

**INDEX**

**B.A. (Honors) Humanities & Social Sciences (Sem-IV/V)**  
**CLUSTER INNOVATION CENTRE**

<b>SL.NO.</b>	<b>SUBJECT</b>	<b>PAGE NO.</b>
<b>1</b>	<b>SEMESTER-IV</b> <b>BSc. (Hons.) Humanities &amp; Social Sciences - DSC</b> <ol style="list-style-type: none"> <li>1. Introduction to Digital Humanities (DSC-10)</li> <li>2. Indian Philosophical Thinkers (DSC-11)</li> <li>3. Cultural Studies: Theories and Applications (DSC-12)</li> </ol> <b>Pool of DSE</b> <ol style="list-style-type: none"> <li>1. Technology and Human Interaction (DSE-02A)</li> <li>2. Constructively Engaging with Social Media (DSE-02B)</li> <li>3. Technology, Safety and Security (DSE-02C)</li> <li>4. Technoliteracy: Challenges and Opportunities (DSE-02D)</li> <li>5. Technology and Education (DSE-02E)</li> <li>6. Technology and Health (DSE-02F)</li> </ol>	2-14
<b>2</b>	<b>SEMESTER-V</b> <b>BSc. (Hons.) Humanities &amp; Social Sciences - DSC</b> <ol style="list-style-type: none"> <li>1. Climate Change and Environmental Degradation (DSE-03A)</li> <li>2. Sustainable Energy and Natural Resources (DSE-03B)</li> <li>3. Sustainable Agriculture and Food Systems (DSE-03C)</li> </ol> <b>Pool of DSE</b> <ol style="list-style-type: none"> <li>1. Circular Economy (DSE-03D)</li> <li>2. Social Justice and Equity (DSE-03E)</li> <li>3. Sustainable Cities and Communities (DSE-03F)</li> </ol>	15-22

**SEMESTER – IV**  
**B.A. (Honors) Humanities & Social Sciences**

**CLUSTER INNOVATION CENTRE**

**Category II**

**(UG Courses for Undergraduate Programme of study with Humanities & Social Sciences discipline as one of the Core Disciplines)**

**DISCIPLINE SPECIFIC CORE (DSC-10): Introduction to Digital Humanities**

**Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the Course
		Lecture	Tutorial	Practical/ Practice			
Introduction to Digital Humanities (DSC-10)	4	3	0	1	Class XII Pass	Nil	CIC

**Learning Objectives**

The Learning Objectives of this course are as follows:

- To introduce students to the theory and practice of digital humanities through critical learning and use of various digital tools and applications.
- Imparting technical skills and competencies for understanding and creating basic digital humanities resources.

**Learning Outcomes**

Upon completion of this course, students -

- will gain technical skills and competencies for understanding and creating basic humanities resources using digital tools.
- will be prepared to undertake more advanced courses in the fields of digital humanities and other related courses.

**SYLLABUS OF DSC-10**

**UNIT I: Introduction to Digital Humanities (12 hours)**

Defining Digital Humanities

Humanities Computing to Digital Humanities

The Elements of Digital Humanities

Text and Document

Object and Artefact

Image, Sound and Space

## **UNIT II: Digital Data, Tools and Methods (12 hours)**

### Digital Data and Information

Acquiring, Cleaning and Clearing Data

Shapes of Data – Structured, Unstructured and Semi-structured Data

Understanding File Types – Plain Text; CSV; JSON; HTML; XML; Binary Files

### Digital Data Creation

Digitising Text with OCR

Digitising Text with Crowdsourcing

Digitising Objects

Digitising Audio/Visual Information

### Tools for Extracting and Analysing Digital Data

Text-based Tools

Data-based Tools

Image and Sound-based Tools

### Data Visualization and Storytelling

### Geospatial Digital Humanities

## **Unit III: Meta Issues in Digital Humanities (12 hours)**

Education, Collaboration, Publication and Preservation

Gender and Other Divides

Digital Humanities Theory

Copyright and Open Access

## **UNIT IV: Debates in Digital Humanities (9 hours)**

Methods

Practices

Disciplines

### **Practical component (if any) -**

**(30 Hours)**

Students will be trained in various tools used in digital humanities. Case studies of effective creation of digital resources using digital methods and tools in the context of India will also be discussed and evaluated.

