# MODULE DESCRIPTION FORM

| Module Information | | | |
|---|---|---|---|
| **Module Title** | **SUSTANIBLE DEVELOPMENT** | **Module Delivery** | |
| **Module Type** | **Core learning activity** | ☒ **Theory**<br>☐ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☒ **Seminar** | |
| **Module Code** | **SUD1090** | | |
| **ECTS Credits** | **5** | | |
| **SWL (hr/sem)** | **125** | | |
| **Module Level** | 1 | **Semester of Delivery** | 2 |
| **Administering Department** | SSWR1969, PLPR1966, HOLA1974, FORE1964, FOSC1965, FICR1973, ANPR1964, AGEC1979, AETT1979, AGME1986 | **College** | AGFO1964 |
| **Module Leader** | **zwaid fathiy abd**<br>Omar Dheyaa Mohammed<br>Asmaa Mohammed Adil<br>**Moyassar Mohammed Aziz**<br>**Nofal Issa Mohamed**<br>**Taha Mohammed Taki**<br>**Firas Kadhim Dawoo Aljuboori**<br>**Khaled Anwer Khaled ALKHALED**<br>**Talal Saeed Hameed**<br>Sumood Husain Ai Al-Hadedy | **e-mail** | zu-kh1985@uomosul.edu.iq<br>dr.omaralmallah@uomosul.edu.iq<br>asmaama@uomosul.edu.iq<br>moyassar_aziz@uomosul.edu.iq<br>nofelemh@uomosul.edu.iq<br>tahataqi@uomosul.edu.iq<br>firasaljuboori@uomosul.edu.iq<br>khalid.anwar31@uomosul.edu.iq<br>stalal1982@uomosul.edu.iq<br>sumod_husain@uomosul.edu.iq |
| **Module Leader's Acad. Title** | Professor<br>**Assistant Professor** | **Module Leader's Qualification** | **Ph.D.**<br>**MSc.** |
| **Module Tutor** | Ramia Amer Khalil | **e-mail** | Ramiaalalaf83@uomosul.edu.iq |
| **Peer Reviewer Name** | Mohammed Ahmed Mahal | **e-mail** | ahmedmhmd424@uomosul.edu.iq |
| **Scientific Committee Approval Date** | 15/10/2024 | **Version Number** | 1.0 |

| Relation with other Modules | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |

| Co-requisites module | None | Semester | |
|---|---|---|---|

## Module Aims, Learning Outcomes and Indicative Contents

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|---|---|
| **Module Objectives** | 1. Understand the concept of sustainable development and its various dimensions.<br>2. Analyze the impact of environmental and social changes on achieving sustainability.<br>3. Study the role of government policies and innovation in supporting sustainable development.<br>4. Raise awareness of the importance of achieving social justice within the goals of sustainability. |
| **Module Learning Outcomes** | LO#1: How sustainability considerations can actually be embedded within an individual's and community's day to day activities and decision-making processes.<br><br>LO#2: How existing sustainable development tools and methods can be adjusted/fine-tuned accordingly, and how to design sustainability performance metric to assess the impact on community's sustainable development.<br><br>LO#3: How to design feedback systems that can readjust the pathways of processes and procedures to ensure success in implementing sustainable development initiatives.<br><br>LO#4: How to empower communities set sustainability targets using appropriate metrics. |
| **Indicative Contents** | The theoretical and cognitive foundation of the concept of sustainable development will be developed and an experiential understanding of emerging global challenges for sustainable environmental and community governance systems will be gained through theoretical lectures in the fifteen weeks. By focusing on seminars related to sustainable development and simulating successful country experiences, the capacity of communities and students will be enhanced and their research role and development in establishing the necessary information links and feedback loops within the system will be raised to allow system actors to have a sound understanding of developing sustainable solutions. This will enable visualization of the different factors that affect sustainability and proposing an action plan for building sustainable communities.<br><br>Total hrs = 62 = SSWL - (Exam hrs) = 62-2= 60 (Time table hrs x 15 weeks) |

## Learning and Teaching Strategies

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| **Strategies** | 1. Interactive lecture, Brainstorming<br>2. Dialogue and discussion<br>3. Assigning reports<br>4. Quizzes |

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|---|---|
| | 5. Show examples for writing scientific reports in the correct formats. |

## Student Workload (SWL)

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|---|---|---|---|
| **Structured SWL (h/sem)** | 62 | **Structured SWL (h/w)** | 4 |
| **Unstructured SWL (h/sem)** | 63 | **Unstructured SWL (h/w)** | 4 |
| **Total SWL (h/sem)** | **125** | | |

## Module Evaluation

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|---|
| **Formative assessment** | **Quizzes** | 3 | 15% (15) | 3, 9 ,11 | LO#1, LO#2, LO#3 and LO#4 |
| | **Collage Assignments** | 2 | 10% (10) | 2 and 12 | LO#1 and LO#3 |
| | **Projects** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 5% (5) | 14 | LO#4 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO#1, LO#2 |
| | **Final Exam** | 2hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

