimating the diversity of large community – Evenness and Equitability – Hierarchical diversity.

UNIT – III

Conservation and Management of Biodiversity: Types of conservation – In-situ and Ex-situ conservation – Concept of germ plasma preservation and gene banks – Community Biodiversity – Registers and their importance – National Biodiversity Strategy and Action Plan Programme – Protected Area Management Plan – Biodiversity Bill 2002 – Patent Act Agenda 21 – National Policies and Acts [Wild Life (Protection) Act,1972] related to biodiversity.

UNIT – IV

Environment and Biotechnology: Microbes in relation to environment – Biosensors – Environmental applications of biosensors – Biotechnological methods in pollution abatement – Biodegradation – Genetically Engineered Microbes (GEMs) in biotreatment of wastes – Eco-friendly bio-products for environmental health – Environmental biotechnology in the 21st century.

REFERENCES:

1. Mac Arthur R.H., **Geographical Ecology: Patterns in the Distribution of Species**, Harper & Row Publications, New York (1972).
2. Pielou E.C., **Ecological Diversity**, John Wiley & Sons, New York (1975).
3. Stracey P.D., **Wild Life in India – Its Conservation and Control**, Ministry of Food And Agriculture, Govt. of India, New Delhi (1963).
4. Saharia V.B., **Wild Life in India**, Nataraj Publishers, Dehradun (1982).
5. Seshadri B, **Indian Wild Life Resources**, Sterling Publishers, New Delhi (1982).
6. Chatterji, A.K., **Introduction to Environmental Biotechnology**, Prentice Hall, New Delhi (2005).

John

ENV 206::ENVIRONMENTAL LAWS, POLICIES AND LEGISLATION

UNIT – I

Environmental Protection: Need – Issues - Problems and Awareness – International and National Efforts for Environmental Protection – Agenda 21- Environmental Ethics and Global Imperatives – Current Environmental Issues in India – Constitutional Amendments – Article 48 A & 52 A.

UNIT – II

Environmental Legislation: Scope and importance – Key concept of environmental management and approaches – Environmental legislation and punitive control – Objectives of legislation and frame work in the country – Planning and enforcement – Environmental Organizations – Information exchange and surveillance – EIA Notification in 1994 – ISO 14000 – EMS Standards.

UNIT – III

Environmental Policy in India: Need for policies- Public Policy – Economic policies – Relationship between economic development and environment – Implementing Environmental Public Policy Strategies in pollution control – Constitutional provisions in India regarding environment – Public Awareness and Participation in Environmental Management – National Land Use Policy 1988 – Industrial Policy 1991.

UNIT- IV

Environmental Laws and Acts: Environmental Laws – Need – Indian Prospective – National Committee on Environmental Planning (NCEP) – Role of Indian Judiciary in the protection of Environment : Forest Conservation Act, 1980, Indian Forest Act (Revised) 1982, Wild Life Protection Act, 1972 amended 1991, Air (Prevention and Control of pollution) Act 1981 amended 1987, The Water (Prevention and control of pollution) Act 1988, Motor Vehicle Act 1988, Hazardous Waste Management Act 1989, Biomedical Waste Act 1999, Plastic Act 2000 – Municipal solid waste Act 1999, Public Liability Insurance Act 1992 - Biodiversity and WTO (1988) – Convention on biological diversity (1992) – Ecological, Economic, Aesthetic and other importance of Biological diversity.

REFERENCES::

1. Trivedi R.K., **Handbook of Environmental Laws, Guidelines, Compliances and Standards, Vol I and II**, B.S. Publications.
2. Newson M.M., **Managing the Human Impact on the Natural Environment: Patterns and Processes**, International Book Distributor, Dehradun (1993).
3. Keith Thomas, **Man and Natural World – A History of Modern Sensibility**, Pantheon, New York (1983).
4. Jadav H and Bhosale V.M., **Environmental Protection and Laws**, Himalaya Publications (1995).
5. Shyam Divan and Armin Rosencranz, **Environmental Law and Policy in India**, Oxford Uni. Press (2001).

ENV. 304: BASICS OF STATISTICAL METHODS AND COMPUTER PROGRAMMES

(Skill Oriented Course)

UNIT-I

Sampling Distributions: Chi-Square Distribution, t-distribution, F- distribution-Statistical Inference and Hypothesis Testing- One sample tests, two sample tests, several sample tests. Applications: Case-Control Studies, Test of Association.