### **Essential/recommended readings**

- Gardiner, Eileen and Musto, Ronald G. 2015. The Digital Humanities. Cambridge University Press
- Gold, M. K. and Klein, L. F. 2016. Debates in the Digital Humanities. University of Minnesota Press.

### **Suggestive readings**

- Burdick, Annie et.al., 2012. Digital Humanities, Cambridge: The MIT Press.
- Susan Schreibman, Ray Siemens, John Unsworth. 2004. A Companion to Digital Humanities. Blackwell Publishing Ltd.
- Susan Schreibman, Ray Siemens, John Unsworth. 2016. A New Companion to Digital Humanities. Wiley Blackwell.
- Eve, Martin Paul. 2014. Open Access and the Humanities: Contexts, Controversies and the Future. Cambridge University Press.

- Dykes, Brent. 2020. Effective Data Storytelling: How to Drive Change with Data, Narrative and Visuals. Wiley.

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

### DISCIPLINE SPECIFIC CORE (DSC-11): Indian Philosophical Thinkers

#### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the Course
		Lecture	Tutorial	Practical/ Practice			
Indian Philosophical Thinkers (DSC-11)	4	3	1	0	Class XII Pass	Nil	CIC

#### Learning Objectives

The Learning Objectives of this course are as follows:

- to develop critical thinking, by introducing a wide range of philosophical debates.
- to equip the students to engage with Indian philosophical debates.

#### Learning Outcomes

Upon completion of this course –

- students will have an understanding and evaluation of philosophies from Indian perspective.
- students will be skilled at mapping philosophical diversity within the Indian traditions of philosophy.

### SYLLABUS OF DSC-11

#### Unit-I Ancient and Medieval Thinkers (6 hours)

- Bhishm: Rajdharma
- Kautilya: Inter-state Relations
- Kabir: Symbols of Resistance

#### Unit- II Swami Vivekananda (9 hours)

- Concept of Non-Dualism in the light of Modernity
- Vivekananda's idea of Education

#### Unit- III M K Gandhi (9 hours)

- Gandhi's critique of Modernity
- Gandhi on Religious Conversion and Swadeshi

#### Unit- IV Vinayak Damodar Savarkar (9 hours)

- Hindutva

- Cultural Nationalism

**Unit- V Dr. B.R. Ambedkar (9 hours)**

- The debate between Ambedkar and Gandhi on Caste
- Ambedkar's idea of Feminism

**Practical component (if any) - NIL**

**Essential/recommended readings**

- Kautilya. Kautilya's Arthashastra. (Translated by Shamasastri, R.). Mysore Publishing & Printing House, 1967.
- Pandey, Priyanka. 2019. Rajadharma in Mahabharata: With Special reference to Santi-Parva. D.K. Printworld.
- Vivekananda, S. 1989. The Complete works of Swami Vivekananda by Swami Vivekananda (Volume 5). Advaita Ashrama: Kolkata.
- Vivekananda, S. 2001. Jnana Yoga. Vedanta Press.
- Gandhi, M. 2009. Hind Swaraj. Rajpal& Sons.
- Gandhi, M. 2011. My Experiments with Truth. Maple Press.
- Ambedkar, B.R. 2021. Annihilation of Caste. Maple Press.
- Sampath, V. 2022. Savarkar: A contested Legacy from A Forgotten Past: The complete 2-Volume Biography of Savarkar. Penguin Random House India.
- Roy, H. & Singh, M.P. 2020. Indian Political Thought: Themes and Thinkers. 2<sup>nd</sup> Eds. Pearson Education.
- Bahuguna, R.P. 'Symbols of Resistance' in Bismoy Pati et. al. (ed) *Negotiating India's Past*. Tulika Books. 2003. p. 235.

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## DISCIPLINE SPECIFIC CORE (DSC-12): Cultural Studies: Theories and Applications

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the Course
		Lecture	Tutorial	Practical/ Practice			
<b>Cultural Studies: Theories and Applications (DSC-12)</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>Class XII Pass</b>	<b>Nil</b>	<b>CIC</b>

### Learning Objectives

The Learning Objectives of this course are as follows:

- To make students critically analyse the role of Cultural Studies in understanding human evolution and processes of Knowledge Production.
- To expose students to various facets of Cultural Studies.
- To equip students to apply the concepts and discourses of Cultural Studies in the context of Humanities and Social Sciences.

