

**Academic Year 2022-23**

## **17.4**

### **Education in SDGs**

#### **17.4.2 Education for SDGs: Specific Courses on Sustainability**

#### **MRIIRS weblink to SDG17**

<https://mriirs.edu.in/sdg17-partnerships-for-the-goals/>

### **Education for SDGs: Specific Courses on Sustainability**

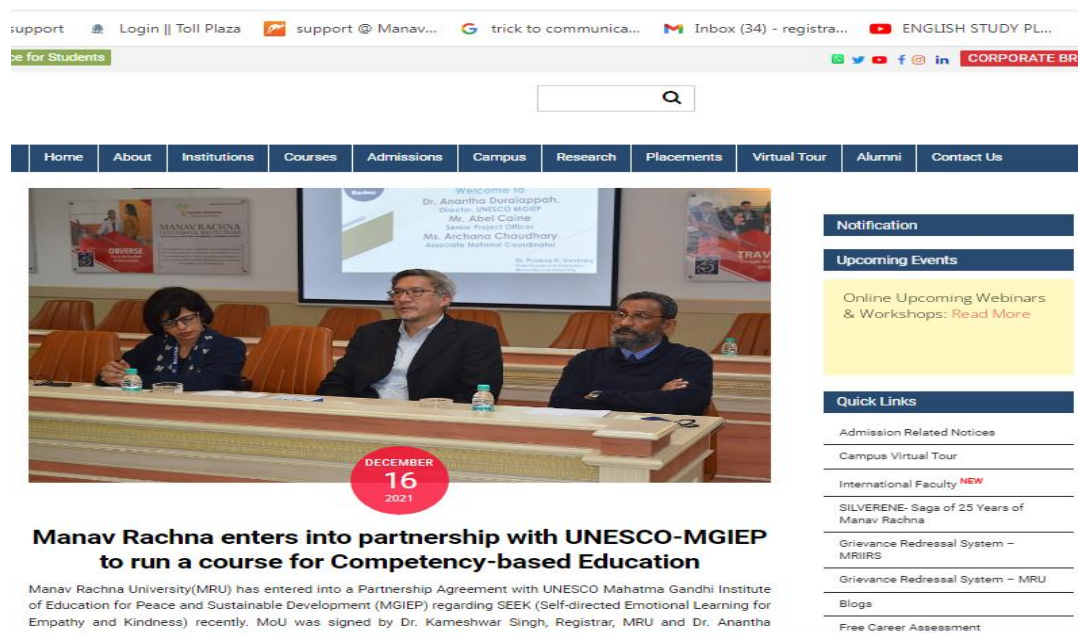
Manav Rachna has a range of elective courses and core courses focusing on sustainability and SDGs. A course titled – “Art and Sustainability” in the second semester of the Bachelor of Liberal Arts Program focuses entirely on the reflection, action and liberation element of sustainability by the application of various art forms – viz. music, dance, theatre, cinema and performance. The Core Foundation course titled – “Environmental Studies” which is offered across the University for all the students creates an interdisciplinary process of training and learning on the varied perspectives of sustainability and SDGs. A dedicated open elective course titled – “Solid Waste Management”, “Food, Hygiene and Sanitation”, “Philosophy and Physiology of Yoga”, “Green Energy Resources”, “Health, Fitness and Education”, etc are also offered across the University.

The curriculum structure is oriented and integrated into a sustainability discourse across all courses of the University. More details are provided on the evidence section.

In addition to that, there are dedicated courses like – “Essentials of Peace and Sustainability”, “Essentials of Peace” which have the following objectives –

- To provide strategic and operational level decision-making and leadership training to enhance planning and management of multidimensional peace operations.
- To support the development of India peace operations to emerge as Peaceful New Bharat.
- To provide a repository of data across the entire spectrum of peace operations.
- To provide mission focused pre-deployment training at both tactical and operational levels.
- To start research, masters and undergraduate programme in Peace.
- To spread message of peace, security and sustainable developments amongst the youth.

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In addition to this, Manav Rachna has entered into a partnership with UNESCO-MGIEP to run a course on Competency Based Education based on the principles of peace and sustainability. The course aims to address the SDG 16 by building up the character, competence of employees, students and society at large.