UNIT-II

Correlation and Regression: Karl Pearson's Coefficient of Correlation, Spearman's rank correlation coefficient, Linear Regression

UNIT-III

Object oriented programming in C++: Concepts of data abstraction, encapsulation, Introduction to objects, classes and instances, static members, inheritance, polymorphism, Overloading and information hiding – function overloading, operator overloading in C++, Memory management - constructors, overloading of constructors, copy constructors, destructors, constructors and information hiding, concepts of file handling in C++.

UNIT-IV

Object oriented Mechanism in JAVA: Class definition in JAVA, constructors, inheritance, polymorphism in JAVA, Access specifications in JAVA, Interfaces and packages in JAVA, Error and exception handling in JAVA, Building JAVA Applets and Applications in JAVA Multi threads in JAVA - introduction to threads, the thread class, the runnable interface, thread states, thread priorities, thread groups and synchronization. Graphics in JAVA.

References:

1. S. C. Gupta and V. K. Kapoor: Fundamentals of Mathematical Statistics.
2. Rohatgi, V. K. (1984). An introduction to probability theory and mathematical Statistics. New ge International Publication.
3. B. L. Agarwal: Basic Statistics.
4. Kiran Pandya, SmrutiBulsari and Sanjay Sinha : SPSS in Simple Steps
5. 1.Object Oriented Programming in C++, Robert Lafore, Galgotia
6. Object Oriented programs, BalaGuruswamy, TMH
7. Programming in JAVA, Dietel&Dietel, AWL
8. Introduction to JAVA programs, Y.Danial Liang, PHI
9. Complete Reference JAVA, 3ed, Peter Naughton&H.Schimalt – TMH



ENV 305 (b) :: OCCUPATIONAL HEALTH AND INDUSTRIAL SAFETY

UNIT I: Occupational Health

Hazards and Safety—Physical, Chemical and Biological hazards. Occupational Diseases and Occupationally induced illness - Prevention and Control. Health problems in different types of industries. Measures for Workers. Health Education Medical First- Aid and Management of Medical Emergencies. Epidemiological approaches. Ergonomics.

UNIT II: Industrial Safety Management Techniques

Industrial Safety Standards. Dispersion of Radioactive material and release of Toxic and inflammable materials. Work Study – Method of Study and Measurement. Measurement of Skills. Safety - Cost of Expenses. Principles and Functions in Safety Management.

UNIT III: Hazards Exposure evaluation

Sampling techniques, Personal monitoring, Biological monitoring; Threshold Limit Values (TLV), STEL; List of Industries involving Hazardous process Occupational Hazards under the First Schedule of the Factories Act, 1948; Permissible Limits of certain Chemical substances in work environment under the Second Schedule of the Factories Act, 1948.

UNIT IV: Hazards Control

Causes of Accident – Theory of accidents, Accident Reporting system, Safety Audit, Accident prevention, Safety Committee, Case studies on Bhopal, Chernobyl and similar disasters - Control of Hazards Substitutions, Isolation, Personal Protective Equipment (PPE).

REFERENCES

1. A B C of Industrial Safety, Walsh, W and Russell, L, (1984), Pitma Publishing United Kingdom.
2. Della D.E., and Giustina, 1990, DzSafety and Environmental Managementdz, Van NostrandReinhold International Thomson Publishing Inc.
3. Environmental and Industrial Safety, Hommadi, A. H. (1989), I.B.B Publication, New Delhi.
4. Environmental Strategies—Hand Book, Kolluru R. V, (1994) McGraw Hill Inc., New York.
5. Goetsch D.L., 1990, Occupational Safety and Health for Technologists, Engineers andManagersdz, Prentice Hall.

ENV 405 (b):: ENVIRONMENTAL SAFETY

UNIT-I

Scope and Importance; need for public awareness about our environment; Economic and social security; Environment impact of transportation and Mining. Environmental impact assessment (EIA) — purpose, procedure and benefits of EIA; Biodiversity and its conservation; Sustainable development. Global warming and greenhouse effect, urbanization, acid rain, ozone layer depletion, nuclear accident and holocaust.

UNIT- II

Case studies, population explosion, family welfare programmers-HIV/AIDS, women and child welfare, Environmental pollution — causes, Effects and control measures of air pollution, water pollution, soil pollution, marine pollution, noise pollution and nuclear hazards, Solid waste management-urban and industrial waste-causes, effects and control measures.