### Learning Outcomes

Upon completion of this course, students –

- will be able to critically analyse the role of Cultural Studies in understanding human evolution and processes of Knowledge Production.
- will be able to apply the concepts and discourses of Cultural Studies in the context of Humanities and Social Sciences.

## SYLLABUS OF DSC-12

### Unit 1: Key concepts in Cultural Studies (9 hours)

Power  
Representation  
Materialism  
Non-reductionism

### Unit 2: Historical Development of Cultural Studies (12 hours)

Early beginnings: Richard Hoggart  
Culture is Ordinary: Raymond Williams  
Encoding and Decoding: Stuart Hall  
Media, Culture and Society

### Unit 3: Strands in Cultural Studies (12 hours)

Cultural Hegemony  
Structuralism/Post-Structuralism  
Psychoanalysis and Subjectivity  
  
Everyday Life and Popular Culture

Subversion

**Unit 4: Identity and Cultural Studies (12 hours)**

Social Identities

Gender and Identity

Hybrid Identity

Politics of Identity

**Practical component (if any) - NIL**

**Essential/recommended readings**

- Barker, C. 2003. Cultural Studies: Theory and Practice. Sage Publications
- Williams, R. 2017. Culture and Society. Vintage Publishing.
- Fiske, J. 2011. Understanding Popular Culture. Routledge.

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## DISCIPLINE SPECIFIC ELECTIVE (DSE-02A): Technology and Human Interaction

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
<b>Technology and Human Interaction (DSE-02A)</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>Class XII Pass</b>	<b>Students must be familiar with the concepts (or related concepts) taught under Technology &amp; Society (DSC-02)</b>

### Learning Objectives

The learning objectives of this course are as follows:

- To make the student learn the intersection between technological development and social progress.
- To equip students with appropriate tools and techniques to solve social problems through technological interventions.

### Learning Outcomes

Upon completion of this course,

- students will be skilled at drawing connections between technological development and social progress.
- students will be skilled at using suitable tools to solve social problems through technological interventions.

### OUTLINE OF DSE-02A

The ubiquity of technical tools around us has forced humanity to think about the implications of this ever-evolving interaction. The sheer scale and speed of technological development in the last century is unprecedented and therefore, it has become more important than ever before to study and analyse human-technology interface. This is an intervention-based module and therefore the students will be guided to bring out technological solutions to social problems. Students will explore the possibilities of using traditional skills and techniques as well as modern technology for helping the problem-solving process especially in slums and rural areas. The scope of this paper would also include engaging with issues arising out of the application of Artificial Intelligence for social good. Students will be encouraged to involve various stakeholders, the concerning agencies and other communities pursuing similar goals.

#### Theoretical Component (01 credit)

**15 hours**

Overview of technology and human interaction, Actor-Network Theory, technology and social change, techno-ethics, Affordances and Constraints

#### Indicative Themes:

- Impact of technology on various aspects of human interactions
- Ethical implications of technology
- Digital well-being
- Human-centred Design



**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

**DISCIPLINE SPECIFIC ELECTIVE (DSE-02B): Constructively Engaging with Social Media**

**Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Constructively Engaging with Social Media (DSE-02B)	4	1	0	3	Class XII Pass	Students must be familiar with the concepts (or related concepts) taught under Technology & Society (DSC-02)

**Learning Objectives**

The learning objectives of this course are as follows:

- To engage students with various dimensions, debates and discourses related to social media.
- To analyse the impact of social media on society, culture and individuals.
- To make students learn effective social media strategies for education, innovations and entrepreneurship.

**Learning Outcomes**

Upon completion of this course,

- students will be able to engage with the various dimensions, debates and discourses related to social media.
- students will be able to analyse and assess various impacts of social media.
- students will be skilled in using social media strategies in the areas of education, innovations and entrepreneurship.

**OUTLINE OF DSE-02B**

The advent of social media has revolutionised human communication and relations in unimaginable ways. It has surmounted the geographical distance and national boundaries connecting millions across the globe. However, this has also presented new challenges from the point of view of an individual, culture and society. This is an intervention-based module and therefore students will be mentored to constructively use social media towards their individual growth as well as for public good. By understanding the unique character of various social media platforms and their potential, students will be encouraged to use these tools for social good. Students will work towards developing awareness campaigns exploiting strengths of social media, content creation and utilising social media potential for social innovations and entrepreneurship.

