# VISVESVARAYA TECHNOLOGICAL UNIVERSITY
# BELAGAVI

## 3rd to 8th Semester BE- Electronics & Communication
## Scheme of Teaching and Examinations
**Outcome Based Education (OBE) and Choice Based Credit System (CBCS)**

**(Effective from the academic year 2018 – 19)**

27/7/19

Head of the Department
Dept. of Electronics & Communication Engineering
Sri Sairam College of Engineering
Anekal, Bengaluru - 562 106

06/01/2020

PRINCIPAL
Sri Sairam College Of Engineering
Sai Leo Nagar, Guddanahalli Post,
Anekal, Bengaluru - 562 106

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
## Scheme of Teaching and Examination 2018 – 19
## Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
## (Effective from the academic year 2018 – 19)

**III SEMESTER**

| Sl. No | Course and Course Code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | BSC | 18MAT31 | Transform Calculus, Fourier Series and Numerical Techniques | Mathematics | 2 | 2 | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PCC | 18EC32 | Network Theory | | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 3 | PCC | 18EC33 | Electronic Devices | | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 4 | PCC | 18EC34 | Digital System Design | | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | PCC | 18EC35 | Computer Organization & Architecture | | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18EC36 | Power Electronics & Instrumentation | | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 7 | PCC | 18ECL37 | Electronic Devices & Instrumentation Laboratory | | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 8 | PCC | 18ECL38 | Digital System DesignLaboratory | | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 9 | HSMC | 18KVK39/49 | Vyavaharika Kannada (Kannada for communication)/ | HSMC | -- | 2 | -- | -- | 100 | -- | 100 | 1 |
| | | 18KAK39/49 | Aadalitha Kannada (Kannada for Administration) | | | | | | | | | |
| | | OR | | | | | | | | | | |
| | | 18CPC39/49 | Constitution of India, Professional Ethics and Cyber Law | | 1 | -- | -- | 03 | 40 | 60 | | |
| | | | | | Examination is by objective type questions | | | | | | | |
| | | | | TOTAL | 17 | 10 | 04 | 24 | 420 | 480 | 900 | 24 |
| | | | | | OR | OR | | OR | OR | OR | | |
| | | | | | 18 | 08 | | 27 | 360 | 540 | | |

**Note:** BSC: Basic Science, PCC: Professional Core. HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course.

18KVK39Vyavaharika Kannada (Kannada for communication) is for non-kannada speaking, reading and writing students and 18KAK39 Aadalitha Kannada (Kannada for Administration) is for students who speak, read and write kannada.

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | NC MC | 18MATDIP31 | Additional Mathematics - I | Mathematics | 02 | 01 | -- | 03 | 40 | 60 | 100 | 0 |

(a)The mandatory non – credit courses Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B.Tech programs,shall attend the classes during therespective semesters to complete all the formalities of the course and appear for the University examination.In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the students have to fulfill the requirements during subsequent semester/s to appear for SEE.

(b)These Courses shall not beconsidered for vertical progression, but completion of the courses shall be mandatory for the award of degree.

**Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs**

Lateral entrant students from B.Sc. Stream, shall clear the non-credit courses Engineering Graphics and Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree.

AICTE Activity Points to be earned by students admitted to BE/B.Tech/B.Plan day college programme (For more details refer to Chapter 6,**AICTE Activity Point Programme, Model Internship Guidelines):**

Over and above the academic grades, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other Universities to fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card.

The activities can be can be spread over the years, anytime during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, minimum hours' requirement should be fulfilled. Activity Points (non-credit) have no effect on SGPA/CGPA and shall not be considered for vertical progression.

In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

**B. E. (Common to all Programmes)**
**Outcome Based Education (OBE) and Choice Based Credit System (CBCS)**
**SEMESTER - III**

**CONSTITUTION OF INDIA, PROFESSIONAL ETHICS AND CYBER LAW (CPC)**

| | | | |
|---|---|---|---|
| Course Code | **18CPC39/49** | CIE Marks | 40 |
| Teaching Hours/Week (L:T:P) | (1:0:0) | SEE Marks | 60 |
| Credits | 01 | Exam Hours | 02 |

**Course Learning Objectives:** To

- know the fundamental political codes, structure, procedures, powers, and duties of Indian government institutions, fundamental rights, directive principles, and the duties of citizens
- Understand engineering ethics and their responsibilities; identify their individual roles and ethical responsibilities towards society.
- Know about the cybercrimes and cyber laws for cyber safety measures.

**Module-1**

**Introduction to Indian Constitution:**
The Necessity of the Constitution, The Societies before and after the Constitution adoption. Introduction to the Indian constitution, The Making of the Constitution, The Role of the Constituent Assembly - Preamble and Salient features of the Constitution of India. Fundamental Rights and its Restriction and limitations in different Complex Situations. Directive Principles of State Policy (DPSP) and its present relevance in our society with examples. Fundamental Duties and its Scope and significance in Nation building.