UNIT-III

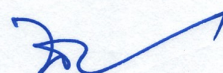
Renewable and non-renewable natural resources — Forest resource, Water resource, Mineral wealth / resource, Food resource, Energy resources, Growing energy needs, renewable and non-renewable energy sources, Use of alternate energy sources, Land resource and land degradation, Role of an individual in conservation of natural resources, equitable use of resources for sustainable life styles.

UNIT-IV

Role of Government in environment protection, legal aspects of environment protection, NGO initialization, National Committee on environmental Planning (NCP), Environmental Appraisal Committee (EAC), central and state boards for prevention and control of pollution, goals of environment impact policy, case studies, Disaster management floods, earth quake, cyclone, landslides, role of individual in prevention of pollution.

References:

1. Benny Joseph (2005) Environmental Studies — Tata McGraw Hill - Publishers.
2. Rao CS (2006) - Environmental Pollution Control — New Age International Pvt. Ltd Publishers.
3. ManjunathD..L (2007) - Environmental Studies - Pearson Education Publishers.
4. Yaji R.K (2006) - Text Book of Environmental Studies - United Publishers.
5. Centre for Environmental Education (1990) - Essential learning's in Environmental education.
6. VenugopalRao P (2006) - Principles of Environmental Science and Engineering —Prentice Hall.



ENV 405 (b):: ENVIRONMENTAL SAFETY

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Renewable and non-renewable natural resources — Forest resource, Water resource, Mineral wealth / resource, Food resource, Energy resources, Growing energy needs, renewable and non-renewable energy sources, Use of alternate energy sources, Land resource and land degradation, Role of an individual in conservation of natural resources, equitable use of resources for sustainable life styles.

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4. Yaji R.K (2006) - Text Book of Environmental Studies - United Publishers.
5. Centre for Environmental Education (1990) - Essential learning's in Environmental education.
6. VenugopalRao P (2006) - Principles of Environmental Science and Engineering —Prentice Hall.

SRI VENKATESWARA UNIVERSITY COLLEGE OF ENGINEERING: TIRUPATI-517502
DEPARTMENT OF CIVIL ENGINEERING
M.Tech. Civil Engineering (R-23) Structures



1.2.1. Percentage of new Courses introduced of the total number of courses across all programmes offered during the last five years.

S. No	Course Code	Title of the Course	Year of Introduction	If revision has been carried out in the syllabus during last 5 years, Percentage of content added or replaced
1.	SE15C	Quality Control and Safety Management	2023	11/36=30.55%
2.	SE15C	Maintenance and Rehabilitation of Structures	2023	
3.	SE11L	Structural Design Lab	2023	
4.	SE23C	Design of Bridges	2024	
5.	SE23C	Design of Earthquake Resistant Structures	2024	
6.	SE24C	Advanced Construction Techniques	2024	
7.	SE24C	Low cost Housing Techniques	2024	
8.	PG21C	Value Added course- Cyber Security	2024	
9.	MP21C	Mini Project with Seminar	2024	
10.	PG31C	Waste to Energy	2024	
11.	SE32S	Industrial/ Research Internship (Min of 4 Weeks)	2024	

**ENV-305- COMPUTER APPLICATIONS AND TOXICOLOGICAL STUDY IN FOOD
ADULTERATION
(Skill Oriented Course)**

UNIT - 1

Computer and application in toxicology: Introduction to computers, basic unit and functions, H/W and S/W, operating systems, word processing, spread sheet, graphic programs, dbase, windows, statistical S/W programs and packages. Steps involved in S/W development, computer languages with emphasis to FORTRAN language and programming,

UNIT- II

Toxicology software systems. Use of computers in information retrieval systems, Technology development: Technology development-meaning; Drug related technology development; Toxicological studies, bioequivalence (BU), clinical trials-phase-I, phase-II and phase-III.

UNIT –III (P)

Detection of milk adulteration - Detection of starch in milk and milk products (khoya, chenna, paneer) - Detection of mashed potatoes, sweet potatoes and other starches in ghee/butter - Detection of sugar solution in honey - Detection of chalk powder in sugar/pithi sugar/jaggery - Detection of excess bran in wheat flour - Detection of added colour in food grains - Detection of rhodamine B in ragi.

UNIT-IV (P)

Detection of papaya seeds in black pepper - Detection of artificial/water soluble synthetic colours in chilli powder - Detection of saw dust in chilli powder - Detection of chalk in common salt - Detection of artificial colour in turmeric powder - Detection of malachite green in green vegetables like bitter gourd, green chilli and others - Detection of artificial colour on green peas - Detection of rhodamine B in sweet potato.