### Curriculum, Programme and Courses with Emphasis on Sustainability as A Part Of The Educational Programmes

In the Preamble of the Liberal Arts Program of the University, Art and Sustainability component is mentioned as a one of the key objectives of the educational program. Along with that, there are wide variety of courses within the educational programmes which have integrated sustainability as a key component of the educational discourse within the University. Preamble of the programmes clearly mention sustainability as one of the objectives to be attained. Further courses across the programmes of the University are interconnected with sustainability.

### Preamble

The programme BA Liberal Arts is adapted to an outcome based education system which would enable the students to acquire the capabilities to meet the demands of society and industry at regional, national and global level. The Programme Education Objectives (PEOs) of BA Liberal Arts are consistent with the Vision and Mission of the Department as well as the University, and aim to produce globally successful sociologists who are empowered to contribute to nation building through sound knowledge, research skills and research aptitude. The POs and PSOs address the PEOs and aim to produce human development professionals, social researchers and human resource management professionals with high professional and social ethics.

The curriculum exhibits the requisite balance among the fundamental, core and elective subjects. It creates a student talent pool that can serve the needs of industry and development sector needs of the national and global social research, social policy and social welfare arenas. Many courses are meant to meet the workforce needs of industry and development sectors. The course empowers the students on critical thinking and understanding, art and sustainability communication, social work, sustainable development practice, areas of arts, science and humanities through practical case studies at the national, regional and global level. The students of this programme are equipped to be employed in the development and social sector through a holistic learning of sustainability practices in real life decision making complemented by entrepreneurship skills. The issues of gender and social sustainability are also mainstreamed through the practical and experiential case study based pedagogies of the curriculum.

The design of curriculum is done in accordance with the predetermined Programme Education Objectives. The syllabus content of each course is meticulously created to develop thorough understanding and gain in-depth knowledge. A number of theory courses are accompanied with projects to inculcate the practical skills. In order to ensure the effectiveness of teaching-learning process and true implementation of the curriculum, the course outcomes of each course are developed to meet the programme outcomes and programme specific outcomes, which are also reflected in the Course Articulation Matrix. Course outcome and program outcome attainment is measured through direct and indirect tools including internal assessments, assignments, end semester examinations, dissertations, projects etc.

### Source –

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MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES  
(Deemed to be University under section 3 of the UGC Act, 1956)

FACULTY OF BEHAVIORAL AND SOCIAL SCIENCES  
DEPARTMENT OF SOCIAL AND POLITICAL STUDIES

CURRICULUM  
AND  
SCHEME OF EXAMINATION

(BACHELOR OF LIBERAL ARTS)

BATCH: 2019-22

Source - <https://manavrachna.edu.in/wp-content/uploads/2022/06/booklet Liberal-arts Year2019 2020 25022021.pdf>

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**Semester I****MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (MRIIRS)***(Deemed to be University under section 3 of the UGC Act 1956)***BLA-DS-101 (CH-202B): Environmental Studies**

Periods/week	Credits	Maximum marks	: 200
L: 3	T: 1	4	Continuous Assessment : 100
Duration of theory examination: 3hrs.		End Semester Examination: 100	

**Prerequisites:** NA**Course Type:** Foundation**Course Outcomes**

By the end of course, students would be able to:

BLA-DS-101.1 Assess importance of natural resources and environment, and their major concerns

BLA-DS-101.2 Understand basic structure with issues of ecosystem with energy flows and biodiversity conservation

BLA-DS-101.3 Understand socioeconomic concern of environment including pollutions and disaster management, etc.

**PART A****Unit-1: Nature of Environmental Studies**

Definition, multidisciplinary scope and importance of environmental studies; need for public awareness.

**Unit-2: Natural Resources**

Renewable v/s non-renewable natural resources and associated problems; forest resources: use and over-exploitation, deforestation, case studies, timber extraction, mining, dams and their effects on forest and tribal people; water resources: use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems; mineral resources: use and exploitation, environmental effects of extracting and using mineral resources, case studies; food resources: world food problems, changes caused by agriculture and over-grazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies; energy resources: growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, case studies; land resources: land as a resource, land degradation, man induced landslides, soil erosion and desertification; role of an individual in conservation of natural resources; equitable use of resources for sustainable lifestyles.