**Module-2**

**Union Executive and State Executive:**
Parliamentary System, Federal System, Centre-State Relations. Union Executive – President, Prime Minister, Union Cabinet, Parliament - LS and RS, Parliamentary Committees, Important Parliamentary Terminologies. Supreme Court of India, Judicial Reviews and Judicial Activism. State Executives – Governor, Chief Minister, State Cabinet, State Legislature, High Court and Subordinate Courts, Special Provisions (Articles 370.371,371J) for some States.

**Module-3**

**Elections, Amendments and Emergency Provisions:**
Elections, Electoral Process, and Election Commission of India, Election Laws. Amendments - Methods in Constitutional Amendments (How and Why) and Important Constitutional Amendments. Amendments – 7,9,10,12,42,44, 61, 73,74, ,75, 86, and 91,94,95,100,101,118 and some important Case Studies. Emergency Provisions, types of Emergencies and its consequences.

**Constitutional special provisions:**
Special Provisions for SC and ST, OBC, Women, Children and Backward Classes.

**Module-4**

**Professional / Engineering Ethics:**
Scope & Aims of Engineering & Professional Ethics - Business Ethics, Corporate Ethics, Personal Ethics. Engineering and Professionalism, Positive and Negative Faces of Engineering Ethics, Code of Ethics as defined in the website of Institution of Engineers (India): Profession, Professionalism, and Professional Responsibility. Clash of Ethics, Conflicts of Interest. Responsibilities in Engineering Responsibilities in Engineering and Engineering Standards, the impediments to Responsibility. Trust and Reliability in Engineering, IPRs (Intellectual Property Rights), Risks, Safety and liability in Engineering

**Module-5**

**Internet Laws, Cyber Crimes and Cyber Laws:**
Internet and Need for Cyber Laws, Modes of Regulation of Internet, Types of cyber terror capability, Net neutrality, Types of Cyber Crimes, India and cyber law, Cyber Crimes and the information Technology Act 2000, Internet Censorship. Cybercrimes and enforcement agencies.

**Course Outcomes:** On completion of this course, students will be able to,

CO 1: Have constitutional knowledge and legal literacy.
CO 2: Understand Engineering and Professional ethics and responsibilities of Engineers.
CO 3: Understand the the cybercrimes and cyber laws for cyber safety measures.

**Question paper pattern for SEE and CIE:**

- The SEE question paper will be set for 100 marks and the marks scored by the students will proportionately be reduced to 60. The pattern of the question paper will be objective type (MCQ).
- For the award of 40 CIE marks, refer the University regulations 2018.

| Sl. No. | Title of the Book | Name of the Author/s | Name of the Publisher | Edition and Year |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **Textbook/s** | | | | |
| 1 | Constitution of India, Professional Ethics and Human Rights | Shubham Singles, Charles E. Haries, and et al | Cengage Learning India | 2018 |
| 2 | Cyber Security and Cyber Laws | Alfred Basta and et al | Cengage Learning India | 2018 |
| **Reference Books** | | | | |
| 3 | Introduction to the Constitution of India | Durga Das Basu | Prentice –Hall, | 2008. |
| 4 | Engineering Ethics | M. Govindarajan, S. Natarajan, V. S. Senthilkumar | Prentice –Hall, | 2004 |

| Sri SAIRAM COLLEGE OF ENGINEERING | Title : Lesson Plan | | |
|---|---|---|---|
| | Format No. FR-019 | Rev. No. 01 | Issue Date: 15/04/2016 |

**Academic Year** : 2020-2021
**Class** : ECE / II - Year /III SEM / A
**Staff Name** : Savitha H.S
**Course Name** : 18CPC39/49 - Constitution of India,Professional Ethics and Cyber Law

**Hours / Week** : 1
**Total Hours** : 15
**IA Mark** : 40
**Exam Hours** : 2
**Exam Marks** : 100
**Topic Type** : Module

| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 27/08/2020 | 1 | Module 1 | Introduction to Indian Constitution | The Necessity of the Constitution, The Societies before and after the Constitution adoption | CO1 | L1 | PPT | Text 1:Shubham Singles, Charles E. Haries, and Et al : "Constitution of India and Professional Ethics" by Cengage Learning India Private Limited, Latest Edition – 2018. Chapter 1 |
| 2 | 19/09/2020 | 1 | Module 1 | Introduction to Indian Constitution | Introduction to the Indian constitution,The making of the Indian Constitution, The Role of the Constituent Assembly - Preamble and Salient features of the constitution of india.Fundamental Rights and its Restriction and limitations in different Complex Situations. | CO1 | L1 | PPT | Text 1:Chapter 2 |
| | | | | | | | | | |