References

1. Advances in Molecular Toxicology by James C. Fishbein
2. Operating Systems: Internals and Design Principles by Stallings (Pearson)
3. Handbook of Food Adulteration and Safety Laws by Sumeet Malik
4. Molecular Toxicology by P. David Josephy .
5. Adulteration Analysis of some foods and drugs
6. Frontiers in drug safety volume 1 by Alankar Shrivastava
7. A.K. De. Environmental Chemistry, 1985
8. Sharma, B.K. Kaur H., Environmental Chemistry, Goel Publishing House (1995).’
9. Sharma.P.D., Environmental Biology and Toxicology, Rastogy (1994).

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

III Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. of Credits
		L	T	P	Total	
MA301C	Mathematics III	3			3	3
CA301C	Fundamentals of Database Management Systems	3	1		4	4
CS303C	Discrete Mathematical Structures	3			3	3
CA302C	Introduction to Artificial Intelligence	3			3	3
CA303C	Elements of Electronics and Digital Logic Design	3			3	3
CA304L	Fundamentals of Database Management Systems Laboratory			3	3	1.5
CA305L	Electronics and Digital Logic Design Laboratory			3	3	1.5
CS309S	Skill Oriented Course - Basic Python Programming	1		2	3	2
PA310A	Audit Course - Constitution of India	2			2	0
Total		18	1	8	27	21

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)
- Audit Course - 100 marks (Internal) - Zero Credits

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

IV Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. of Credits
		L	T	P	Total	
CA401C	Signals and Systems	3			3	3
CA402C	Operating Systems	3			3	3
HS403C	Managerial Economics and Accountancy	3			3	3
CS404C	Computer Oriented Numerical Methods	3			3	3
CS405C	Computer Organization	3			3	3
CS406C	Design and Analysis of Algorithms	3			3	3
CA401L	Artificial Intelligence Laboratory			3	3	1.5
CA402L	Operating Systems and Algorithms Laboratory			3	3	1.5
CS409S	Skill Oriented Course - Basic Web Designing	1		2	3	2
Total		19		8	27	23
Internship for 4 to 6 Weeks (Mandatory) during summer vacation.						

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

V Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. ofCredits
		L	T	P	Total	
CA501C	Data Communication and Networking	3			3	3
CA502C	Advanced Artificial Intelligence	3			3	3
CS504C	Formal Languages and Automata Theory	3			3	3
CS505C	Advanced Data Structures	3			3	3
CA503C	Professional Elective- I	3			3	3
CA501L	Data Communication and Networking Laboratory			3	3	1.5
CA505L	Advanced Data Structures Laboratory			3	3	1.5
CS509S	Skill Oriented Course - JAVA PROGRAMMING	1		2	3	2
ME509M	Universal Human Values	2			2	-
Total		21		8	29	23

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

VI Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. ofCredits
		L	T	P	Total	
CA601C	Data Science	3			3	3
CA602C	Web Technology	3			3	3
CA603C	Cryptography and Network Security	3			3	3
CA604C	Machine Learning	3			3	3
CA605C	Software Engineering	3			3	3
CA606C	Open elective-I(Through MOOCs)	3			3	3
CA601L	Cryptography and Network Security Laboratory			3	3	1.5
CA602L	Data Science Laboratory			3	3	1.5
CS609S	Advanced Python programming (Skill course)	1		2	3	2
ME609M	Professional ethics(mandatory course)	2			2	
Total		21		8	29	23
Internship for 4 to 6 Weeks (Mandatory) during summer vacation.						

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

VII Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. of Credits
		L	T	P	Total	
CA701C	Neural Networks	3			3	3
CA702C	Natural Language Processing	3			3	3
CA703C	Professional Elective-II	3			3	3
CA704C	Professional Elective-III	3			3	3
CA705C	Open Elective-II (Through MOOCs)	3			3	3
CA706C	Open Elective-III (Through MOOCs)	3			3	3
CA701L	Natural Language Processing Laboratory			3	3	1.5
CA702L	Mobile Application Development(skill course)	1		2	3	2
CA709S	Industrial Internship(evaluated)					3
Total		19		8	27	23
Internship for 4 to 6 Weeks (Mandatory) during summer vacation.						

