

UNR1602 Sustainable Development**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
None	1	1	2	0	--	2

COURSE AIM

To make the students familiar with an understanding of the social and environmental responsibilities of ICT professionals and the role of sustainability in ICT design and product life cycles, and advance the body of knowledge related to appropriate technologies in both Canada and in developing regions of the world. The course hopes to improve education resources and technology transfer to increase the effectiveness of student projects working towards the United Nations Millennium Development Goals. Students will also improve their problem solving ability, written and oral communication, and teamwork skills.

COURSE WEEKLY CONTENTS

- 1 Introduce students to the fundamental concepts of computing for sustainability and sustainable development.
- 2 ICT for sustainability and sustainable development.
- 3 Aspects of appropriate technology.
- 4 Green ICT.
- 5 Resource conservation.
- 6 Renewable resources.
- 7 7th week Assessment + Design for extreme affordability.
- 8 Introduce students to a range of computing problem solving methods.
- 9 Methods to identify and select sustainable solutions to design problems.
- 10 Methods of improving existing ICT solutions.
- 11 Methods of systems thinking.
- 12 12th week Assessment +
- 13 Technical, economic, and social consequences of ICT practices and processes.
- 14 To better delineate the complex ICT decisions related to social and environmental issues.
- 15 Assist students in the application of science and innovation to meet human needs while indefinitely preserving the life support systems of the planet.

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40

REFERENCES

- Textbook** • Mulder, K., "Sustainable Development for Engineers, a Handbook and Resource Guide", Routledge, Taylor & Francis.