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| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 03/10/2020 | 3 | Module 1 | Introduction to Indian Constitution | Directive Principles of State Policy (DPSP) and its present relevance in our society with examples. Fundamental Duties and its Scope and significance in Nation building. | CO1 | L1 | PPT/MCQ | Text 1:Chapter 3 |
| 4 | 24/10/2020 | 4 | Module 2 | Union Excutive and State Excutive | Parliamentary System, Federal System, Centre-State Relations. | CO2 | L1 | PPT | Text 1:Chapter 11 |
| 5 | 06/11/2020 | 5 | Module 2 | Union Excutive and State Excutive | Union Executive – President, Prime Minister, Union Cabinet, Parliament - LS and RS, Parliamentary Committees, Important Parliamentary Terminologies. Supreme Court of India, Judicial Reviews and Judicial Activism | CO2 | L1 | PPT | Text 1:Chapter 11 |
| 6 | 06/11/2020 | 6 | Module 2 | Union Excutive and State Excutive | State Executives – Governor, Chief Minister, State Cabinet, State Legislature, High Court and Subordinate Courts, Special Provisions (Articles 370.371,371J) for some States. | CO2 | L1 | PPT/MCQ | Text 1:Chapter 12 |
| 7 | 13/11/2020 | 5 | Module 3 | Elections, Amendments and Emergency Provisions | Elections, Electoral Process, and Election Commission of India, Election Laws. | CO3 | L1 | PPT | Text 1:Chapter 31 |
| | | | | | | | | | |

| S.No | Proposed Date | Period | Module | T of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 13/11/2020 | 6 | Module 3 | Elections, Amendments and Emergency Provisions | Amendments - Methods in Constitutional Amendments (How and Why) and Important Constitutional Amendments. Amendments – 7,9,10,12,42,44, 61, 73,74, ,75, 86, and 91,94,95,100,101,118 and some important Case Studies. | CO3 | L1 | PPT | Text 1:Chapter 31 |
| 9 | 20/11/2020 | 5 | Module 3 | Elections, Amendments and Emergency Provisions | Emergency Provisions, types of Emergencies and it's consequences.Constitutional special provisions: Special Provisions for SC and ST, OBC, Women, Children and Backward Classes. | CO3 | L1 | PPT/MCQ | Text 1:Chapter 31 |
| 10 | 20/11/2020 | 6 | Module 4 | Responsibilities in Engineering | Scope & Aims of Engineering & Professional Ethics - Business Ethics, Corporate Ethics, Personal Ethics. | CO4 | L1 | PPT | Text 1:Chapter 28 |
| 11 | 27/11/2020 | 5 | Module 4 | Responsibilities in Engineering | Engineering and Professionalism, Positive and Negative Faces of Engineering Ethics, Code of Ethics as defined in the website of Institution of Engineers (India): Profession, Professionalism, and Professional Responsibility. | CO4 | L1 | PPT | Text 1:Chapter 28 |
| | | | | | | | | | |

| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 27/11/2020 | 6 | Module 4 | Responsibilities in Engineering | Clash of Ethics, Conflicts of Interest. Responsibilities in Engineering Responsibilities in Engineering and Engineering Standards, the impediments to Responsibility. Trust and Reliability in Engineering, IPRs (Intellectual Property Rights), Risks, Safety and liability in Engineering. | CO4 | L1 | PPT/MCQ | Text 1:Chapter 28 |
| 13 | 28/11/2020 | 4 | Module 5 | Internet Laws, Cyber Crimes and Cyber Laws | Internet and Need for Cyber Laws, Modes of Regulation of Internet, Types of cyber terror capability, | CO5 | L1 | PPT | Text 2:Alfred Basta and et al:" Cyber Security and Cyber Law"by Cengage Learning India Private Limited, Latest Edition – 2018. Chapter 1 |
| 14 | 04/11/2020 | 5 | Module 5 | Internet Laws, Cyber Crimes and Cyber Laws | Net neutrality, Types of Cyber Crimes, India and cyber law, Cyber Crimes and the information Technology Act 2000, Internet Censorship. | CO5 | L1 | PPT | Text 2:chapter1 |
| 15 | 12/12/2020 | 4 | Module 5 | Internet Laws, Cyber Crimes and Cyber Laws | Cybercrimes and enforcement agencies. | CO5 | L1 | PPT/MCQ | Text 2:chapter1 |

Faculty In-charge

Head of the Department

26/4/2020
Principal



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| Sri SAIRAM COLLEGE OF ENGINEERING | Title : Course Delivery Plan | | |
|---|---|---|---|
| | Format No<br>FR-013 | Rev No<br>02 | Issue Date<br>15/04/2016 |