All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

- Formal Languages & Automata Theory
- Mobile Application Development

**B.Tech (CSA) – Choice Based Credit System – 2020 Regulations
(With effect from the academic year 2021-22)**

Scheme of Instruction and Examinations

VIII Semester

Course Code	Course Title	Scheme of Instruction (Hours/Week)	No. of Credits
L	T	P	Total
CS/PROJ	Project Work with Internship	-	12

Professional Elective -I	Professional Elective -II	Professional Elective -III
Data mining	Image processing	Deep learning
Compiler Design	Distributed systems	Speech processing
Computer Graphics	Optimization Techniques	Internet of Things

B.Tech (CSE-AI) – Choice Based Credit System – 2020

Regulations Scheme of Instruction and Examinations

List of subjects for B.Tech(Honors) in Computer Science and Engineering(Artificial Intelligence)**

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. of Credits
		L	T	P	Total	
CAHN01	Distributed Databases	3	1		4	4
CAHN02	Advanced Operating Systems	3	1		4	4
CAHN03	Multicore Computing	3	1		4	4
CAHN04	Robotics	3	1		4	4
CAHN05	Software Architecture and Design Patterns	3	1		4	4
CAHN06	Deep Learning	3	1		4	4

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

** Students shall register for any 4 subjects (4*4 = 16 credits) from the above listed subjects, choosing one subject each in IV, V, VI and VII semester. Further, they shall acquire 4 credits through two MOOCs (each of 2 credits), which shall be discipline-specific.

B.Tech (CSE-AI) – Choice Based Credit System – 2020 Regulations

Scheme of Instruction and Examinations

List of subjects for B.Tech(Minor) in Computer Science and Engineering(Artificial Intelligence)**

Course Code	Course Title	Scheme of Instruction (Hours/Week)				No. of Credits
		L	T	P	Total	
CAMN01	Data Structures	3	1		4	4
CAMN02	Computer Organization	3	1		4	4
CAMN03	Artificial Intelligence	3	1		4	4
CAMN04	Computer Networks and n	3	1		4	4
CAMN05	Machine learning	3	1		4	4
CAMN06	Java and Web Technology	3	1		4	4

- All Courses - 40 marks (Internal) + 60 Marks (Univ. Semester End)

** Students shall register for any 4 subjects ($4 \times 4 = 16$ credits) from the above listed subjects, choosing one subject each in IV, V, VI and VII semester. Further, they shall acquire 4 credits through two MOOCs (each of 2 credits), which shall be discipline-specific.



SRI VENKATESWARA UNIVERSITY COLLEGE OF SCIENCES :: TIRUPATI
DEPARTMENT OF ANTHROPOLOGY

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Annexure-4

ANB : 406-6 (a) - Open Elective : EPIDEMIOLOGY

UNIT I: Epidemiology: Meaning and Scope, Methods, Rates, Indices, Genetic Epidemiology, Clinical Epidemiology

UNIT II : Complex Diseases: Concept, Genetic Factors, Environmental Impact, Etiology, Diagnosis, Prevalance; Prevention and Control of Diabetics, Cardio-Vascular Diseases and HIV/AIDS

UNIT III: Human Obesity : Characteristics, Types, Reasons and Complications on Individual Health, Prevention and Control.

UNIT IV : Major Communicable and Non-communicable diseases : Global and Indian Scenario; Malaria, and Tuberculosis : Etiology, Prevalance, Prevention and Management.

Recommended Readings:

1. Robert H. Fletcher, Suzanne W Fletcher. Clinical Epidemiology : The Essentials
2. Robert C. E. Ston, Jare M Olson, Lyce Palmes. Biostatistical Genetics and Genetic Epidemiology
3. Ron Stall, Sandra m Cifford, Croing R Jeans. Anthropology and Epidemiology : Inter Disciplinary Approaches to the study of Health and Disease
4. Gary D Friedman. Primer of Epidemiology
5. Sackett et al., 1991. Clinical Epidemiology : A Basic Science for Clinical Medicine
6. Penny Webb, Chris Bain, Sandi Pirozzo. Essential Epidemiology : An Introduction for students and Health Professionals
7. JH. Abramson, Z.H. Abramson. Survey Methods in Epidemiological research, Programme Evaluation and Community Medicine

(P. T. O)

ENV 405 (b):: ENVIRONMENTAL SAFETY

UNIT-I

Scope and Importance; need for public awareness about our environment; Economic and social security; Environment impact of transportation and Mining. Environmental impact assessment (EIA) — purpose, procedure and benefits of EIA; Biodiversity and its conservation; Sustainable development. Global warming and greenhouse effect, urbanization, acid rain, ozone layer depletion, nuclear accident and holocaust.

