

DS4016

Wellbeing and Sustainability

CIP: 143501 Industrial Engineering.

CL-L-U-CA-UDC: 3-0-12-3-3.5

Discipline:

Sustainable Development

School:

Engineering and Sciences

Academic Department:

Industrial Engineer

Programs:

Prerequisites:

None.

Equivalences:

None.

Course intention within the general study plan context:

It is a basic course aimed at students from all areas of knowledge, to explore sustainability from an interdisciplinary perspective. It does not require previous knowledge in the area.

At learning outcome, each student develops a personal life project that should be reflected in social benefit.

Course objective:

At the end of the course, the student will be able to change the development paradigm of contemporary society, making better decisions with a holistic vision of the interaction between natural and human systems and exploring the philosophical, personal, territorial, productive, political and social dimensions related to well-being and sustainability.

Course topics and subtopics:

Course topics are based on the Sustainable Development Goals (SDGs). The objective numbers considered are noted in each topic.

1. Introduction (SDG #4, #13 and #15).
2. Philosophy: humans and nature (SDG #1, #5, #10 and #13).
3. Personal: health and well-being (SDG #2 and #3).
4. Territory: built and natural environments (SDG #7 and #11).
5. Productive sectors (SDG #7, #9 and #12).
6. Government and society (SDG #8 and #16).

Specific learning objectives by topic:

1. Introduction (SDG #4 Quality Education, #13 Climate Action and #15 Life on Land).

The objective of this module is to establish the common bases for analysis and understanding of what is a sustainable life, from the perspective of people, cities, productive sectors, society and its relationship with the government.

2. Philosophy: humans and nature (SDG #1 No Poverty, #5 Gender Equality, #10 Reduce Inequalities and #13 Climate Action).

To explore the philosophical dimensions and ethical positions that trigger the ecological crisis and also the perspectives on worldviews and ways of life that can contribute to human well-being as we enter the Anthropocene epoch.

3. Personal: health and well-being (SDG #2 Zero Hunger and #3 Good Health and Well-being).

To know the impact of climate change and environmental pollution on human health and encourage individual decision-making that favors integrated health by exploring the physical, mental and social dimensions, according to the World Health Organization (WHO) is necessary for a complete state of well-being.

4. Territory: built and natural environments (SDG #7 Affordable and Clean Energy and #11 Sustainable Cities and Communities).

The student will learn about the positions and methodologies in which the different design disciplines seek to improve personal and collective wellbeing, as well as to achieve the Sustainable Development Goals -SDG.

5. Productive sectors (SDG #6 Clean Water and Sanitation, #7 Affordable and Clean Energy, #9 Industry, Innovation and Infrastructure and #12 Responsible Consumption and Production).

Provide a perspective of the planetary resource limits, the role of industrial ecosystems and the issues to be considered to achieve sustainability.

To discuss how organizations need to institutionalize practices to support the individual wellbeing, flexible and hybrid schemes of work.

6. Government and society (SDG #8 Decent Work and Economic Growth and #16 Peace, Justice and Strong Institutions).

To understand the concept of culture of peace and sustainable development in order to develop skills to manage and generate solutions to different social conflicts in a democracy that promotes peaceful and inclusive societies.

Apply the fundamental concepts of conflict theory to different practical cases to develop skills for effective negotiations, work meetings and collaborative processes, particularly in complex situations of design and implementation of public policies, involving various actors and/or sectors as well as alternative mechanisms for access to justice.

Suggested methodologies and learning techniques:

It is an online course, using collaborative and project oriented learning.

Activities led by a professor:

1. Sessions taught by the head teacher or an expert speaker on the subject.

Independent learning activities performed by the student:

1. Watch videos.
2. Read written material, such as articles, cases, books, among others.
3. Review internet pages with content appropriate to the topic.
4. Perform learning-application activities in their professional and personal context.

Teaching and learning techniques:

Collaborative learning

Estimated timing per topic:

1. Introduction (SDG #4, #13 and #15) (2 weeks, 8 hours).
2. Philosophy: the human being and nature (SDG #1, #5, #10 and #13) (2 weeks, 8 hours).
3. Personal: health and well-being (SDG #2 and #3) (2 weeks, 8 hours).
4. Territory: built and natural environments (SDG #7 and #11) (2 weeks, 8 hours).
5. Productive sectors (SDG #6, #7, #9 and #12) (2 weeks, 8 hours).
6. Government and society (SDG #8 and #16) (2 weeks, 8 hours).

Suggested evaluation policies:

For the evaluation of student learning, procedures and criteria will be used for evaluating the results of the learning process through the grading and feedback of the activities that the students will develop in every topic of the course.

The evaluation procedures and the weighting of each of them are as follows:

70% --- Group activities related to the topics of each week.

30% ---Individual activities related to the topics of each week.

Suggested Bibliography:

TEXT BOOKS:

* Graedel, T. E, Industrial ecology and sustainable engineering, Indian edition, first impression., Uttar Pradesh, India : Pearson India Education Services, 2015, eng, 9332556954

* Matos Meléndez, Barbara Bernardina, Educación ambiental para el desarrollo sostenible del presente milenio, Segunda edición., Bogotá, Colombia : Ecoe Ediciones, 2016, spa, 9789587713237

* Sachs Jeffrey, The age of sustainable development, eng, 9780231539005 (e-book)

BOOKS FOR CONSULTATION:

* Hoque Faisal, Everything connects : how to transform and lead in the age of creativity, innovation and sustainability, New York : McGraw-Hill Education, 2014, eng, 0071830758

* Flannery Tim F, Now or never : why we must act now to end climate change and create a sustainable future, 1st ed., New York : Atlantic Monthly Press, 2009, 0802118984

* edited by Gert Spaargaren, Peter Oosterveer and Anne Loeber, Food practices in transition : changing food consumption retail and production in the age of reflexive modernity, 041588084X

Support material:

Academic credentials required to teach the course:

(143501)Doctoral Degree in Industrial Engineering ; (000000)Doctoral Degree in the area in which the Project will be carried out

CIP: 143501, 000000

Recommended Experience:

Knowledge of well-being and sustainability from different perspectives: philosophical, personal, territorial, productive, political and social.