**Branch** : ECE

**Year** : II - Year

**Academic Year** : 2020-2021

**Sem / Sec** : III SEM / A

| S.No | Subject Code | Subject Title | Hours/ Week | Total Hours Required to Complete Subject | Total Work Load | Section | Faculty Allocated | Resourse Required | University Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 18MAT31 | Transform calculus,Fourier series and Numerical techniques | 4 | 45 | 8 | A | Gangavathi P | Black Board,LCD | 4 |
| 2 | 18EC32 | Network Theory | 5 | 40 | 10 | A | A.Poonguzhali | Black Board,LCD | 5 |
| 3 | 18EC33 | Electronic Devices | 3 | 40 | 6 | A | P.Gowri | Black Board,CKS,LCD | 3 |
| 4 | 18EC34 | Digital System Design | 3 | 40 | 6 | A | Halesha H R | Black Board,Hands on Training | 3 |
| 5 | 18EC35 | Computer Organization & Architecture | 3 | 40 | 6 | A | Sivaprakash C | Black Board,Hands on Training,LCD | 3 |
| 6 | 18EC36 | Power Electronics & Instrumentation | 3 | 40 | 6 | A | RAJA.G.V. | Black Board,Hands on Training | 3 |
| 7 | 18ECL37 | Electronics Devices & Instrumentation Laboratory | 4 | 40 | 4 | A | A.Poonguzhali,RAJA. G.V. | CKS,Hands on Training | 4 |
| 8 | 18ECL38 | Digital System Design Laboratory | 4 | 48 | 4 | A | Halesha H R,Sivaprakash C,Aruna R | CKS,Hands on Training | 4 |
| 9 | 18CPC39/49 | Constitution of India,Professional Ethics and Cyber Law | 1 | 15 | 2 | A | Savitha H.S | Black Board | 1 |

23/11/20



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# VISVESVARAYA TECHNOLOGICAL UNIVERSITY
# BELAGAVI

## 3rd to 8th Semester BE- Electronics & Communication
## Scheme of Teaching and Examinations
**Outcome Based Education (OBE) and Choice Based Credit System (CBCS)**

**(Effective from the academic year 2018 – 19)**

27/7/19

Head of the Department
Dept. of Electronics & Communication Engineering
Sri Sairam College of Engineering
Anekal, Bengaluru - 562 106

06/01/2020

PRINCIPAL
Sri Sairam College Of Engineering
Sai Leo Nagar, Guddanahalli Post,
Anekal, Bengaluru - 562 106

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
## Scheme of Teaching and Examination 2018 – 19
## Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
## (Effective from the academic year 2018 – 19)

**V SEMESTER**

| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | HSMC | 18ES51 | Technological Innovation Management And Entrepreneurship | | 3 | 0 | -- | 03 | 40 | 60 | 100 | 03 |
| 2 | PCC | 18EC52 | Digital Signal Processing | | 3 | 2 | -- | 03 | 40 | 60 | 100 | 04 |
| 3 | PCC | 18EC53 | Principles of Communication Systems | | 3 | 2 | -- | 03 | 40 | 60 | 100 | 04 |
| 4 | PCC | 18EC54 | Information Theory & Coding | | 3 | -- | -- | 03 | 40 | 60 | 100 | 03 |
| 5 | PCC | 18EC55 | Electromagnetic Waves | | 3 | -- | -- | 03 | 40 | 60 | 100 | 03 |
| 6 | PCC | 18EC56 | Verilog HDL | | 3 | -- | -- | 03 | 40 | 60 | 100 | 03 |
| 7 | PCC | 18ECL57 | Digital Signal Processing Laboratory | | -- | 2 | 2 | 03 | 40 | 60 | 100 | 02 |
| 8 | PCC | 18ECL58 | HDL Laboratory | | -- | 2 | 2 | 03 | 40 | 60 | 100 | 02 |
| 9 | HSMC | 18CIV59 | Environmental Studies | Civil/ Environmental [Paper setting: Civil Engineering Board] | 1 | -- | -- | 02 | 40 | 60 | 100 | 01 |
| | | | | **TOTAL** | **19** | **08** | **4** | **26** | **360** | **540** | **900** | **25** |

**Note:** PCC:Professional Core, HSMC: Humanity and Social Science.

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

**B. E. ELECTRICAL AND ELECTRONICS ENGINEERING**
**Choice Based Credit System (CBCS) and Outcome Based Education (OBE)**
**SEMESTER – V**

## ENVIRONMENTAL STUDIES

| | | | |
|---|---|---|---|
| Course Code | **18CIV59** | CIE Marks | 40 |
| Teaching Hours / Week (L:T:P) | (1:0:0) | SEE Marks | 60 |
| Credits | 01 | Exam Hours | 02 |

**Module - 1**

**Ecosystems** (Structure and Function): Forest, Desert, Wetlands, Riverine, Oceanic and Lake.
**Biodiversity:** Types, Value; Hot-spots; Threats and Conservation of biodiversity, Forest Wealth, and Deforestation.

