Miami Dade College

Course Competencies Template - Form 112

GENERAL INFORMATION	
Name: Mark Mawlawi	Phone #: 77532
Course Prefix/Number: EGN2033	Course Title: Technology and Social Change
Number of Credits: 3	

Degree Type	☐ B.A.　☐ B.S.　☐ B.A.S　☒ A.A.　☐ A.S.　☐ A.A.S. ☐ C.C.C.　☐ A.T.C.　☐ V.C.C
Date Submitted/Revised: 04-17-2007	Effective Year/Term: 2007-1

☐ New Course Competency　　☒ Revised Course Competency

General Education courses must align with the General Education Outcomes. The above course links to the following outcome(s):

☒ Communication	☒ Social Responsibility
☐ Numbers / Data	☒ Ethical Issues
☒ Critical thinking	☐ Computer / Technology Usage
☐ Formulation of strategies	☐ Aesthetic / Creative Activities
☒ Cultural / Global Perspective	☒ Environmental Responsibility

Course Description (limit to 50 words or less, **must correspond with course description on Form 102**):

This course is designed for engineering and computer majors and any student interested in learning about the impact of technology on people and society. Students learn about changes in human culture and quality of life as a result of technological innovation. Topics include important developments and trends in technology, the interaction between people and technologies, contemporary events in technology and their impact on society, the role of the engineer in designing and promoting new technologies, and how to evaluate the social, ethical, political, and economic implications of existing and emerging technologies. 3 hr. lecture.

Prerequisite(s):	Corequisite(s):

Course Competencies: (for further instruction/guidelines go to: http://www.mdc.edu/asa/curriculum.asp)

Competency 1:	The student will demonstrate an understanding of technology by:

1. Defining "technology."
2. Identifying, discussing, and describing past and current technologies used in society.
3. Discussing trends in technology over the course of human history.
4. Categorizing types of technologies, including mechanical, energy, computer, information, biological, medical, communication, electronic, etc., and giving examples of each type.
5. Discussing the benefits and liabilities of each type of technology to society.

Competency 2:	The student will demonstrate an understanding of technological impacts on society by:

Revision Date: ___04-17-2007___

Approved By Academic Dean Date: _____　　Reviewed By Director of Academic Programs Date: _____

1. Defining society.
2. Identifying technological turning points on a timeline.
3. Discussing the affect technology has on human culture.
4. Differentiating between a technological advance and a cultural change.
5. Giving examples of technological advances and what effects they have had on society.

Competency 3:	The student will demonstrate an understanding of the impact of emerging technologies on society by:

1. Identifying areas in society that may be improved through the use of technology.
2. Identifying emerging technologies for future development and discussing what improvements they may bring about.
3. Discussing how new technologies may impact the future.
4. Explaining how future technologies can impact society.

Competency 4:	The student will demonstrate an understanding of the universal concerns surrounding technological advances by:

1. Identifying and discussing issues relating to emerging developments in the health and medical fields.
2. Discussing the impact, both positive and negative, that technology is having on the environment.
3. Analyzing political and economic issues relating to new technologies.
4. Examining the security and military implications of new technologies.
5. Evaluating the ethical concerns about how technology affects humans and society.

Competency 5:	The student will demonstrate a critical understanding of the positive and negative effects of technology on society by:

1. Researching historical trends and analyzing their effect on society.
2. Presenting arguments justifying the impact that specific technologies have had on society.
3. Comparing and contrasting the advantages and disadvantages of specific technologies on human culture and the environment.

Competency 6:	The student will demonstrate an understanding of how human factors influence and foster technological development by:

1. Explaining how human culture can influence technology.
2. Citing specific examples of how human and social issues have led to new technological advances.
3. Discussing examples of how existing technology has been developed or improved as directly attributable to the needs and requirements of people and society.

Competency 7:	The student will demonstrate an understanding of the role of the engineer in developing technologies by:

1. Identifying the engineer's role in the design and development process of new technologies.

2. Debating whether or not engineers are responsible for the application of their creations.
3. Citing examples of constructive and destructive uses of technology.
4. Identifying what engineers may and may not do to reduce the negative impact of specific technologies when given a specific technology to evaluate.