**Theoretical Component (01 credit)**

**15 hours**

History and evolution of social media, Network Theory, Technological Determinism, Mediated Communication, Surveillance Capitalism

**Indicative Themes:**

- Social media and awareness campaigns
- Social media as an alternative to mainstream media
- Using social media for crowdsourcing
- Using social media for start-ups

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

**DISCIPLINE SPECIFIC ELECTIVE (DSE-02C): Technology, Safety and Security**

**Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Technology, Safety and Security (DSE-02C)	4	1	0	3	Class XII Pass	Students must be familiar with the concepts (or related concepts) taught Technology & Society (DSC-02)

**Learning Objectives**

The learning objectives of this course are as follows:

- To make students understand the various issues and challenges related to security and safety of the digital data.
- To guide students for a comprehensive assessment of safety and security measures related to technology.
- To enable students to bring out effective strategies of safety and security in the digital space.

**Learning Outcomes**

Upon completion of this course,

- students will be alert to different types of risks and vulnerabilities in the digital space.
- students will be able to analyse the ethical and social implications of data security and safety.
- students will be able to develop effective strategies for safety and security in the digital space.

**OUTLINE OF DSE-02C**

While technology has provided us with excellent tools to monitor and secure our public spaces, it has also presented us with issues of privacy and cyber-crimes like phishing. This is an intervention-based paper aimed at understanding digital security and safety challenges. Once the students understand these issues they will attempt to bring out effective strategies and

communicate the same to society through workshops, seminars and talks, awareness campaigns, publishing research and newspaper articles, producing mass media programmes such as blogs, vlogs, and other creative mediums. The students will be encouraged to involve various stakeholders, the concerning agencies and other communities pursuing similar goals.

### Theoretical Component (01 credit)

**15 hours**

Digital literacy, legal literacy relevant to privacy and individual rights, understanding the digital world, strengths and challenges of digital communication, digital ethics

### Indicative Themes:

- Digital Literacy campaigns
- Cyber frauds
- Cyber crimes

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

### DISCIPLINE SPECIFIC ELECTIVE (DSE-02D): Techno-literacy: Challenges and Opportunities

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Technoliteracy: Challenges and Opportunities (DSE-02D)	4	1	0	3	Class XII Pass	Students must be familiar with the concepts (or related concepts) taught under Technology & Society (DSC-02)

### Learning Objectives

The learning objectives of this course are as follows:

- To make students understand the various issues and challenges related to digital literacy in the context of diverse demography.
- To sensitize and train students on digital literacy.

### Learning Outcomes

Upon completion of this course,

- students will be able to analyse the various issues and challenges related to digital literacy.
- students will be able to develop training programs/modules on digital literacy.
- students will be able to assess the effectiveness of digital literacy training programs.

### OUTLINE OF DSE-02D

Technology has greatly enhanced the quality of life. The advent of World Wide Web, at the fag end of the last century itself has revolutionised how societies interact and transact. In this context, developing countries have a challenge to not just innovate and adopt new technologies but also take their citizenry along so that they are enabled to use it for their own good. This is an intervention-based module and therefore the students will be guided to identify areas and communities where techno-literacy is lacking. They will also be trained and sensitised to be able to carry out such training and sensitisation workshops/ talks/ discussions/ plays etc. in the concerned communities. Students will be encouraged to involve various stakeholders, the concerning agencies and other communities pursuing similar goals.

### **Theoretical Component (01 credit)**

**15 hours**

The concept and context of technoliteracy, its relevance and need; technological determinism; digital divide; challenges and barriers in technoliteracy

### **Indicative Themes:**

- Digital literacy
- Digital divide
- Opportunities, challenges and barriers in technoliteracy

### **Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

### **DISCIPLINE SPECIFIC ELECTIVE (DSE-02E): Technology and Education**

### **Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Technology and Education (DSE-02E)	4	1	0	3	Class XII Pass	Students must be familiar with the concepts (or related concepts) taught under Technology & Society (DSC-02)

### **Learning Objectives**

The learning objectives of this course are as follows:

- To make students understand the use of technology in the teaching-learning process.
- To equip students with effective technological tools and skills that will meet the varied educational needs of a diverse population.