**Module - 2**

**Advances in Energy Systems** (Merits, Demerits, Global Status and Applications)**:** Hydrogen, Solar, OTEC, Tidal and Wind.
**Natural Resource Management** (Concept and case-studies): Disaster Management, Sustainable Mining, Cloud Seeding, and Carbon Trading.

**Module - 3**

**Environmental Pollution** (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts, Case-studies)**:** Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.
**Waste Management & Public Health Aspects:** Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge.

**Module - 4**

**Global Environmental Concerns** (Concept, policies and case-studies):Ground water depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology.

**Module - 5**

**Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications):** G.I.S. & Remote Sensing, Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs.
**Field work:** Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.

**Course Outcomes:** At the end of the course, students will be able to:

- CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
- CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
- CO3: Demonstrate ecology knowledge of a complex relationship between biotic and abiotic components.
- CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

**Question paper pattern:**

- The Question paper will have 100 objective questions.
- Each question will be for 01 marks
- Student will have to answer all the questions in an OMR Sheet.
- The Duration of Exam will be 2 hours.

| Sl. No. | Title of the Book | Name of the Author/s | Name of the Publisher | Edition and Year |
|---|---|---|---|---|
| **Textbook/s** | | | | |
| 1 | Environmental Studies | Benny Joseph | Tata Mc Graw – Hill. | 2nd Edition, 2012 |
| 2. | Environmental Studies | S M Prakash | Pristine Publishing House, Mangalore | 3rd Edition' 2018 |
| 3 | Environmental Studies – From Crisis to Cure | R Rajagopalan | Oxford Publisher | 2005 |
| **Reference Books** | | | | |
| 1 | Principals of Environmental | Raman Sivakumar | Cengage learning, | 2nd Edition, 2005 |

| | | | | |
|---|---|---|---|---|
| | Science and Engineering | | Singapur. | |
| 2 | Environmental Science – working with the Earth | G.Tyler Miller Jr. | Thomson Brooks /Cole, | 11th Edition, 2006 |
| 3 | Text Book of Environmental and Ecology | Pratiba Sing, Anoop Singh& Piyush Malaviya | Acme Learning Pvt. Ltd. New Delhi. | 1st Edition |

| Sri SAIRAM COLLEGE OF ENGINEERING | Title : Lesson Plan | | |
|---|---|---|---|
| | Format No. FR-019 | Rev. No. 01 | Issue Date: 15/04/2016 |

**Academic Year** : 2020-2021
**Class** : ECE / III - Year /V SEM / A
**Staff Name** : E Charles
**Course Name** : 18CIV59 - ENVIRONMENTAL STUDIES

**Hours / Week** : 1
**Total Hours** : 15
**IA Mark** : 40
**Exam Hours** : 2
**Exam Marks** : 100
**Topic Type** : Module

| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 09/02/2020 | 1 | Module - 1 | ECO SYSTEMS | Introduction: Environment - Components of Environment Ecosystem | CO1 | L1,L2 | Chalk & Talk, PPT | Book name:CH:1:1.3 |
| 2 | 09/09/2020 | 1 | Module - 1 | ECO SYSTEMS | Types & Structure of Ecosystem, Balanced ecosystem Human Activities – Food, Shelter, And Economic & Social Security | CO1 | L1,L2 | Chalk & Talk, PPT | Book name:CH:2:2.1 |
| 3 | 16/09/2020 | 1 | Module - 1 | ECO SYSTEMS | Impacts of Agriculture & Housing Impacts of Industry, Mining & Transportation | CO1 | L1,L2 | Chalk & Talk, PPT | Book name:CH:2: 2.2.1, 2.2.2 |
| 4 | 30/09/2020 | 1 | Module - 2 | ADVANCES IN ENERGY SYSTEMS | Natural Resources, Water resources – Availability & Quality aspects, Water borne diseases &water induced diseases | CO2 | L1,L2 | Chalk & Talk, PPT | Book name:CH:3:3.1,3.2 |
| 5 | 16/10/2020 | 4 | Module - 2 | ADVANCES IN ENERGY SYSTEMS | Fluoride problem in drinking water Mineral resources, Forest Wealth Material Cycles – Carbon Cycle, Nitrogen Cycle & Sulphur Cycle. | CO2 | L1,L2 | Chalk & Talk, PPT | Book name:CH:3:3.3, 3.4, 3.5 |



