Ethics and Professionalism in Computer Science
CS 5024

I – Catalog Description

Ethical implications and consequences of computing technology applied to algorithmic decision making, security, privacy, autonomous systems. Ethical frameworks and their application to relevant current topics. Formulating, reasoning, and communicating positions on ethical topics related to computing technology. Diversity and bias as it relates to information technology. Ethical conduct of research and development of intellectual property. Pre: Graduate standing. (3H, 3C).

Course Number: 5024

Transcript (ADP) Title: Ethics & Professionalism in CS

II – Learning Objectives

Having successfully completed this course, the student will be able to:

1. Locate and use sources of background technical information on current topics related to privacy, intellectual property, algorithmic decision making.
2. Weigh and apply the ethical framing employed by opposing views on current computing technology-related topics such as privacy, intellectual property, algorithmic decision making.
3. Define and defend a position on a computing technology issue.
4. Apply ethical requirements to situations involving conflicts of interest, proper conduct of research, appropriate use human subjects in research, bias, and diversity.

III – Justification

Ethical violations and abuse of computing technology is a significant problem today. As computing technologies become more pervasive, graduate students in the field need an understanding of the ethical implications and consequences related to algorithmic decision making, security, privacy, autonomous systems, etc. This course covers frameworks to help study ethical issues in computing technology including case studies of current happenings. Current topics will be featured to motivate understanding and discussion. This course provides a vehicle for coverage of ethics, diversity, and conduct of research required of all graduate students.

Course is taught at the 5000-level because students need a background and technical maturity at the graduate level in computer science or related technical discipline. This allows for understanding the potential applications of technology for unethical ends, and the ability to formulate and argue positions with sophistication appropriate to the graduate level. The course is open to students outside of Computer Science from any field with significant application of computing technologies.

IV – Prerequisites and Corequisites

Pre: Graduate standing

V – Texts and Special Teaching Aids

Required Text:

Quinn, Michael J. (2016). *Ethics for the Information Age* (7th Edition). Pearson. Pp. 568.

The course is also meant to cover controversies of the day, so one or more sources of information such as popular press books on current topics will be required. An example is: O'Neil, Cathy (2016). *Weapons of Math Destruction*. Broadway Books. Pp. 254.

VI – Syllabus

Topic	Percent of Course
Ethical Frameworks	10%
Technology of algorithmic decision making and its consequences	20%
Professional written presentation of a position/viewpoint	15%
Ethical conduct of research and development	10%
Issues related to diversity	5%
Current topics related to technology and privacy issues	10%
Current topics related to autonomous technologies	10%
Current topics related to data, intellectual property, and finance	10%
Current topics related to technology and bias	10%
Total	100%