### **Learning Outcomes**

Upon completion of this course,

- students will have knowledge about the role and importance of technology in the teaching-learning process.

- students will be skilled in using technology to meet the challenges in education.

## OUTLINE OF DSE-02E

Like all aspects of human institutions the education system has also been transformed by technology from time to time. However, with the advancement of the world wide web and artificial intelligence there is a fundamental question on the need of human agency as a mediator in the process of education. Therefore, it has become important on one hand to harness the potential of technology for imparting education on the other hand it has become equally important to assess and reinvent the role of human agency in this process. This is an intervention-based module and therefore the students will be guided to explore the role and importance of technology in the teaching-learning process, especially in India. The students will be equipped with a specific set of tools and skills to create applications and platforms to help people and institutions engaged with imparting education. They will work towards improving educational accessibility in underprivileged communities and areas.

### Theoretical Component (01 credit)

**15 hours**

Use of technology in teaching-learning process, potential of technology to bridge the gap between illiteracy and education in India; issues and challenges in use of technology in education

### Indicative Themes:

- Access to education through digital media
- Developing educational tools using technology
- issues and challenges in use of technology in education

### Practical component (if any) - 75 %

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## DISCIPLINE SPECIFIC ELECTIVE (DSE-02F): Technology and Health

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Technology and Health (DSE-02F)	4	1	0	3	Class XII Pass	Students must be familiar with the concepts (or related concepts) taught under Technology & Society (DSC-02)

### Learning Objectives

The learning objectives of this course are as follows:

- To make students aware about the role of technology in the assessment, diagnosis and treatment in healthcare.
- To encourage students to use technology for health promotion in society.

### Learning Outcomes

Upon completion of this course,

- students will be able to design innovative strategies that will educate the public on the role of technology in assessment, diagnosis and treatment in healthcare.
- students will be skilled in using technology for health promotion in society.

### OUTLINE OF DSE-02F

Modern lifestyle has presented humanity with a myriad health issues which has put immense pressure on the conventional methods of diagnosis and treatment of diseases and/ disorders. With the advent and tremendous progress in technology, delivery of healthcare services has not only become faster, easier and cost-effective, but it has also made prevention and awareness programmes more accessible. Today, we have access to innovative tools and devices that make it easy to assess health, do quicker diagnosis and receive faster treatments. This paper is thus designed to introduce students to study and evaluate the intersection of technology and health in being able to provide and promote better healthcare facilities.

#### Theoretical Component (01 credit)

**15 hours**

Health and well-being, technology and health, social medicine and community health in light of technology, technology and mental health.

#### Indicative Themes:

- Technology and health and well-being
- Technological advances in healthcare facilities
- Issues of ethics in use of technology in healthcare services
- Social Medicine and Community Health

#### Practical component (if any) - 75 %

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch University of Delhi, from time to time.

**SEMESTER – V**  
**B.A. (Honors) Humanities & Social Sciences**  
**CLUSTER INNOVATION CENTRE**  
**Category II**

**(UG Courses for Undergraduate Programme of study with Humanities & Social Sciences discipline as one of the Core Disciplines)**

**DISCIPLINE SPECIFIC ELECTIVE (DSE-03A): Climate Change and Environmental Degradation**

**Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Climate Change and Environmental Degradation (DSE-03A)	4	1	0	3	Class XII Pass	Students must be familiar with concepts taught in any course on environmental science and sustainable development

**Learning Objectives**

- To enable students to understand and address the risks from climate change and environment degradation.
- To enable students to assess the natural hazards, vulnerabilities and risks associated with climate change.
- To help students determine the public perception on climate change and environment degradation.

**Learning Outcomes**

- Students will develop adequate knowledge of the complexity and relationship between climate change and environment degradation.
- Students will be able to do quantitative and qualitative assessment of climate change using spatial data.
- Students will be skilled in designing strategies to counter and change public perception on climate change and environment degradation.

**OUTLINE OF DSE-03A**

Environmental degradation which is a consequence of centuries of unsustainable practices has further been exacerbated by climate change in more recent times. The combined effect of climate change and environmental degradation affects all types of development initiatives that various countries have taken up. This project will thus involve encouraging students to understand the factors responsible for climate change, its relationship with environmental

degradation, ways to mitigate the negative consequences of climate change and environmental degradation and also initiate discussions on sustainable efforts through workshops, awareness programs and hands-on learning.