**Unit-3: Ecosystems**

Concept of ecosystem, structure and function of an ecosystem; producers, consumers and decomposers, energy flow in ecosystem; ecological succession; food chains, food webs and ecological pyramids; introduction, types, characteristic features, structure and function of different eco-system: forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).

**Unit-4: Biodiversity and its Conservation**

Introduction, definition: genetic, species and ecosystem diversity; biogeographical classification of India; value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values; biodiversity at global, national and local levels; India as a mega-diversity nation, hot-spots of biodiversity; threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, endangered and endemic species of India; conservation of biodiversity: in-situ and ex-situ conservation of biodiversity.

**PART B**

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MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (MRIIRS)			
(Deemed to be University under section 3 of the UGC Act 1956)			
BLA-DS-205: Art and Sustainability			
Periods/week Credits	Max. Marks: 200		
L: 3    T: 1    4	Continuous Assessment: 100		
Duration of Examination: 2 Hrs	End Semester Exam: 100		
Prerequisites: NA			
Course Type: Core			
Course Outcomes			
The objectives of the course will be to:			
BLA-DS-205.1 Describe basic concepts related to art and sustainability.			
BLA-DS-205. 2 Create and develop reflection, action and liberation component of art, sustainability			
BLA-DS-205.3 Demonstrate and determine the application of art in understanding, reflecting, assessing sustainability			
PART A			
UNIT – I: Introduction to Art:			
1.1 What is Art?			
1.2 What are the different forms and traditions of Art?			
1.3 What is an Ecological Art History?			
Unit – II Foundations of Art and Sustainability			
2.1 Definitions of Art and Sustainability			
2.2 How are Art and Sustainability connected?			
Unit-III Concepts of Reflection, Action and Liberation Component of Art and Sustainability			
2.1 Definitions of reflection, action and liberation component of Art and Sustainability			

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Appendix C: List of courses and proposed activities relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability				
	Environment and Sustainability	Professional Ethics	Human Values	Gender Equality
Environmental Studies CH 202B	✓			
Art, Sustainability and Healing		✓	✓	
Art and Sustainability		✓	✓	

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- List of the specific courses in the university on sustainability**

Course Title	Course Code	Programme (s) in which Course is offered	Mandatory/Elective
Environmental Studies	CH-202B	Common in All Programmes of MRIIRS Except B.Tech	Mandatory
Renewable Energy and Energy Harvesting	BPH-OE-001	Open Elective Course For All Programmes of MRIIRS	Elective
Green Technology	BT-OE-001	Open Elective Course For All Programmes of MRIIRS	Elective
Green Energy Resources	BEE-OE-004	Open Elective Course For All Programmes of MRIIRS	Elective
Solar Technology	BEC-OE-003	Open Elective Course For All Programmes of MRIIRS	Elective
Art and Sustainability	BLA-DS-205	B.A Liberal Arts	Mandatory
Engineering Materials for Sustainability	BCE-DS-523	B.Tech-Civil Engineering	Mandatory
Development Communication & Sustainable Development Goals	BJMC(I)-DS-402	B.A Journalism and Mass Communication	Mandatory
Environment Biotechnology	BBT-DS-602	B.Tech- Biotechnology; M.Sc-Microbiology	Mandatory
Environment Biotechnology Lab	BBT-DS-652	B.Tech- Biotechnology; M.Sc-Microbiology	Mandatory
Advanced Environmental Biotechnology	M-BT-202	M.Tech - Biotechnology	Mandatory
Advanced Environmental Biotechnology Lab	M-BT-252	M.Tech - Biotechnology	Mandatory
Environmental Engineering	BCE-DS-602	B.Tech-Civil Engineering	Mandatory
Environmental Engineering Lab	BCE-DS-652	B.Tech-Civil Engineering	Mandatory
Environmental Systems	BCE-DS-624	B.Tech-Civil Engineering	Mandatory
Environmental Impact Assessment	MCE-303	M.Tech- Civil Engineering	Mandatory
Indian Economic and Social Environment	BCOM-DS-105	B.Com (Hons)	Mandatory
Design Elements & Principles of Our Environment	351.109B	B.Sc-Interior Design	Mandatory
Environment & Development Economics	MECO-DS-204	M.A. Economics	Mandatory
Difference and inequality in society	BLA-DS-502	B.A Liberal Arts	Mandatory



