

Sustainable Development Study Centre (SDSC)

Introduction

Sustainable Development Study Centre is working as an interdisciplinary setup with Departments of Physics, Chemistry, Economics, Geography and Biotechnology. The centre is currently focusing on research activity encompassing sustainable livelihoods, environmental management and community development in Pakistan with national attention drawn to the problems of environmental degradation and related issues. It is hoped that SDSC will help to pioneer a new trend for applied research emerging from academia to influence policy makers in the area of socioeconomic development. In addition the centre has established linkage with other institutions of higher learning in environmental research. The centre has designed interdisciplinary courses and research to overcome the trust deficit between policy makers and academia.

The Objectives of SDSC are to:

- Address Pakistan's sustainability issues with innovative, integrated, collaborative, and trans-disciplinary research.
- Mobilize S&T for managing boundaries between knowledge and action
- Enhance postgraduate teaching in the emerging field of sustainability science with emphasis on critical analyses and thinking
- Build capacity to develop SDSC as a center of excellence on sustainability research and teaching at national and International level.

Academic Programmes:

The following Academic Programmes are offered in Environmental Science at SDSC:

- BSc (Hons)
- MPhil
- PhD

Research Groups

Following research groups are working at SDSC:

- Sustainable Development
- Environmental Toxicology
- Water and Waste Water Management
- Occupational Health & Safety
- Air Pollution monitoring and Control
- Renewable energy
- Conservation biology/ Bio-diversity

Facilities

The SDSC became fully operational in the March 2007 in a purpose built four story building. The infrastructure includes laboratories, lecture rooms, conference rooms and a library. There are well equipped laboratories (Soil and Plants Analysis, Alternative Energy, Aquatic and Environmental Toxicology, Air pollution, Water research, Environmental microbiology and Biotechnology) to facilitate the research requirements of BSc (Hons), MPhil and PhD students. Library has a collection of more than 515 reference books and computers are available for the students to avail internet and digital library facilities.

Special Features

SDSC has academic and research collaborations with the following international and national organizations / departments / institutes:

- Worldwide fund for Nature (WWF Pakistan)
- King Edward Medical University (KEMU Pakistan)

- College of Earth and Environmental Science, University of Punjab, Pakistan.
- NEC Consultants (Private) Limited
- Solution Environmental & Analytical Laboratory, Pakistan
- Sustainable Development Policy Institute (SDPI), Islamabad, Pakistan
- Aquadem (Turkey)
- Lahore Waste Management Company. (LWMC)
- LEED Pakistan.
- Urban Unit
- Ministry of Environment, Government of Punjab

Career Scope / Opportunities

Career Opportunities in this discipline are immense and are further going to increase in Pakistan and abroad in future.

Environmental Science graduates can find jobs in:

- Research and Development Organizations
- Industries
- Health Department
- Environmental NGOs
- Environmental Consultancies
- Solid Waste Management Companies
- Environmental Education
- Social Development Sector

BSc (Hons)		
Year- I		
Semester- I		
Course Code	Course Title	Credit Hours
ENVSC-1101	Introduction to Environmental Science	2
ENVSC-1101P	Introduction to Environmental Science	1
Semester- II		
Course Code	Course Title	Credit Hours
ENVSC-1201	Fundamental of Ecology	2
ENVSC-1201P	Fundamental of Ecology	1
Year-2		
Semester- III		
Course Code	Course Title	Credit Hours
ENVSC -2101	Chemistry of the Environment	2
ENVSC -2101P	Chemistry of the Environment	1
Semester IV		
Course Code	Course Title	Credit Hours
ENVSC-4209	Environment Profile of Pakistan	3
ENVSC-2202	Environmental Monitoring (Air Water Soil and noise)	3
ENVSC-2202P	Environmental Monitoring (Air Water Soil and noise)	1



Year-3		
Semester V		
Course Code	Course Title	Credit Hours
ENVSC-3101	Introductory Environmental Economics	3
ENVSC-3102	Applied Ecology	3
ENVSC-3102P	Applied Ecology (P)	1
ENVSC-3103	Fundamentals of Earth Sciences	3
ENVSC-3104	Environmental Microbiology	3
ENVSC-3104P	Environmental Microbiology (P)	1
ENVSC-4210	Analytical Techniques in Environmental Science	1
ENVSC-4210 P	Analytical Techniques in Environmental Science (P)	2
Semester VI		
Course Code	Course Title	Credit Hours
ENVSC-2201	Physics of the Environment	2
ENVSC-2201P	Physics of the Environment (P)	1
ENVSC-3201	History and Philosophy of Environmental Thought	3
ENVSC-3105	Environmental Toxicology	2
ENVSC-3105 P	Environmental Toxicology (P)	1
ENVSC-3202	Environmental Polices & Regulations (P)	2
ENVSC-3202 P	Environmental Polices & Regulations (P)	1
ENVSC-3203	Environmental & Natural Resource Economics	3
ENVSC-3204	Environmental Technology	3
ENVSC-3204 P	Environmental Technology (P)	1
ENVSC-3205	Natural Resource Management	2
ENVSC-3205 P	Natural Resource Management (P)	1
Year-4		
Semester VII		
Course Code	Course Title	Credit Hours
ENVSC-4201	Environmental Management Systems	2
ENVSC-4201P	Environmental Management Systems (P)	1
ENVSC-4202	Remote Sensing and GIS	3
ENVSC-4202P	Remote Sensing and GIS (P)	1
	Elective – I	2+ 1
	Elective – II	2+ 1
ENVSC-4299	Research Project/Internship	3
Semester VIII		
Course Code	Course Title	Credit Hours
ENVSC-4101	Conservation Biology	3
ENVSC-4101P	Conservation Biology (P)	1
ENVSC-4102	Environmental Impact Assessment	2
ENVSC-4102P	Environmental Impact Assessment (P)	1
	Elective – III	2+ 1
	Elective – IV	2+ 1
ENVSC-4299	Research Project/Internship	3