UNIT- II

Case studies, population explosion, family welfare programmes-HIV/AIDS, women and child welfare, Environmental pollution — causes, Effects and control measures of air pollution, water pollution, soil pollution, marine pollution, noise pollution and nuclear hazards, Solid waste management-urban and industrial waste-causes, effects and control measures.

UNIT-III

Renewable and non-renewable natural resources — Forest resource, Water resource, Mineral wealth / resource, Food resource, Energy resources, Growing energy needs, renewable and non-renewable energy sources, Use of alternate energy sources, Land resource and land degradation, Role of an individual in conservation of natural resources, equitable use of resources for sustainable life styles.

UNIT-IV

Role of Government in environment protection, legal aspects of environment protection, NGO initialization, National Committee on environmental Planning (NCP), Environmental Appraisal Committee (EAC), central and state boards for prevention and control of pollution, goals of environment impact policy, case studies, Disaster management floods, earth quake, cyclone, landslides, role of individual in prevention of pollution.

References:

1. Benny Joseph (2005) Environmental Studies — Tata McGraw Hill - Publishers.
2. Rao CS (2006) - Environmental Pollution Control — New Age International Pvt. Ltd Publishers.
3. ManjunathD..L (2007) - Environmental Studies - Pearson Education Publishers.
4. Yaji R.K (2006) - Text Book of Environmental Studies - United Publishers.
5. Centre for Environmental Education (1990) - Essential learning's in Environmental education.
6. VenugopalRao P (2006) - Principles of Environmental Science and Engineering —Prentice Hall.

UNIT I: Occupational Health

Hazards and Safety—Physical, Chemical and Biological hazards. Occupational Diseases and Occupationally induced illness - Prevention and Control. Health problems in different types of industries. Measures for Workers. Health Education Medical First- Aid and Management of Medical Emergencies. Epidemiological approaches. Ergonomics.

UNIT II: Industrial Safety Management Techniques

Industrial Safety Standards. Dispersion of Radioactive material and release of Toxic and inflammable materials. Work Study – Method of Study and Measurement. Measurement of Skills. Safety - Cost of Expenses. Principles and Functions in Safety Management.

UNIT III: Hazards Exposure evaluation

Sampling techniques, Personal monitoring, Biological monitoring; Threshold Limit Values (TLV), STEL; List of Industries involving Hazardous process Occupational Hazards under the First Schedule of the Factories Act, 1948; Permissible Limits of certain Chemical substances in work environment under the Second Schedule of the Factories Act, 1948.

UNIT IV: Hazards Control

Causes of Accident – Theory of accidents, Accident Reporting system, Safety Audit, Accident prevention, Safety Committee, Case studies on Bhopal, Chernobyl and similar disasters - Control of Hazards Substitutions, Isolation, Personal Protective Equipment (PPE).

REFERENCES

1. A B C of Industrial Safety, Walsh, W and Russell, L, (1984), Pitma Publishing United Kingdom.
2. Della D.E., and Giustina, 1990, DzSafety and Environmental Managementdz, Van NostrandReinhold International Thomson Publishing Inc.
3. Environmental and Industrial Safety, Hommadi, A. H. (1989), I.B.B Publication, New Delhi.
4. Environmental Strategies—Hand Book, Kolluru R. V, (1994) McGraw Hill Inc., New York.
5. Goetsch D.L., 1990, Occupational Safety and Health for Technologists, Engineers and Managersdz, Prentice Hall.

ENV. 304: BASICS OF STATISTICAL METHODS AND COMPUTER PROGRAMMES

(Skill Oriented Course)

UNIT-I

Sampling Distributions: Chi-Square Distribution, t-distribution, F- distribution-Statistical Inference and Hypothesis Testing- One sample tests, two sample tests, several sample tests. Applications: Case-Control Studies, Test of Association.

UNIT-II

Correlation and Regression: Karl Pearson's Coefficient of Correlation, Spearman's rank correlation coefficient, Linear Regression

UNIT-III

Object oriented programming in C++: Concepts of data abstraction, encapsulation, Introduction to objects, classes and instances, static members, inheritance, polymorphism, Overloading and information hiding – function overloading, operator overloading in C++, Memory management - constructors, overloading of constructors, copy constructors, destructors, constructors and information hiding, concepts of file handling in C++.

