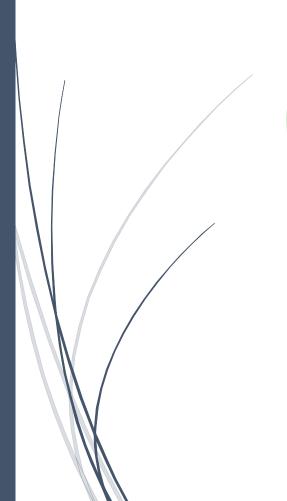


SDG 17









he advancement of the society in this age is only possible with mutual cooperation, collaboration, extending help to each section of the society and sharing of resources. The efficiency of achieving the SDGs become more while working in collaboration than an individual. This is true whether it is applicable for a person or an organization or a country. Wastage of resources must be zero and at the same time abundant resources must be generously shared with those not having access. This mutual cooperation is the fundamental principle of sustainability with involvement and participation of all. UN SDG17 aims to revitalize the global partnership for sustainable development. In line with UN SDG principle DIT University firmly believes in collaboration be it in research or resource sharing or implementation of its work culture not only inclusive but exclusive of University premises. The supportive and flexible work culture of DIT University essentially lies on the proposition of trust-integrity, employee engagement-opportunities, respect-fairness.



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University's Educational Initiatives to offer mandatory courses: on Sustainability Issues

DIT University believes that United Nations' sustainable development Goals (SDGs) are not only guiding principles for society but have to be implemented through education, research, technology innovation and execution at ground level. For this, the students are the best flag bearers and when they will learn the topics through various courses and do hands on training on various aspects of SDGs they will be able to understand its importance and will carry the inner message after passing out and implement effectively same in society through their career path and doable actions.

DIT University offers **Environmental science(CHF201)** course as mandatory course which is related to **SDG 3**, **6**, **11**, **13**, **14**. This course is taken by all students who are pursuing undergraduate degree at DIT University. The course teaches about environmental components, pollution sources, mitigation and sustainable approaches.

University also offers a course **MEF483**, **Entrepreneurship and Start-ups** which are mandatory for all Engineering students where the objective of the course is to provide practical strategies of business incubation, transforming technological ideas to profitable business model focusing on medicines, automation, alternative energy sources, green processes, sustainable constructions etc essentially focusing **SDG 6**, **7**, **9**, **11**, **12**



Environmental Science – CHF-201			
Program: Bachelor Program (all branches) Ye	ar: I/II nd Year Sem	ester: I/II/III/IV	
Subject Code		CHF 201	
Marks		100	
Number of Lecture Hours/Week		2	
Total Number of Contact Hours		2x16 = 32	
Credits		(LTP:200)	

Subject Objective:

To Impart basic knowledge about the environment and its allied problems and to develop an attitude of concern for the environment. Further the course structure will create the awareness about environmental problems among students and motivate the students to participate in environment protection and environment improvement programs. The course aims to develop skills to help the concerned individuals in identifying and solving environmental problems.

CHF-201 Environmental Science Course Outcome:

At the end of the course, the student will be able to:

- CO 1. Demonstrate depleting nature of Environmental Resources and Ecosystem concepts.
- CO 2. Able to identify the structure and functioning of natural ecosystems.
- CO 3. Establish man-wildlife harmonious relationship.
- CO 4. Adapt to 3R (Reuse, Recovery, Recycle). Identify the causes and control measures related to pollutions.
- CO 5. Illustrate and analyze various Case Studies related to Environmental issues and Env. Legislation.

Particulars	Hours	
Unit 1: Basics of Environment and Natural Resources		



Definition and Concept of Environment, Multidisciplinary nature of environmental	
studies. Scope and importance of environmental studies, Need for public awareness,	
Environmental concerns and people. Introduction and classification of natural	
resources. Energy Resources, Water Resources, Land Resources, Forest Resources,	06
Food Resources, Mineral Resources, Case studies related to over exploitation of	
resources and their impacts. Role of an individual in conservation of natural	
resources, Sustainable lifestyles.	
Unit 2: Ecosystems	
Definition and concept of ecology, Structure and Function of an Ecosystem, Energy	
Flow in Ecosystems, Biogeochemical cycles (Nitrogen, Carbon, Phosphorus, Oxygen,	
Hydrological). Species interactions in ecosystems. Ecological succession and	06
ecological pyramids. Characteristic features of grassland, pond, desert and forest	
ecosystems. Ecosystem services and conservation	
Unit 3: Biodiversity and its conservation	
Introduction and types of biodiversity. Bio-geographic classification of India, Value	
and significance of biodiversity, Biodiversity at global, national and local levels, India:	
A mega-diversity nation, Biodiversity hotspots, Threats to Biodiversity: Poaching and	06
man-wildlife conflicts, IUCN Red Data Book and endangered & endemic species of	
India. Biodiversity conservation strategies, Institutes and organizations.	
Unit-4 Environmental Pollutions:	
Introduction and Definition. Causes, consequences and control measures of: Air	
pollution, Water pollution, Noise pollution, Nuclear pollution, Soil pollution,	
Thermal and Marine pollution. Solid waste management, Bio-medical waste	
management. Disasters and its mitigation strategies, Global warming, Climate	06
change, Acid rain, Ozone depletion and Smog. Pollution case studies. Role of an	
individual in pollution prevention.	



