

**Working Paper # 25**  
**Revision of Community Service Course**  
**Sponsored by SMME**

**Background**

1. NUST not only endeavours to produce best professionals, but also stresses equally on human values so that NUST graduates become useful, active and humane citizens of our country. Sudden calamities in Pakistan including floods and earthquakes have increased the importance of volunteer community service more than ever. Whereby there are a host of international, public, private and Non-Governmental institutions working for community, some exposure is imperative at the grass root level at NUST to the nation builders of tomorrow.

2. Aligned with the university's strategic objective of becoming SDGs-engaged, NUST now aims to incorporate Education for Sustainable Development in Community Service Learning Course as per the university best practices from across the globe. ESD is a very important module in THE Impact Rankings and also QS Rankings have included an ESD module for ranking the impact of universities in terms of ESD.

3. Although Community Service Learning course is extremely streamlined, there is a need to formalize and recognize the Education for Sustainable Development as per the strategic objective of the university. Therefore, a small workshop needs to be integrated into this course, so to familiarize the concept of SDGs and sustainability to the students.

**Rationale**

4. The movement towards sustainability is a holistic movement that targets not only environmental and social issues and economical challenges along with that. The movement can not be led only by the management alone, but rather through contributions by the stakeholders, including management, staff and students. Awareness campaigns and educating the population, particularly youth and future leadership, is essential to prepare them for the impending global challenges. The

course workshop will be introduced as an effort by NUST to further propagate the awareness about sustainability and the UN Agenda 2030 among students as per the international best practices.

### **Educational Objectives**

5. The main objective of the workshop will be to:
  - a. Develop fundamental and knowledge about the framework of Sustainable Development Goals (SDGs).
  - b. Understand the history, importance and implementation of SDGs and the various issues faced regarding them.
  - c. Comprehend interrelationships between natural, societal, economic, technological and political systems on the local and global scale.
  - d. Teach students about the three primary pillars of economics, environment, and society of sustainable development
  - e. Update progress towards the achievement of UN Agenda 2030 at a national and global scale
  - f. Ensure that the graduating students of the institution become responsible citizens of the world.
  - g. Teach students about sustainability, and how their conscious efforts and choices can play their part in transforming the world of today for the future.
  - h. Develop problem-solving skills among students by aligning their course projects and FYP with UN SDGs, through focused applied research to resolve local community problems addressing challenges of sustainability

### **Input Obtained from Industry/Corporate Sector**

6. Engaging sustainability leaders from the corporate, public and social sectors to deliver the workshop to students, and create awareness on real-time challenges. Office of Sustainability and Community Service Office will engage suitable speakers to conduct the workshop.

## **Title of the Workshop**

7. Education for Sustainable Development (ESD).

## **International Standards/Practice**

8. All over the world, various renowned educational institutions are offering programs and courses addressing sustainable and development aligned with UN SDGs.

Following are few examples of the courses offered by a few universities in the respective field:

<b>Serial no.</b>	<b>Institution</b>	<b>Course / Program offered</b>
a.	University of Michigan, USA	The university offers ' <i>Beyond the Sustainable Development Goals (SDGs): Addressing Sustainability and Development</i> ', a course which discusses the most pressing issues regarding sustainability and development with an in-depth understanding of the 17 UN SDGS while considering methods and skills necessary to produce efficient solutions
b.	University of Illinois, USA	<i>'Introduction to Sustainability'</i> is a popular course offered by the university. It introduces an academic approach towards sustainability by teaching key knowledge areas of three pillars of sustainability.  The course has already more than 115,000 enrollments on Coursera.
c.	Pennsylvania State University, USA	The university offers a course ' <i>Foundations in Sustainability systems</i> ' providing the theoretical background for the discussion and analysis of sustainability issues while focusing on interrelationships among natural, societal, economic, technological and political systems on the local and global scale
d.	University of Copenhagen, Denmark	<i>'The sustainable development goals'</i> is a course offered by the university which is designed to entirely focus on

		understanding the 17 UN SDGs and their relevancy with the management of the global systems supporting humanity. The course also concentrates on the SDGs that require the most attention in today's world.
e.	Stanford University, USA	The university offers a graduate program called 'Sustainability Science and Practice' to equip students with the knowledge, mindsets, and practical skills needed to understand and intervene in complex systems to secure human well-being around the world and across generations.