### **Theoretical Component (01 credit)**

**15 hours**

Overview of carbon emission, interaction between air pollutants in the atmosphere, introduction to atmospheric science and climatic phenomenon, introduction to water budget systems in the atmosphere, biosphere and lithosphere, climate change and impact to the various communities of plants and animals such as habit shift, drought, migration etc.

### **Indicative Themes:**

- Impact of Human Activity on Environment
- Preserving Ecosystems
- Mitigation and Adaptation

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## **DISCIPLINE SPECIFIC ELECTIVE (DSE-03B): Sustainable Energy and Natural Resources**

### **Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
<b>Sustainable Energy and Natural Resources (DSE-03B)</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>Class XII Pass</b>	<b>Students must be familiar with concepts taught in any course on sustainability and efficient use of natural resources</b>

### **Learning Objectives**

- To address the environmental consequences associated with the exploitation of natural resources.
- To address the different environmental impacts caused by fossil fuels and thermal power plants.
- To make students aware about different ways of energy efficiency use.

### **Learning Outcomes**

- Students will gain a comprehensive understanding of sustainable energy and natural resources.
- Students will be equipped with the knowledge and tools to make informed decisions about sustainable development in their personal and professional lives.



## OUTLINE OF DSE-03B

The course will engage with some of the issues around the impact of energy use on climate change, the concept of renewable energy, energy efficiency, natural resource management, sustainable development, and policy and regulation. Students will learn about different renewable energy technologies, including solar, wind, hydroelectric, geothermal, and bioenergy. The course will also explore the importance of energy efficiency in buildings, appliances, and transportation. The concept of sustainable development will be discussed, with a focus on balancing economic development and environmental protection. The course will also cover policy and regulation related to energy and natural resources, as well as the socioeconomic impacts of sustainable development.

### Theoretical Component (01 credit)

15 hours

Introduction to sustainable energy, natural resources and its depletion and different forms of impact caused by anthropogenic activities on natural resources.

### Indicative Themes:

- Renewable and non-renewable resources
- Renewable energy
- Affordable and clean energy

Practical component (if any) - 75 %

90 hours

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## DISCIPLINE SPECIFIC ELECTIVE (DSE-03C): Sustainable Agriculture and Food Systems

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Sustainable Agriculture and Food Systems (DSE-03C)	4	1	0	3	Class XII Pass	Students must be familiar with concepts related to sustainability and technology's role in agriculture

### Learning Objectives

- To introduce students to the elements of sustainable agriculture.
- To enable students to explore the economic, social and environmental dimension of sustainable agriculture and food systems.
- To explore the factors affecting ecological balance and sustainable agriculture systems.

### Learning Outcomes

- Students will be able to appreciate and foreground the sustainable agricultural practices in the larger public sphere.
- Students will gain a holistic understanding entailing the economic, social and environmental dimensions of sustainable agriculture and food systems.
- Students will be equipped to make informed decisions about their food choices.

### OUTLINE OF DSE-03C

With a rapidly increasing human population, spurt in urbanization, varying food needs, growing wealth, environment degradation affecting food production, knowledge and discussion about sustainable agriculture and sustainable food systems have become imperative. This course will encourage students to examine the principles and practices of sustainable agriculture and food systems. Principles of agroecology, sustainable livestock management, challenges of sustainable and equitable food systems and policy and regulation related to sustainable agriculture and food systems will also be studied under this course. The course will help students lead campaigns towards making the public more aware about sustainable agriculture and food practices.

#### Theoretical Component (01 credit)

**15 hours**

Overview of ecosystem, interaction between biotic and abiotic environment components, energy and nutrient cycles, ecosystem services and biodiversity functioning.

#### Indicative Themes:

- Environmentally sustainable, socially just, and economically viable agricultural practices
- Access to healthy and sustainable food for all

#### Practical component (if any) - 75 %

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## DISCIPLINE SPECIFIC ELECTIVE (DSE-03D): Circular Economy

### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
<b>Circular Economy (DSE-03D)</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>Class XII Pass</b>	<b>Students must be familiar with concepts related to environmental conservation and waste management</b>

### Learning Objectives

- To gain a comprehensive understanding of circular economy.
- To understand the importance and practices of reducing waste, waste management, recycling, and reusing.
- To appreciate ethical production and consumption.