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Design Elements & Principles of Our Environment	BID-DS-101	B.Sc-Interior Design	Mandatory
Living Green	351.309B	B.Sc-Interior Design	Mandatory
Green And Intelligent Buildings	AR-607A	Bachelor of Architecture	Mandatory
Renewable Energy Resources & Utilization	BME-DS-625	B.Tech-Mechanical Engineering	Mandatory
Wind and Solar Energy System	BEE-DS-724	B.Tech-Electrical and Electronics Engineering	Mandatory
Hydrology & Water Resources Engineering	BCE-DS-603	B.Tech-Civil Engineering	Mandatory
Building Services - I (Water Supply & Sanitation)	AR-308A	Bachelor of Architecture	Mandatory
Groundwater Geology	BGE-DS-502	B.Sc (Hons) Geology	Mandatory
Groundwater Lab & Engineering Geology Lab	BGE-DS-552	B.Sc (Hons) Geology	Mandatory
Watershed Management	BGE-DS-601	B.Sc (Hons) Geology	Mandatory
Groundwater Geology	BGE-DS-651	B.Sc (Hons) Geology	Mandatory
Groundwater Exploration	MAG-DS-306	M.Sc Applied Geology	Mandatory
Research Innovation Catalyst - I	RIC-300	Common in All Programmes of MRIIRS	Mandatory
Research Innovation Catalyst - II	RIC-400	Common in All Programmes of MRIIRS	Mandatory
Research Innovation Catalyst - III	RIC-500	Common in All Programmes of MRIIRS	Mandatory
Research and Innovation Catalyst-IV	RIC (E) - 600	B.Tech- Biotechnology and Bachelor of Physiotherapy	Mandatory
Research Methodology and IPR	M-MC-100	M.Tech - Biotechnology, M.Tech ECE, M.Tech- Automation and Robotics, M.Tech Civil	Mandatory
English for Research Paper Writing	M-MC-002	M.Tech Computer Engineering & Networking	Mandatory
Research Methodology & Biostatistics (Theory)	BPT-DS-603	Bachelor of Physiotherapy	Mandatory
Biostatistics and Research Methodology	MPT 105	Master of Physiotherapy	Mandatory
Sequential Research Development	MPTM/N/S-DS-353	Master of Physiotherapy	Mandatory
Research Dissertation	MPTM/N/S-DS-451	Master of Physiotherapy	Mandatory
Statistics and Research methodology	BND-DS-502	B.Sc-Nutrition & Dietetics	Mandatory
Research Proposal Development	MND-DS-355	M.Sc- Nutrition & Dietetics	Mandatory

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Business Research Methods	BBA-DS-402	Bachelor of Business Administration-General, Banking and Financial Markets, Digital Marketing	Mandatory
Communication Research	BJMC-DS-501	B.A Journalism and Mass Communication	Mandatory
Introduction to Research Techniques	BJMC(I)-DS-304	B.A Journalism and Mass Communication	Mandatory
Business Research Method	BCOM-DS-403	B.Com (Hons)	Mandatory
Introduction to Research Methodology	BAP-DS-203	BA (Hons.) Applied Psychology	Mandatory
Research Methodology (Practical)	BPSY-DS-452	BA (Hons.) Applied Psychology	Mandatory
Research Methods I	MPSY-DS-107	M.A. Applied Psychology	Mandatory
Research Methods II	MAP-DS-203	M.A. Applied Psychology	Mandatory
Advanced Research Methodology	MPSY-DS-301	M.A. Applied Psychology	Mandatory
Advanced Research Methodology (Practical)	MPSY-DS-351	M.A. Applied Psychology	Mandatory
Research Methodology (Dissertation)	AR-903A	Bachelor of Architecture	Mandatory
Research Design Histories	BDES-AN-304	Bachelor of Design	Mandatory
Advanced Research Methodologies	MECO-DS-301	M.A. Economics	Mandatory
Research Innovation & Catalyst-III	BGE-DS-504	B.Sc (Hons) Geology	Mandatory
Research Innovation & Catalyst-I	BGE-DS-305	B.Sc (Hons) Geology	Mandatory
Research Innovation & Catalyst-II	BGE-DS-404	B.Sc (Hons) Geology	Mandatory
Research Methodology	D-CW-001	Ph.D	Mandatory
Subject Based Research Method	Ph.D-CW-003	Ph.D	Mandatory
Research Publication and Ethics	Ph.D-CW-004	Ph.D	Mandatory
Project Phase-I	PROJ-XX-600	Common in All B. Tech Programmes of MRIIRS	Mandatory
Project Phase - II	PROJ-XX-700	Common in All B. Tech Programmes of MRIIRS	Mandatory
Summer Internship –I	PROJ-XX-300	Common in All B. Tech Programmes of MRIIRS	Mandatory
Summer Internship-II	PROJ-XX-500	Common in All B. Tech Programmes of MRIIRS	Mandatory
Summer Internship-III	PROJ-XX-800	Common in All B. Tech Programmes of MRIIRS	Mandatory
Minor Project Phase - I	PROJ-BT-600	B.Tech- Biotechnology	Mandatory