Unit-5 Social Issues and Environment:		
Sustainable Development: Concept and importance, Environmental Impact		
Assessment (EIA), GIS, Remote sensing. Water conservation and rain water		
harvesting. Resettlement and rehabilitation problems, Environmental audit, eco-		
labeling and eco-friendly business. Environmental Legislation in India, Population	04	
explosion and its impact on environment and human health, Value Education and		
environmental ethics.		
Field work		
• Visit to a local area to document environmental asset:		
river/forest/grassland/hill/mountain		
• Visit to a local polluted site-Urban/Rural/Industrial/Agricultural		
Study of common flora and fauna.		
• Study of a common ecosystem-pond, river, hill slopes, etc.		
TEXT BOOKS		

- **1.** Bharucha Erach, 2004. Textbook for Environmental Studies, University Grants Commission, New Delhi.
- **2.** Kaushik A & Kaushik C P. 2007. Perspectives in Environmental Studies, New Age International Publ.
- 3. S. Deswal & A. Deswal 2015. A Basic Course in Environmental Studies. Dhanpat Rai & Co.

REFERENCE BOOKS

- 1. Miller T.G. Jr. 2002. Environmental Science, Wadsworth Publishing Co. (TB).
- 2. De A.K., 1996. Environmental Chemistry, Wiley Eastern Ltd.
- 3. Sharma, P.D. 2005. Ecology and environment, Rastogi Publication.



MEF 483

Ser No	Unit	Mapping with Mandatory Contents	Delivery Mode
1	 Unit 1: (4Hrs.) Conceptual definition of entrepreneurs, Entrepreneurship and start up. Historical development of entrepreneurship. Entrepreneurship in economic theory. Entrepreneurial practice. Impact of Entrepreneurship on society. The role of entrepreneurship in economic development. Role of innovation in entrepreneurship. 	 Understanding the Entrepreneur Who can be an entrepreneur? What is the difference between a start-up and a small business? When is the perfect time to start-up? 	PPT, Handout, Case Study etc.
2	 Unit 2: (6Hrs) Entrepreneurial economy. Entrepreneurship and Economic Development. Type of Entrepreneurship. Features and types of entrepreneurs Entrepreneur and small business. Terms of entrepreneurship. Sources of business ideas. Technical and technological analysis of entrepreneurial projects. Designing a business investment. 	 2. Finding and evaluating an Idea How do I get an idea in the first place? How do I know if my idea is worth pursuing? 3.The founding team What should be the profile of the ideal team? How should I go about finding founders and forming my team? 	PPT, Handout, Case Study, Video Coverage etc.



	Angel Investor and Venture capitalist – Roles and Importance.	 4. What is Fund-raising & term sheets and How should I analyze the term sheet? • What the various types of investors (angel, seed, VC, PE) and what is ideal for my business? • How much money should I ask for, and how should I set the valuation for my company? • Setting up a company 	
3	 Unit 3: (5Hrs.) Forms of entrepreneurial organization. Entrepreneurial process. Entrepreneurial and start-up strategies. Role of Government agencies in Entrepreneurship development. Entrepreneurial project: entrepreneurial venture and entrepreneurial development chain. Knowledge of business economy. Group based strategies development. 	 What are the various legal entities in vogue in the start-up world? What are the pros and cons of each entity? What are the compliance and legal factors that I should keep in mind before setting up? 	PPT, Handout, Orders on the subject, authority, format, guidelines
4	 Unit 4: (5Hrs) Sources of capital. Market Research, Understanding the Market need for your concept. 	4. Digital as a resourceWhy is 'digital' important for my business?	PPT, Handout, Example of Business plan, Video Coverage etc.



	 Defining the business concept and formulating a business plan for startup. Fundamentals of entrepreneurial management. Business process: product design, operational art, stock management 	 How should I maximize my digital Role? Business Plan What are the components of an ideal business plan? What are the do's and don'ts I should be aware of? Business Canvas 	
5	 Unit 5: (6Hrs.) Entrepreneur biographies - the actual successes and failures. Exit strategies for entrepreneurs. Case studies of : Successful Entrepreneurial Ventures, Failed Entrepreneurial Ventures and Turnaround Ventures. Some case studies related to Product & Technology. 	 Measuring what matters What are the metrics I should track to know the health of my start-up? What are the tools / framework I should use to track them? How to pitch? What the components of a pitch deck? What is an elevator pitch? What are the best practices while pitching to investors? Pitch day Teams formed during the program will pitch their ideas in front of experienced entrepreneurs and angel investors. 	PPT, Handout, Case Study, Video Coverage etc.