UNIT-IV

Object oriented Mechanism in JAVA: Class definition in JAVA, constructors, inheritance, polymorphism in JAVA, Access specifications in JAVA, Interfaces and packages in JAVA, Error and exception handling in JAVA, Building JAVA Applets and Applications in JAVA Multi threads in JAVA - introduction to threads, the thread class, the runnable interface, thread states, thread priorities, thread groups and synchronization. Graphics in JAVA.

References:

1. S. C. Gupta and V. K. Kapoor: Fundamentals of Mathematical Statistics.
2. Rohatgi, V. K. (1984). An introduction to probability theory and mathematical Statistics. New ge International Publication.
3. B. L. Agarwal: Basic Statistics.
4. Kiran Pandya, SmrutiBulsari and Sanjay Sinha : SPSS in Simple Steps
5. 1.Object Oriented Programming in C++, Robert Lafore, Galgotia
6. Object Oriented programs, BalaGuruswamy, TMH
7. Programming in JAVA, Dietel&Dietel, AWL
8. Introduction to JAVA programs, Y.Danial Liang, PHI
9. Complete Reference JAVA, 3ed, Peter Naughton&H.Schimalt – TMH

ENV 206::ENVIRONMENTAL LAWS, POLICIES AND LEGISLATION

UNIT – I

Environmental Protection: Need – Issues - Problems and Awareness – International and National Efforts for Environmental Protection – Agenda 21- Environmental Ethics and Global Imperatives – Current Environmental Issues in India – Constitutional Amendments – Article 48 A & 52 A.

UNIT – II

Environmental Legislation: Scope and importance – Key concept of environmental management and approaches – Environmental legislation and punitive control – Objectives of legislation and frame work in the country – Planning and enforcement – Environmental Organizations – Information exchange and surveillance – EIA Notification in 1994 – ISO 14000 – EMS Standards.

UNIT – III

Environmental Policy in India: Need for policies- Public Policy – Economic policies – Relationship between economic development and environment – Implementing Environmental Public Policy Strategies in pollution control – Constitutional provisions in India regarding environment – Public Awareness and Participation in Environmental Management – National Land Use Policy 1988 – Industrial Policy 1991.

UNIT – IV

Environmental Laws and Acts: Environmental Laws – Need – Indian Prospective – National Committee on Environmental Planning (NCEP) – Role of Indian Judiciary in the protection of Environment : Forest Conservation Act, 1980, Indian Forest Act (Revised) 1982, Wild Life Protection Act, 1972 amended 1991, Air (Prevention and Control of pollution) Act 1981 amended 1987, The Water (Prevention and control of pollution) Act 1988, Motor Vehicle Act 1988, Hazardous Waste Management Act 1989, Biomedical Waste Act 1999, Plastic Act 2000 – Municipal solid waste Act 1999, Public Liability Insurance Act 1992 - Biodiversity and WTO (1988) – Convention on biological diversity (1992) – Ecological, Economic, Aesthetic and other importance of Biological diversity.

REFERENCES::

1. Trivedi R.K., **Handbook of Environmental Laws, Guidelines, Compliances and Standards, Vol I and II**, B.S. Publications.
2. Newson M.M., **Managing the Human Impact on the Natural Environment: Patterns and Processes**, International Book Distributor, Dehradun (1993).
3. Keith Thomas, **Man and Natural World – A History of Modern Sensibility**, Pantheon, New York (1983).
4. Jadav H and Bhosale V.M., **Environmental Protection and Laws**, Himalaya Publications (1995).
5. Shyam Divan and Armin Rosencranz, **Environmental Law and Policy in India**, Oxford Uni. Press (2001).

Evidences

1.2.2.

ENV-106 ::BIODIVERSITY CONSERVATION AND MANAGEMENT

UNIT – I

Biodiversity: Definition and concept – Distribution of climatic regions of world and vegetation types – Patterns of species diversity – Species importance – Species area relationships – Theories of species diversity – Equilibrium theory – Biodiversity of tropical and temperate regions – Hot Spots of the world – Case Studies on Forests, Deserts, Coral Reef and Island Species.

UNIT – II

Measures of Biodiversity: Alfa, Beta and Gamma diversities – Indices of diversity and evenness – The Simpson Index Diversity of fully censured communities – Estimating the diversity of large community – Evenness and Equitability – Hierarchical diversity.