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Minor Project Phase - II	PROJ-BT-700	B.Tech- Biotechnology	Mandatory
Mini Project with Seminar	CS-M-200	M.Tech Computer Engineering & Networking	Mandatory
Project based on a programming language	BCA-DS-652	Bachelor of Computer Applications	Mandatory
Major Project	MCA-DS-653	Master of Computer Applications	Mandatory
Project	MCA-DS-652	Master of Computer Applications	Mandatory
Software Project Management	MCA-DS-602	Master of Computer Applications	Mandatory
Information Technology Project Management	COMP701A	B.Sc.- Information Technology	Mandatory
Information Technology Project	COMP-DS-720	B.Sc.- Information Technology	Mandatory
Physiotherapy Project + Evaluative clinical Practice VI	BPT-855	Bachelor of Physiotherapy	Mandatory
Capstone Project	BND-DS-551	B.Sc-Nutrition & Dietetics	Mandatory
Summer Training Project	BBA-DS-502	Bachelor of Business Administration-General, Banking and Financial Markets, (Global) International Business	Mandatory
Project - Report & Presentation	BBA-DS-602	Bachelor of Business Administration-Banking and Financial Markets	Mandatory
Summer Internship Project	MBA-DS-301	Master of Business Administration	Mandatory
Project Appraisal and Finance	MBA-DS-FN-303	Master of Business Administration	Mandatory
Final Dissertation/ Project	MBA-DS-401	Master of Business Administration	Mandatory
Term Paper (Project)	BENG-DS-505	B.A (Hons) English	Mandatory
Business Project (Summer Internship Report)	BCOM-DS-551	B.Com (Hons)	Mandatory
Thesis/Project/Internship/Field Training	BPSY-DS-503	BA (Hons.) Applied Psychology	Mandatory
Practical Aspects of Project management	C-705B	B.Sc-Interior Design	Mandatory
Portfolio Thesis project	MSC ID 301	M.Sc.-Interior Design	Mandatory
Live project/ Internship	MSC ID 401	M.Sc.-Interior Design	Mandatory
Structural Design -Project	AR-705A	Bachelor of Architecture	Mandatory
Project Management	AR-1002A	Bachelor of Architecture	Mandatory
Project Ways of Seeing	BDES-CD-302	Bachelor of Design	Mandatory
Project Symbols And Systems	BDES-CD-303	Bachelor of Design	Mandatory
Project-Contexts of Visual Communication	BDES-CD-402	Bachelor of Design	Mandatory
Project- Typography In Context	BDES-CD-403	Bachelor of Design	Mandatory
Project-Visualising Experience	BDES-CD-404	Bachelor of Design	Mandatory
Vocational Training	MCA-DS-453	Master of Computer Applications	Mandatory

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Clinical training	MPT 108	Master of Physiotherapy	Mandatory
Clinical Internship / Industrial Training	BND-DS-651	B.Sc-Nutrition & Dietetics	Mandatory
Practical Training in Psychology	BPSY-DS-107	BA (Hons.) Applied Psychology	Mandatory
Practical Training in Psychology II	BAP-DS-202	BA (Hons.) Applied Psychology	Mandatory
Field Training	MPSY-DS-304	M.A. Applied Psychology	Mandatory
Professional Training	AR-801	Bachelor of Architecture	Mandatory
Industrial Training	BHM-DS-351	B.Sc-Hospitality and Hotel Administration	Mandatory
Geological Field Training -III	MAG-DS-360	M.Sc Applied Geology	Mandatory