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| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 23/10/2020 | 4 | Module - 2 | ADVANCES IN ENERGY SYSTEMS | Energy – Different types of energy, Conventional sources & Non Conventional sources of energy Solar energy, | CO2 | L1,L2 | Chalk & Talk, PPT | Book name:CH:3: 3.7, 3.7.2, 3.7.3, 3.7.4, 3.7.5 |
| 7 | 06/11/2020 | 4 | Module - 3 | ENVIRONMENTAL POLLUTION | Environmental Pollution – Water Pollution, Noise pollution | CO3 | L1,L2 | Chalk & Talk, PPT | Book name:CH:5:5.1 |
| 8 | 10/10/2020 | 4 | Module - 3 | ENVIRONMENTAL POLLUTION | Land Pollution, Public Health Aspects. | CO3 | L1,L2 | Chalk & Talk, PPT | Book name:CH:5:5.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4 |
| 9 | 06/11/2020 | 4 | Module - 3 | ENVIRONMENTAL POLLUTION | Global Environmental Issues: Population Growth, | CO3 | L1,L2 | Chalk & Talk, PPT | Book name:CH:5:5.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4 |
| 10 | 07/11/2020 | 4 | Module - 4 | GLOBAL ENVIRONMENTAL CONCERNS | Solid Waste Management, E - Waste Management | CO4 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.1 |
| 11 | 13/11/2020 | 4 | Module - 4 | GLOBAL ENVIRONMENTAL CONCERNS | Biomedical Waste Management - Sources,Characteristics & Disposal methods | CO4 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.2 |
| 12 | 20/11/2020 | 4 | Module - 4 | GLOBAL ENVIRONMENTAL CONCERNS | Remote Sensing in Environmental Engineering Practices. | CO4 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.3, 10.4 |
| 13 | 27/11/2020 | 4 | Module - 5 | LATEST DEVELOPMENTS IN ENVIRONMENTAL POLLUTION MITIGATAION TOOLS | Environmental Acts & Regulations, Role of government | CO5 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.1 |

| S.No | Proposed Date | Period | Module | Title of the Module | Planned Topics | COC | BTL | ICT/Activity | Text Book / References |
|---|---|---|---|---|---|---|---|---|---|
| 14 | 04/12/2020 | 4 | Module - 5 | LATEST DEVELOPMENTS IN ENVIRONMENTAL POLLUTION MITIGATAION TOOLS | Legal aspects, Role of Nongovernmental | CO5 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.2 |
| 15 | 11/12/2020 | 4 | Module - 5 | LATEST DEVELOPMENTS IN ENVIRONMENTAL POLLUTION MITIGATAION TOOLS | Organizations (NGOs) , Environmental Education & Women Education | CO5 | L1,L2 | Chalk & Talk, PPT | Book name:CH:10:10.3, 10.4 |

Faculty In-charge

Head of the Department

Principal 26/11/2020

| Sri SAIRAM COLLEGE OF ENGINEERING | Title : Course Delivery Plan | | |
|---|---|---|---|
| | Format No<br>FR-013 | Rev No<br>02 | Issue Date<br>15/04/2016 |

**Branch** : ECE

**Year** : III - Year

**Academic Year** : 2020-2021

**Sem / Sec** : V SEM / A

| S.No | Subject Code | Subject Title | Hours/ Week | Total Hours Required to Complete Subject | Total Work Load | Section | Faculty Allocated | Resourse Required | University Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 18ES51 | TECHNOLOGICAL INNOVATION MANAGEMENT AND ENTREPRENEURSHIP | 3 | 40 | 6 | A | V K Tivari | Black Board,LCD | 3 |
| 2 | 18EC52 | DIGITAL SIGNAL PROCESSING | 5 | 40 | 10 | A | R.DEEPA | Black Board,CKS,Hands on Training | 5 |
| 3 | 18EC53 | PRINCIPLES OF COMMUNICATION SYSTEMS | 5 | 40 | 10 | A | K.P. Linija Shylin | Black Board,LCD | 5 |
| 4 | 18EC54 | INFORMATION THEORY and CODING | 3 | 40 | 6 | A | Aruna R | Black Board,LCD | 3 |
| 5 | 18EC55 | ELECTROMAGNETIC WAVES | 3 | 40 | 6 | A | P.Venugopal | Black Board,LCD | 3 |
| 6 | 18EC56 | Verilog HDL | 3 | 40 | 6 | A | Santosh Kumar N | Black Board,LCD | 3 |
| 7 | 17EC553 | Operating System | 3 | 40 | 6 | A | B.Srilatha | Black Board,LCD | 3 |
| 8 | 17ME563 | Automation And Robotics | 3 | 40 | 6 | A | A.Poonguzhali | Black Board,LCD | 3 |
| 9 | 18CIV59 | ENVIRONMENTAL STUDIES | 1 | 15 | 2 | A | E Charles | Black Board | 1 |
| 10 | 18ECL57 | DIGITAL SIGNAL PROCESSING LABORATORY | 4 | 56 | 4 | A | R.DEEPA,Savitha H.S | CKS,Hands on Training,LCD | 4 |
| 11 | 18ECL58 | HDL LABORATORY | 4 | 52 | 4 | A | V K Tivari,P.Gowri | CKS,Hands on Training | 4 |