### **Scheme of Studies**

9. ESD will be a 3 hours workshop offered in the Community Service Learning course. Community Service Learning Course comprises of 6 workshops. Two workshops that were conducted separately i.e. Community Service Project Management and Technological Advancements Impacting Community- Relevance of the school's speciality with Community Service, will be combined to add ESD workshop as the 6<sup>th</sup> workshop. The workshops schedule will be as follows :

- a. Course Orientation and Deriving Inspirations for Community Service
- b. Community Service Project Management and Technological Advancement Impacting Community -Relevance of the school's speciality with Community Service ( merged workshops)
- c. Disaster Management and Response
- d. Basic First Aid and Fire Fighting Training
- e. Social Entrepreneurship
- f. **Education for Sustainable Development (ESD)**

### **Detailed Curriculum of Education for Sustainability Workshop**

10. As per Annexure A.

### **Faculty**

11. Head Office of Sustainability, NUST, in collaboration with the Community Service Office, will arrange the speaker to deliver the 3 hours workshop.

12. Additional faculty/guest speakers from different sectors will be called upon on a required basis. Specific faculty development/training is not required.

### **Revision of credit hours**

13. Presently, it is a 0-2 course. It is recommended to revise the credit hours to 0-1. The scheme of studies will be as follows:

- a. 18 hours of attendance of workshops (sample implementation as per Annexure B)
- b. 30 hours of field activities. (sample implementation as per Annexure B)

### **Comments of Academics Directorate**

14. No additional requirement of faculty, classrooms & labs. The proposal was deliberated and endorsed by UCRC held on 21 June 2022.

### **Recommendations of Academics Directorate**

15. CSL-402 Community Service Learning Course (0-1) is recommended for approval w.e.f Fall 2022 for all UG programs.

16. Academic council is requested for the decision..

CSL-402 Community Service Learning Course (0-1)

Contents of ESD Workshop:

Introduction to Sustainable Development:

The aim of this workshop is to create better understanding and nuances between the terms 'sustainable development' and 'sustainability' and 'development', as well as the history and scope of the Sustainable Development Goals (SDGs). SDGs Framework: Inter-relation of 17 SDGs, Role of United Nations, the complexities of the 169 individual targets and 232 KPIs. A Brief on understanding the relation of SDGs to addressing global challenges such as inequality, climate change, poverty, unsustainable consumption and production, and peace and security. Scientifically inform the course participants and provide evidence-based information about the background and reality of each SDG. Students will be provided with an understanding of sustainable development on a broader scale and to what formulates a sustainable society and what are the important aspects that need to be worked upon.

The following topics will be quickly introduced in the workshop:

- a. **Climate Change:** Major contributors of climate change, and impact of climate change on the economy, populations and future implication. Importance of mitigation of industrial wastes, carbon emissions. Measures to curtail the negative climate impact.
- b. **Quality Education, Poverty and Gender Inequality:** Historical background of poverty and inequality around the world, different approaches to alleviate poverty and inequality, and opportunities for sustainably reducing poverty and inequality. How social issues like gender inequality and poverty can be dealt with to uplift societies and why it's important can be discussed. Real-life examples and strategies based on Pakistan will be discussed and how inequality can be reduced in Pakistani society will be discussed. Pakistan's current struggle with quality education, problems faced and the sustainable solutions to it will be discussed in the class. Education as a bridge towards the social uplifting of the society and as a tool to eradicate poverty and gender inequality will also be studied. The social responsibility of Pakistani citizens towards education, eradication of poverty and gender inequality will be studied.
- c. **Biodiversity Loss and Ecosystem Degradation:** In this module, learnings on how environmental changes are bringing about ecological changes on a massive scale. The loss of various species owing to several negative impacts of climate change and the degradation of ecosystems will be studied. Why environmental changes happen, what the drivers and impacts of these changes are, and how to share ecosystems between people and wildlife while preventing environmental degradation.
- d. **Green Energy:** In this module, optimal energy usage, global trends of energy usage, and transition to a more sustainable pattern of usage will be taught. The sustainable methods of energy harvesting and clean and green energy sources will be discussed. The discussions will follow the clean energy options for Pakistan and how energy-efficient systems lead to conservation and reduced stress on current resources. The potential of the various renewable sources of energy will be discussed along with the feasibility of implementation in Pakistan. Renewable sources such as Sun, wind and water will be studied. Systemic analyses, such as material and energy flow analyses will allow the students to analyze the systems and determine their efficiency.