UNIT – III

Conservation and Management of Biodiversity: Types of conservation – In-situ and Ex-situ conservation – Concept of germ plasma preservation and gene banks – Community Biodiversity – Registers and their importance – National Biodiversity Strategy and Action Plan Programme – Protected Area Management Plan – Biodiversity Bill 2002 – Patent Act Agenda 21 – National Policies and Acts [Wild Life (Protection) Act,1972] related to biodiversity.

UNIT – IV

Environment and Biotechnology: Microbes in relation to environment – Biosensors – Environmental applications of biosensors – Biotechnological methods in pollution abatement – Biodegradation – Genetically Engineered Microbes (GEMs) in biotreatment of wastes – Eco-friendly bio-products for environmental health – Environmental biotechnology in the 21st century.

REFERENCES:

1. Mac Arthur R.H., **Geographical Ecology: Patterns in the Distribution of Species**, Harper & Row Publications, New York (1972).
2. Pielou E.C., **Ecological Diversity**, John Wiley & Sons, New York (1975).
3. Stracey P.D., **Wild Life in India – Its Conservation and Control**, Ministry of Food And Agriculture, Govt. of India, New Delhi (1963).
4. Saharia V.B., **Wild Life in India**, Nataraj Publishers, Dehradun (1982).
5. Seshadri B, **Indian Wild Life Resources**, Sterling Publishers, New Delhi (1982).
6. Chatterji, A.K., **Introduction to Environmental Biotechnology**, Prentice Hall, New Delhi (2005).

John

**ENV-305- COMPUTER APPLICATIONS AND TOXICOLOGICAL STUDY IN FOOD
ADULTERATION
(Skill Oriented Course)**

UNIT - 1

Computer and application in toxicology: Introduction to computers, basic unit and functions, H/W and S/W, operating systems, word processing, spread sheet, graphic programs, dbase, windows, statistical S/W programs and packages. Steps involved in S/W development, computer languages with emphasis to FORTRAN language and programming,

UNIT- II

Toxicology software systems. Use of computers in information retrieval systems, Technology development: Technology development-meaning; Drug related technology development; Toxicological studies, bioequivalence (BU), clinical trials-phase-I, phase-II and phase-III.

UNIT –III (P)

Detection of milk adulteration - Detection of starch in milk and milk products (khoya, chenna, paneer) - Detection of mashed potatoes, sweet potatoes and other starches in ghee/butter - Detection of sugar solution in honey - Detection of chalk powder in sugar/pithi sugar/jaggery - Detection of excess bran in wheat flour - Detection of added colour in food grains - Detection of rhodamine B in ragi.

UNIT-IV (P)

Detection of papaya seeds in black pepper - Detection of artificial/water soluble synthetic colours in chilli powder - Detection of saw dust in chilli powder - Detection of chalk in common salt - Detection of artificial colour in turmeric powder - Detection of malachite green in green vegetables like bitter gourd, green chilli and others - Detection of artificial colour on green peas - Detection of rhodamine B in sweet potato.

References

1. Advances in Molecular Toxicology by James C. Fishbein
2. Operating Systems: Internals and Design Principles by Stallings (Pearson)
3. Handbook of Food Adulteration and Safety Laws by Sumeet Malik
4. Molecular Toxicology by P. David Josephy .
5. Adulteration Analysis of some foods and drugs
6. Frontiers in drug safety volume 1 by Alankar Shrivastava
7. A.K. De. Environmental Chemistry, 1985
8. Sharma, B.K. Kaur H., Environmental Chemistry, Goel Publishing House (1995).’
9. Sharma.P.D., Environmental Biology and Toxicology, Rastogy (1994).



SRI VENKATESWARA UNIVERSITY COLLEGE OF ENGINEERING: TIRUPATI-517502
DEPARTMENT OF CIVIL ENGINEERING
B.Tech. Civil Engineering (R-20)

1.2.1. Percentage of new Courses introduced of the total number of courses across all programmes offered during the last five years.

S. No	Course Code	Title of the Course	Year of Introduction	If revision has been carried out in the syllabus during last 5 years, Percentage of content added or replaced
1	HS303CO	Managerial Economics and Accountancy (Common to all branches)	2023	6/34= 17.6%
2	CE309S	Skill Development Course1	2023	
3	PA310A	Constitution of India(Common to all branches)	2023	
4	MC411B	NCC/NSS	2023	
5	MA401C	Probability &Statistics (Common to all branches)	2023	
6	CE409S	Skill Development Course 2	2023	