23/11/2020



Printed on 21/11/2020 1:36 pm

Report generated throught EDUMATE

## 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

A Portfolio Company of TIMESINTERNET

### Green Audit Certificate

The External Quality Assurance Cell has conducted Green Audit of Sri Sairam College of Engineering for the Academic Year 2019-20.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Academic policies adopted by the institution. With this in mind, the specific objectives of the audit were to evaluate the adequacy of the management control framework the Departments to ensure that they are in compliance with the applicable regulations, policies and standards.

During the initial planning of the audit, an analysis was conducted in order to identify, evaluate and prioritize the quality parameters in line with the global accreditation standards. The analysis was based upon an examination of the policies, manuals and standards that govern the green/environment quality and sustainability, on data analysis, and on the results of preliminary interviews with personnel considered key in the environmental management in the campus. The criteria and methods used in the audit were based on the identified risks.

The methodology used included physical inspection, review of the relevant documentation, and interviews. Reliance was placed on the third-party data provided by the institution.

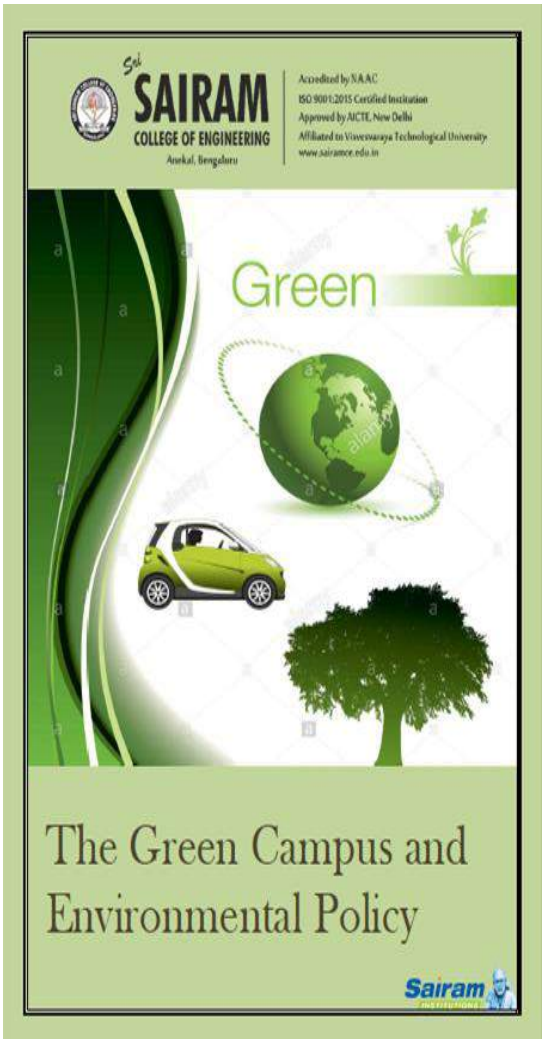
**Statement of Assurance**

This audit has been conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*.

In our professional judgement, sufficient and appropriate audit procedures were completed and evidence gathered to support the accuracy of the conclusions reached and contained in this report. The conclusions are based on a comparison of the situations as they existed at the time of the audit with the established Criteria.

Suman Nandy

Suman Nandy, CISA, CISSP, ITIL (Foundation)




http://sairamce.edu.in/wp-content/uploads/2021/05/Green-Campus-and-Environmental-Policy.pdf

# Plastic Free Campus

http://sairamce.edu.in/wp-content/uploads/2019/10/Plastic-Free-Campus-Policy.pdf

# Rain Water Harvesting System

Area available on Open Terrace : Around 8400 sq. ft. Capacity of Water tank connected with Rain Water Harvesting : 45000 Liters. Anekal has an average total accumulation of 5.0 inches rainfall in peak months