### Learning Outcomes

- Students will be equipped with the knowledge and tools to make informed decisions about implementing circular economy practices in their personal and professional lives.
- Students will be able to practice ethical production and consumption in their personal and professional lives.

### OUTLINE OF DSE-03D

The course engages with concepts such as circular economy, the importance of resource efficiency, the role of business models, the principles of the circular economy, and the challenges and opportunities of implementing circular economy practices. Students will learn about waste management, recycling, reusing to gain an understanding of the importance of resource efficiency, including the efficient use of energy, water, and materials. The course will explore the role of business models in circular economy, including product-as-a-service, sharing economy, and closed-loop supply chains. Students will be introduced to the policy and regulatory frameworks, the importance of stakeholder engagement, and the role of innovation and technology.

#### Theoretical Component (01 credit)

**15 hours**

Concept of circular economy, ethical production and consumption, waste management & recycling and sustainable product design

#### Indicative Themes:

- Consumer awareness and behaviour change.
- Sustainable material and design.
- Product life-cycle analysis.

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

### DISCIPLINE SPECIFIC ELECTIVE (DSE-03E): Social Justice and Equity

#### Credit Distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Social Justice and Equity (DSE-03E)	4	1	0	3	Class XII Pass	Students must be familiar with concepts of equity and inclusion with respect to sustainability

#### Learning Objectives

- To introduce students to concepts of intersection of environmental sustainability and social justice.
- To develop strategies for promoting social justice and equity with respect to environment sustainability.

#### Learning Outcomes

- Students will develop a comprehensive understanding of the principles and practices of social justice and equity with respect to sustainability.
- Students will be skilled in developing strategies that will engage communities in collective actions towards sustainable future.

#### OUTLINE OF DSE-03E

This course orients students to the history and theories of social justice including distributive justice and the principles of fairness, equality, and human rights, intersectionality of social identities, importance of representation and inclusion, and the challenges and opportunities of creating a more just and equitable society. Students will learn about the role of media, arts and culture in shaping social norms and values including the role of activism and social movements, and the need for policy and institutional change. Students will also gain an understanding of the socioeconomic and environmental impacts of social justice and equity, including the importance of addressing issues of poverty, inequality, and environmental degradation.

#### Theoretical Component (01 credit)

**15 hours**

Environmental Justice, Intersectionality, Environmental Racism, Just Transition, Eco-feminism and Participatory Democracy.

#### Indicative Themes:

- Intersection of environmental sustainability and social justice.
- Access to basic resources.
- Education and awareness: engaging communities in collective action towards a sustainable future.
- Gender and Environment.

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

### **DISCIPLINE SPECIFIC ELECTIVE (DSE-03F): Sustainable Cities and Communities**

#### **Credit Distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
<b>Sustainable Cities and Communities (DSE-03F)</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>Class XII Pass</b>	<b>Students must be familiar with concepts taught in any course on sustainability and Development</b>

#### **Learning Objectives**

- To enable students to have a comprehensive understanding of key concepts of sustainable cities.
- To introduce students to the principles and best practices of sustainable cities.
- To examine the role of community in realisation and promotion of sustainable urban development.

#### **Learning Outcomes**

- Students will learn about the challenges and opportunities of creating sustainable cities and communities.
- Students will gain an understanding of the principles of sustainable urban planning.
- Students will be able to develop effective strategies in exploring and catalysing the role of community in sustainable urban development.

#### **OUTLINE OF DSE-03F**

The course engages with concepts of sustainable urban planning, community engagement, green infrastructure, and urban resilience. Students will also examine the role of community engagement in sustainable urban development, including the importance of stakeholder involvement in decision-making processes. Students will learn about the benefits of green infrastructure, urban resilience etc. Students will be encouraged to analyze case studies of sustainable cities and communities, and explore best practices and innovative solutions for creating sustainable urban environments.

#### **Theoretical Component (01 credit)**

**15 hours**

Urban sprawl and urbanisation in developing countries, inbound and outbound migration, satellite cities & urbanisation and urban ecology.

#### **Indicative Themes:**

- Sustainable urban development that prioritises livability, accessibility, and environmental sustainability.
- Urban Dualism.

**Practical component (if any) - 75 %**

**90 hours**

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.