- e. **Clean Water and Sanitation:** The students will be familiarized with the concept of SDG 6 “Clean Water and Sanitation”. Students will be taught the importance of water-efficient systems along with the need for water preservation in modern systems to reduce water scarcity for water-stressed countries like Pakistan. The students will be taught the importance to end open defecation for the coming generations owing to its negative environmental impacts such as the spread of diseases. The students will be prompted to discuss their proposed solutions as to how Pakistan can progress towards achieving its SDG 6, keeping in mind the rural population and the water scarcity issue being faced by the country.
- (1) **Responsible Consumerism:** Students will be taught the importance of sustainable and responsible consumerism and how vitally important it is to make conscious environment-friendly choices in our daily lives. Concepts on Circular Economy and Blue Economy will be introduced alongside sustainable fashion to understand the concept of conscious consumerism.
  - (2) **Collaborations and Global Peace:** Understand the political and global aspects relevant to specific sustainability issues and analyses the political background for specific projects. Case studies to enlighten upon the importance of national and regional policies in achieving SDGs, progress made to implement those on government and industrial level, policymaking, and effective collaborations. The roles of international and intra-nationals collaborations bodies to ensure global peace will be analyzed through real-life examples. The students will be taught the importance of collaboration for the greater good and how every citizen of the world is a stakeholder in global peace. Economy as a driving factor for major political decisions would be studied. Environmental economics describing how decisions that may not have monetary value do have environmental value and can be considered as good or bad considering their impact on the environment. The students would be familiarized with the concept of “Tragedy of Commons” to explain how the monetary gains of one individual can sometimes lead to greater harm for any involved community.
  - (3) **Systems Thinking and Change Making:** Understanding complexities and interconnectivity within systems to drive change and becoming a change agent.
  - (4) **Data and Reporting:** Importance of data and reporting in assessing the impact of initiatives, and how data can help formulate evidence-based policy-making. GRI reporting standards and ESG ( Environmental, Social, and Corporate Governance) for an evaluation of an organization/ firm’s collective conscientiousness for social and environmental factors will be introduced.

**Learning Outcomes:**

After completing the course module, students should be able to understand the need and importance of sustainable development and to be able to contribute positively and effectively towards the wellbeing of society.

**CSL-402 Community Service Learning Course (0-1)**

**Community Service Learning Course Description:**

Community Service Learning Course (CSL-401) is an additional course for all UG students of NUST (approved ACM 35). The course provides an in depth coverage of the foundation of community service required for making NUST students effective and valuable members of the society. In the initial 6 weeks of the semester, workshop sessions will be conducted on the following topics:

- a. Course Orientation and Deriving Inspirations for Community Service
- b. Community Service Project Management and Technological Advancement Impacting Community -Relevance of the school's speciality with Community Service ( merged workshops)
- c. Disaster Management and Response
- d. Basic First Aid and Fire Fighting Training
- e. Social Entrepreneurship
- f. Education for Sustainable Development (ESD)**

After the completion of the workshops an assessment/quiz will be taken.

**Field Work:**

Students should complete 30 hours of Field work comprises of 2 Projects

- a. Project 1: 10 hours of field work on the theme of "*Community Service*".
- b. Project 2: 20 hours of field work on the theme of "*Community Development and Empowerment*".

**Grading Weightage of the course:**

The grading weightage of the course will be as follows:

- a. Quizzes from 6X workshops- 20%
- b. 2x Field Projects - 80 % (40% each)