Elective Courses		
Course Code	Course Title	Credit Hours
ENVSC-4203	Health and Environment	2
ENVSC- 4203P	Health and Environment	1
ENVSC- 4204	Data Analysis	2
ENVSC-4204P	Data Analysis (P)	1
ENVSC- 4205	Environmental Biotechnology	2
ENVSC- 4205P	Environmental Biotechnology	1
ENVSC- 4206	Environmental Governance	2
ENVSC- 4206P	Environmental Governance	1
ENVSC- 4207	Water Resource Management	2
ENVSC- 4207P	Water Resource Management	1
ENVSC-4208	Disaster Management	2
ENVSC-4208P	Disaster Management	1
ENVSC-3201	History and Philosophy of Environmental Thought.	3
Environmental Science as Allied Subject		
Year I (Semester I)		
Course Code	Course Title	Credit Hours
ENVSC-I101	Introduction to Environmental Science	2
ENVSC-I101P	Introduction to Environmental Science	1
Semester II		
Course Code	Course Title	Credit Hours
ENVSC-I201	Fundamentals of Ecology	2
ENVSC-I201P	Fundamentals of Ecology	1
Year-2		
Semester III		
Course Code	Course Title	Credit Hours
ENVSC -2101	Chemistry of the Environment	2
ENVSC -2101P	Chemistry of the Environment	1
Semester IV		
Course Code	Course Title	Credit Hours
ENVSC-4209	Environmental Profile of Pakistan	3



MPhil		
Year-I		
Semester I & II		
Course Code	Course Title	Credit Hours
ENVSC- 7101	Conservation Biology	3
ENVSC- 7101 (P)	Conservation Biology (P)	1
ENVSC- 7102	Stress Physiology	3
ENVSC- 7102 (P)	Stress Physiology (P)	1
ENVSC- 7103	Sustainability Science	4
ENVSC- 7104	Wastewater Management	3
ENVSC- 7104 (P)	Wastewater Management (P)	1
ENVSC- 7105	Restoration Ecology	3
ENVSC- 7105 (P)	Restoration Ecology (P)	1
ENVSC- 7106	Sustainable Agriculture	3
ENVSC- 7106 (P)	Sustainable Agriculture (P)	1
ENVSC- 7201	Aquaculture Practices and Management	3
ENVSC- 7201P	Aquaculture Practices and Management (P)	1
ENVSC- 7202	Sustainable Development & Environmental Economics	3
ENVSC- 7202P	Sustainable Development & Environmental Economics (P)	1
ENVSC- 7203	Public Health & Environment	3
ENVSC- 7203P	Public Health & Environment (P)	1
ENVSC- 7207	Solid Waste Management	3
ENVSC- 7207P	Solid Waste Management (P)	1
ENVSC- 7208	Occupational Safety and Environment	3
ENVSC- 7208P	Occupational Safety and Environment (P)	1
Year-2		
Semester III & IV		
Course Code	Course Title	Credit Hours
ENVSC- 4209	Environmental Profile of Pakistan	3

PhD		
The Sustainable Development Study Centre (SDSC) offers 18 Credit Hours course work for PhD.		
Course Code	Course Title	Credit Hours
ENVSC-8101	Climate Change and Natural	3
ENVSC-8102	Resource Management	3
ENVSC-8103	Sustainability Science	3
ENVSC-8104	Wastewater Engineering	3
ENVSC-8105	Acquaculture Practice and Environment	3
ENVSC-8106	Public Health & Environmental	3
ENVSC-8114	Wetlands Management	3

Faculty

Sustainable Development Study Centre (SDSC)

Director
Dr. Engg. Abdullah Yasar

Associate Professor
Dr. Amtul Bari Tabinda
Dr. Faiza Sharif

Assistant Professor
Muhammad Umar Hayyat
Muhammad Farhan
Muhammad Afzaal

Lecturer
Laila Shahzad
Gul Zareen Ghafoor
Mujtaba Baqar
Rizwan Rasheed
Muhammad Naveed Anwar

Visiting/Adjunct Faculty
Dr. Ali Iqtadar Mirza
Syed Tariq Rizwan
Dr. Ijaz Qureshi
Nusrat Gill

