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| <b>Course title : ICTs for Sustainable Development</b>   |   |                          |   |                           |
| <b>Course code : MPD 183</b>   |   | <b>No. of credits :3</b> | <b>L-T-P distribution : 24-14-8</b>             | <b>Learning hours :42</b> |
| <b>Pre-requisite course code and title (if any) : None</b>   |   |                          |   |                           |
| <b>Faculty :Dr. Sapna Narula</b>   |   |                          | <b>Department : Policy Studies</b>              |                           |
| <b>Course coordinator (s) :Dr. Sapna Narula</b>  |   |                          | <b>Course instructor (s) : Dr. Sapna Narula</b> |                           |
| <b>Contact details:</b> sapna.narula@terisas.ac.in   |   |                          |   |                           |
| <b>Course type</b>   |   | <b>Elective</b>          | <b>Course offered :Semester 3</b>               |                           |
| <b>Course Description:</b>   |   |                          |   |                           |
| <p>Information and Communication technologies can bring revolution to the social and economic lives of rural people in developing countries where majority of population has limited access to services such as education, health services and finance and also limited access to information relevant to their livelihoods i.e. agriculture and small enterprise. Information and communication technologies can actually enable the communities to access these services at an affordable cost. ICTs are also capable of assisting governments, civil society organizations and other international organizations to improve the lives of poor and marginalized people and also provide livelihood opportunities for them. There are many applications in the field of education, health, finance and agriculture, climate change, gender equality and the existing business models are making an impact through user-centric products and services. ICT4D field involves studies such as ICT applications, finding the right business model for target communities, technology generation, technology evaluation, choice and dissemination, content generation, designing information based products and services and building support infrastructure. The implementation of these technologies at the field level in terms of community engagement and capacity building are also the areas which need to be studied thoroughly by development practitioners</p> |   |                          |   |                           |
| <b>Course objectives:</b>  |   |                          |   |                           |
| <p>With rising use of Information and Communication technologies available, there is a high potential for these technologies to address sustainability issues. The students of MA (SDP), as development practitioners must be equipped with the knowledge about their applications in the development field so as to enable them to provide ICT solutions to the target communities. This is an elective course intended for students who would like to gain knowledge and skills on how ICTs can be best used to overcome sustainability challenges.</p> <p>In order to succeed in the practice of sustainable development, professionals must be trained in a basic set of competencies that integrate cross-disciplinary knowledge for practical problem solving with the use of information and communication technologies.</p>  |   |                          |   |                           |
| <b>Course content:</b>   |   |                          |   |                           |
| <b>Module</b>  | <b>Topic</b>  | <b>L</b>                 | <b>T</b>  | <b>P</b>                  |
| 1.   | <b>Introduction to ICTs for sustainable Development</b><br>Introduction to Information and Communication Technology (ICT); Role of ICTs in Sustainable Development; Current Status of ICTs in Sustainable Development- Global and India Scenario. Potential of ICTs in various fields, impact of information Technologies on GDP growth   | 4                        |   |                           |
| 2.   | <b>Building Knowledge Societies</b><br>The concept of Knowledge Society ; identifying stakeholders and target communities; Understanding information needs ,Traditional vs. contemporary knowledge systems, information processing and retrieval; Understanding means of communication in different areas, developing an effective communication strategy<br>Case: Warna Unwired  | 4                        | 2   |                           |
| 3.   | <b>Information and Communication Technologies</b><br>The hardware and software, the physical infrastructure, satellite, wireless solutions, telecommunication technologies, mobiles, fixed line, internet and world wide web, community radio, technology-user interface, design of relevant ICT products and services.   | 4                        |   |                           |
| 4.   | <b>ICT Applications</b><br>Applications of ICT in education, Health ( telehealth, telemedicine and health informatics), Gender Equality, Agriculture ( , e Governance, telecentres, Mobiles for development, climate change and disaster management, ICT Networks for water management<br><i>(This module will be dealt with the help of country case studies in all the sectors and inputs from ICT4D practitioners Case Studies: eCME, Apollo Telemedicine Network Foundation, Bhoomi, eSewa, Gyandoot, eAgriculture. M-PESA, CYCLETEL)</i> | 6                        | 4   | 8                         |

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| 5.  | <b>ICT for Development in India</b><br>Policy and Institutional Framework in India, e governance, ICT Models in health, education , agriculture, finance, gender equality, Mobiles for Development Experience sharing by ICT for Development practitioners Case Studies: Reuters Market Light, Iffco Kisaan Sanchar Ltd. | 4         | 4         |          |
| 6.  | <b>ICT4D Implementation</b><br>Developing an ICT4D Project, Critical Success factors for technology diffusion and use, Constraints in adoption, The role of national policies, Institutional Policy framework, Multi-stakeholder partnerships, Role of Private Sector Case Studies: echaupal , Lifelines India           | 2         | 4         |          |
| <b>Total</b>  |  | <b>24</b> | <b>14</b> | <b>8</b> |
| <b>Evaluation criteria:</b>   |  |           |           |          |
| Mid-term Evaluation: 20%  |  |           |           |          |
| Case Analysis 10%   |  |           |           |          |
| Project 30%   |  |           |           |          |
| End-Term Examination 40%  |  |           |           |          |
| <b>Learning outcomes:</b>   |  |           |           |          |
| The main objective of the course is to help students learn about the concepts, theories and applications concerning the field of ICT for sustainable development. Through case studies and live projects, the students are expected to learn how ICTs can be best applied for sustainability challenges. The learning objectives of the course would be;  |  |           |           |          |
| <ol style="list-style-type: none"> <li>1. Familiarize the students with main theories and conceptual frameworks in the field of ICT for development</li> <li>2. Help students learn potential of both information and communication technologies in different areas such as health, education, agriculture, finance, gender equality and climate change.</li> <li>3. Familiarise students with the existing innovative business models and other applications in the above mentioned areas with reference to India and other developing countries.</li> <li>4. Help students compare and contrast various business models (public, private sector, PPP, civil society) with respect to technology, infrastructure, capacity building, human resource etc.</li> <li>5. Learn how ICT models can be successfully implemented at the field and understand critical success factors and constraints in adoption.</li> </ol> |  |           |           |          |
| <b>Pedagogical approach:</b>  |  |           |           |          |
| The course will have a mix of theory and applied coursework with more practical approach. The teaching shall be done mainly through lectures/ case discussions/case presentations/exercises etc. The entire course has been divided into <b>six modules</b> . There will be <b>42 sessions</b> (One hour each) as per the course outline. The students are also expected to work on cases as well as assignments given to them from time to time which will help them develop their problem-solving as well as conceptual skills in the field. The students would be expected to provide solutions to the assigned case problems in groups.   |  |           |           |          |
| Besides available reference books, the students are expected to go through a large number of resource materials in form of articles, video cases, research papers and web resources as provided by the instructor from time to time and that will form part of class discussion. The course will also have an experience sharing module where various ICT for development practitioners would be invited from industry and NGOs to share their hands on experience  |  |           |           |          |
| <b>Additional information (if any):</b>   |  |           |           |          |
| <b>Student responsibilities</b>   |  |           |           |          |
| Attendance: At-least 75% attendance will be necessary to be able to appear for the final exam.  |  |           |           |          |

**Course Reviewers:**

1. Michael Riggs, Knowledge and Information Management Officer, e- Agriculture Team Leader, Office for Partnerships, Advocacy and Capacity Development, Food and Agriculture Organization
2. Sharbendu Bannerjee, Global Director, CABI-South Asia, India