## Delivery Plan (Weekly Theory Syllabus)

| | **Material Covered** |
|---|---|
| **Week 1** | Introduction to Sustainable Development |
| **Week 2** | Economic, Social, and Environmental Dimensions of Sustainable Development |
| **Week 3** | History and Evolution of the Concept of Sustainable Development |
| **Week 4** | (Sustainable Development Goals (SDGs |
| **Week 5** | Sustainability in Natural Resource Management |
| **Week 6** | Climate Change and Its Impact on Sustainable Development |
| **Week 7** | Midterm Exam |
| **Week 8** | The Role of Education and Awareness in Achieving Sustainable Development |
| **Week 9** | Renewable Energy and Sustainability |
| **Week 10** | Sustainability in the Agricultural and Food Sector |
| **Week 11** | Government Policies and Their Role in Achieving Sustainable Development |
| **Week 12** | Innovation and Technology in Supporting Sustainability |

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|---|---|
| **Week 13** | Social Justice and Equality in Sustainable Development |
| **Week 14** | Global Challenges Facing Sustainable Development |
| **Week 15** | The Future of Sustainable Development |
| **Week 16** | **Preparatory week before the final Exam** |

## Delivery Plan (Weekly Seminars Syllabus)

| Week | Material Covered |
|---|---|
| **Week 1** | • Analysis of environmental challenges and opportunities in sustainable development. |
| **Week 2** | • Analyzing the role of technology in supporting sustainability. |
| **Week 3** | • Workshop on sustainability applications in local projects. |
| **Week 4** | • Netherlands: Circular farming in the dairy sector, reusing animal waste for energy and bioplastics, using bioreactor technology integrated with IoT sensors |
| **Week 5** | • Smart Pastures project in Mongolia, rotational grazing systems based on satellite monitoring, to restore 15% of degraded pastures annually |
| **Week 6** | • Intensive Rice Project in Madagascar, implementing SRI (System of Rice Intensification) to increase production by 50% while saving water in a geography: highland areas in Antananarivo |
| **Week 7** | • Smart Sustainable Farms in Ethiopia, integrating conservation agriculture with drought early warning systems: to increase crop resilience by 40% in Tigray regions. |
| **Week 8** | • Brazil: Low Carbon Agriculture Model (ABC Program), reducing methane emissions by 38% through integrated livestock waste management |
| **Week 9** | • China: Loess Plateau Rehabilitation, largest ecological restoration project (35,000 km²), using terraced terraces + water harvesting + selective afforestation. |
| **Week 10** | • Jordan: "Water Rationing" project, micro-drip irrigation technology with big data analysis, by reducing water consumption by 70% in vegetable cultivation. |
| **Week 11** | • Zambia: Conservation agriculture with FAO, zero tillage + permanent mulch + crop rotation, to increase maize production by 120% in 5 years |
| **Week 12** | • "Palm Oasis" project in Morocco, combating desertification through solar drip irrigation systems. |
| **Week 13** | • African Drylands Program (Senegal), cultivation of salt-resistant sorghum with fog harvesting, to reduce rural youth migration by 55% |
| **Week 14** | • "Integrated Farming" project in the Niger Delta, fish farming with rice cultivation in the same water body, to increase income by 300% while improving biological fertility |
| **Week 15** | Project presentations and discussions on feasibility and conclusions. |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | Omar bin Akhdar Khalfawi "Sustainable Development" | no |
| **Recommended Texts** | Abdullah bin Abdulrahman Al-Baridi "Sustainable Development: An Integrated Approach to Sustainability Concepts and Applications" | |
| **Websites** | | |

| Grading Scheme | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | Grade | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | Excellent | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | Very Good | 80 - 89 | Above average with some errors |
| | **C -** Good | Good | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | Average | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | Acceptable | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | Fail (in process) | (45-49) | More work required but credit awarded |
| | **F –** Fail | Fail | (0-44) | Considerable amount of work required |
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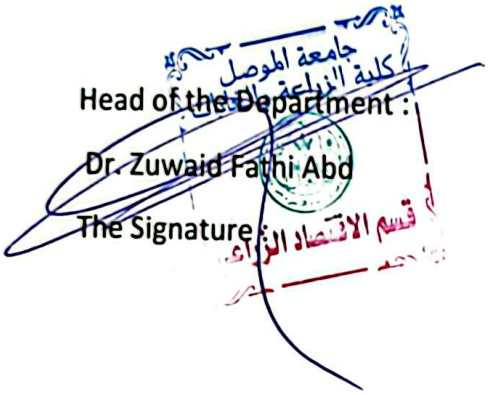
**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.



Chairman Scientific Committee :

prof.Dr. Kais Nazem Ghazal

The Signature :




Head of the Department :

Dr. Zuwaid Fathi Abd

The Signature :