جامعة المنوفية
كلية الهندسة الإلكترونية
قسم هندسة الإلكترونيات والاتصالات الكهربية

Department offering the program: Electronics and Electrical Communications
Department offering the course: According to Faculty Council Decision

Course Specification

1- Course basic information:		
Course Code: UR 117 **University requirement**	**Course Title: Environmental Engineering**	**Academic year: 2015-2016** **Level (1) – Semester : 1st**
Field: **Humanities and Social**	**Teaching hours: Lecture [2] Tutorial [1] Lab [0]**	

2- Course Objectives	
	1. To define for students the meaning of environment and demonstrate environment types. 2. To inform students the environmental resources. 3. To teach students solid waste management and recycling. 4. To enhance student ability to understand the health effects of electromagnetic waves. 5. To enhance student ability to demonstrate health risks of mobile phone. 6. To provide students with electromagnetic radiation safety, safety standards and licensing for base stations.

3- Intended Learning Outcomes: ARS		**Course ILOs**
A- Knowledge and Understanding:	A.6. State quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues.	A6.1 State the meaning of environment and demonstrate environment types. A6.2 State environmental resources. A6.3 State health effects of electromagnetic waves. A6.4 State health risks of mobile phone. A6.5 State radiation safety standards.
	A.9. Discuss topics related to humanitarian interests and moral issues.	A9.1 Discuss noise pollution, soil pollution and radioactive pollution. A9.2 Discuss solid waste management and recycling. A9.3 Discuss health effects of electromagnetic waves. A9.4 Discuss health risks of mobile phones. A9.5 Discuss safety standards and licensing for base stations.
	A.11. Define impacts of engineering solutions on society and environment	A11.1 Define impacts of engineering solutions on noise pollution, soil pollution and radioactive pollution. A11.2 Define impacts of engineering recycling on solid waste. A11.3 Define impacts of safety standards on the reduction of electromagnetic radiation and mobile phone risks.

B- Intellectual Skills	B.2. Select appropriate solutions for engineering problems based on analytical thinking.	B2.1 Select appropriate solutions for noise pollution, soil pollution and radioactive pollution problems. B2.2 Select appropriate solutions for solid waste problems depend on management and recycling. B2.3 Select appropriate solutions for electromagnetic waves and mobile phone health problems based on safety standards.
	B.9. Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.	B9.1 Judge engineering decisions considering environmental impact of environmental resources. B9.2 Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact of solid waste management and recycling. B9.3 Judge engineering decisions considering safety standards and licensing for base stations.
C-Professional Skills	C.8 Apply safe systems at work and observe the appropriate steps to manage risks. C.10 Apply quality assurance procedures and follow codes and standards. C.12. Prepare and present technical reports.	C8.1 Apply safety standards at work with noise pollution, soil pollution and radioactive pollution and observe the appropriate steps to manage environmental risks. C8.2 Apply safety systems at work on recycling of solid waste and observe the appropriate steps to manage environmental risks. C8.3 Apply safety standards at work with electromagnetic waves and observe the appropriate steps to manage health effects. C8.4 Apply safety standards at work with mobile phone base stations and observe the appropriate steps to manage health risks C10.1 Apply quality assurance procedures and follow standards at work with noise pollution, soil pollution and radioactive pollution. C10.2 Apply quality assurance procedures and follow standards at work on recycling of solid waste. C10.3 Apply quality assurance procedures and follow standards at work with electromagnetic waves. C10.4 Apply quality assurance procedures and follow standards at work with mobile phone base stations. C.12.1. Prepare and present technical reports on environmental resources. C.12.2. Prepare and present technical reports on electromagnetic waves and mobile phone health risks.

D- General Skills	D.3. Communicate effectively. D.6. Effectively manages tasks, time, and resources. D.7. Search for information and engage in life-long self learning discipline.	D3.1 Communicate effectively with staff members in lecture, and tutorial times. D6.1 Effectively manages tasks, time, and resources, when writing a report and at exam times. D7.1 Search for information and engage in life-long self learning on topics related to environment and safety standards.

4- Course Contents	Environment meaning and types, the definition of environmental engineer, environmental resources, noise pollution, soil pollution, radioactive pollution, solid waste management and recycling, electromagnetic waves and its health effects, health risks of mobile phone, electromagnetic radiation safety, safety standards and licensing for base stations.
5- Teaching and Learning Methods	- Lectures - Tutorials - Reports
6- Teaching and Learning Methods for disable students	• Discussions at office hours with those students. • Repeat the explanation if required in lecture time or tutorials.
7- Student Assessment	
a- Assessment Methods	- Weekly discussion at class room - Quizzes - Reports - Mid-term, and final exams
b- Assessment Schedule	- Tutorial discussion and reports: Weekly - Quiz-1: Week no 4 - Mid-Term exam: Week no 8 - Quiz.2: Week no 12 - Final – term examination: Week no 16
c- Weighting of Assessment	- Semester work and quizzes : 15 % - Mid-term examination: 15 % - Final – term examination: 70 % Total 100 %
8- List of text books and references:	
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department
b- Text books	-------------
c- Recommended books	----------------
d- Periodicals, Web sites …etc	Web Sites related to Environmental Eng., Noise, and air pollution.

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Environment meaning and types, the definition of environmental engineer,	1-2	A6.1	-	-	D3.1,D6.1,D7.1
Environmental resources, noise pollution, soil pollution, radioactive pollution,	3-5	A6.2, A9.1, A11.1	B2.1, B9.1	C8.1, C10.1, C12.1	D3.1,D6.1,D7.1
Solid waste management and recycling,	6-7	A9.2, A11.2	B2.2, B9.2	C8.2, C10.2	D3.1,D6.1,D7.1
Electromagnetic waves and its health effects,	9-10	A6.3, A9.3, A11.3	B2.3	C8.3, C10.3, C12.2	D3.1,D6.1,D7.1
Health risks of mobile phone,	11	A6.4, A9.4, A11.3	B2.3	C8.4, C10.4, C12.2	D3.1,D6.1,D7.1
Electromagnetic radiation safety, safety standards and licensing for base stations.	12-14	A6.5, A9.5, A11.3	B2.3, B9.3	C8.1, C8.3, C8.4, C10.1, C10.2, C10.3, C10.4	D3.1,D6.1,D7.1

Teaching and Learning Methods - ILOs Matrix

Teaching and Learning Methods	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Lectures	A.6,A.9,A.11	B.2, B.9	C.8, C.10	D.3
tutorials	A.6,A.9,A.11	B.2, B.9	C.8, C.10	D.3,D.6,D.7
Reports	A.6,A.9,A.11	B.2, B.9	C.12	D.6,D.7

Assessment Methods - ILOs Matrix

Assessment Methods	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Weekly discussion	A.6,A.9,A.11	B.2, B.9	C.8, C.10	D.3,D.6,D.7
Reports	A.6,A.9,A.11	B.2, B.9	C.12	D.6,D.7
Quizzes ,Midterm, and Final Written exams	A.6,A.9,A.11	B.2, B.9	C.8, C.10	D.6

Authorized from department board at 15/05/2016
Authorized from college board at 05/06/2016

Course coordinator:
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