# Rooftop Solar Plant

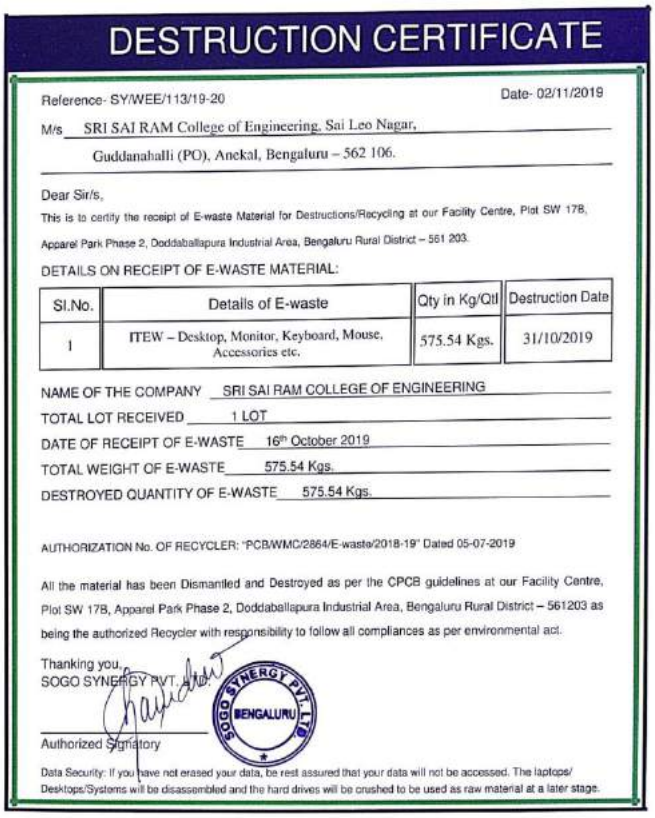
SAP070201

Increase substantially the share of renewable energy in the global energy mix

Renewable energy share in the total final energy consumption

**Capacity: 212 kWh**

# e-Waste Management



## DESTRUCTION CERTIFICATE

Reference- SY/WEE/113/19-20 Date- 02/11/2019

M/s SRI SAI RAM College of Engineering, Sai Leo Nagar,
Guddanahalli (PO), Anekal, Bengaluru – 562 106.

Dear Sir/s,

This is to certify the receipt of E-waste Material for Destructions/Recycling at our Facility Centre, Plot SW 178, Apparel Park Phase 2, Doddaballapura Industrial Area, Bengaluru Rural District – 561 203.

DETAILS ON RECEIPT OF E-WASTE MATERIAL:

| Sl.No. | Details of E-waste | Qty in Kg/Qtl | Destruction Date |
|---|---|---|---|
| 1 | ITEW – Desktop, Monitor, Keyboard, Mouse, Accessories etc. | 575.54 Kgs. | 31/10/2019 |

NAME OF THE COMPANY SRI SAI RAM COLLEGE OF ENGINEERING
TOTAL LOT RECEIVED 1 LOT
DATE OF RECEIPT OF E-WASTE 16th October 2019
TOTAL WEIGHT OF E-WASTE 575.54 Kgs.
DESTROYED QUANTITY OF E-WASTE 575.54 Kgs.

AUTHORIZATION No. OF RECYCLER: "PCB/WMC/2864/E-waste/2018-19" Dated 05-07-2019

All the material has been Dismantled and Destroyed as per the CPCB guidelines at our Facility Centre, Plot SW 178, Apparel Park Phase 2, Doddaballapura Industrial Area, Bengaluru Rural District – 561203 as being the authorized Recycler with responsibility to follow all compliances as per environmental act.

Thanking you,
SOGO SYNERGY PVT. LTD.

Authorized Signatory

SOGO SYNERGY PVT. LTD. BENGALURU

Data Security: If you have not erased your data, be rest assured that your data will not be accessed. The laptops/ Desktops/Systems will be disassembled and the hard drives will be crushed to be used as raw material at a later stage.

# Traditional / Medicinal Herbal Plants in the Campus

| Name of the Tree | Numbers |
|---|---|
| Gul Mohar | 33 Nos. |
| Coconut Trees | 04 Nos. |
| Honge Trees | 15 Nos. |
| Banyan Trees | 03 Nos. |
| Peepal Trees | 02 Nos. |
| Ashoka Tree | 59 Nos |
| Sandal Wood | 21 Nos. |
| Mahagoni | 204 Nos. |

| Name of the Tree | Numbers |
|---|---|
| Maththi | 212 Nos. |
| Neem | 53 Nos. |
| Malabar Plum | 108 Nos. |
| Thespesia Trees | 57 Nos. |
| Silver Oak | 25 Nos. |
| Jack Fruit | 04 Nos. |
| Mangoes | 06 Nos. |
| Drum Stick | 22 Nos. |

# Green Environment in Campus

# GREEN INITIATIVES IN AICTE - ACTIVITY POINTS