EGR 390 / CMSC 390 / CORE 267: Technology and Society

Spring 2017

Meets: Tuesdays at 11:00, in CL1148.
Thursdays at 11:00 or 12:25, in various rooms depending on your discussion section.

INSTRUCTORS:

Dr. Nick Breems: SB 1616, 712-722-6298

Dr. Kevin Timmer: SB 2606, 712-722-6290

DESCRIPTION AND OBJECTIVES

GOVERNING QUESTIONS WITH CORRESPONDING COURSE OBJECTIVES:

A. **What is Technology?** (Religious Orientation/Creational Structure)
   - Students will explore definitions of technology and will come to see the key role that human responsibility plays in design work. They will gain an understanding of the biased nature of doing technology and its implications for shaping society.

B. **What is the biblically founded *vision* for Technology?** (Religious Orientation/Creational Structure)
   - Students will deepen their understanding of Christian (neo-Calvinist or reformed) philosophy and will understand the structure and role of technology in creation.

C. **What is the practical working out of this vision in the day-to-day doing of Technology in light of a finite and cursed cosmos?** (Creational Development/Contemporary Response)
   - Students will come to understand and appreciate the dangers of technological inertia, technicism, and narrowness of perspective by studying, via film, the life of J. Robert Oppenheimer and the development of the atomic bomb.
   - Students will come to appreciate the norms for technology and will apply them to the design of artifacts, work environments, and in analyzing the topic they choose for their term paper.
   - Students will understand the traditional philosophical basis for the study of ethics and will be able to contrast that with a Christian approach to ethics. Students will gain an appreciation for the role of ethics in engineering (and technical work).
   - Students will be able to develop and defend a thesis, in a poster presentation and written paper, on a topic having to do with technology and society.

CATALOG DESCRIPTION

This is an upper level seminar course dealing with the relationship between technology and culture. Presupposing a basic knowledge of Christian philosophy, the course will attempt to deepen that knowledge as it pertains specifically to technology. The main topics covered are the nature of technical/industrial work, the philosophy of technology, and engineering ethics. While designed for senior engineering, computer science, and philosophy majors, the course is open to all upper level (Junior and Senior) students who have studied at least CORE 200.

TEXTS:

Schuurman, *Shaping a Digital World* [Shaping]

> 2013, InterVarsity Press..

Hardy, *The Fabric of This World* [Fabric]

> 1990, William B. Eerdmans Publishing Co.

Schinzinger & Martin, *Introduction to Engineering Ethics* (2nd ed) [Ethics]

> 2011, McGraw-Hill.

Adams, *Exercising Our World View* [DLVK]

> 2014, Dordt College Press

ENGR 390/CMSC 390 Course Materials

> Dordt Bookstore.

ASSIGNMENTS AND EVALUATION:

COURSE EVALUATION

Reading Accountability Quizzes	10%
Discussion Starters	15%
Debate Performance	10%
Monthly Journals	10%
Thesis Paper/Poster	30%
Midterm	25%
	100.00%

Reading Accountability Quizzes (10%): We will be giving approximately six pop quizzes on the assigned readings at the beginning of the Thursday class period scattered throughout the semester. These will be based on the readings for that week. We will delete the lowest score.

Discussion Starters (15%): Students will both submit to canvas and bring to class discussion questions or claims based on the readings for that week. These questions/claims will be graded and may serve as fodder for our classroom discussion.

Debate Performance (10%): Students will engage in a formal, public debate, in teams of three, in the second half of the semester. These debates will discuss contentious issues in the relationship between technology and society, and will be evaluated based on preparation, strength of argumentation, and use of the ethical tools we have developed in class. Further details will be distributed in class.

Monthly Journal / Essays (10%): Each student is required to write a personal, op-ed style essay at the end of each month. The essay should attempt to **apply** (not just respond to) the material from that month's readings, except for the DLVK readings. (Instead, the DLVK entries should serve as a model for the kind of essay we're looking for.) The journal entries should have a maximum of 600 words in length, and will be evaluated on the basis of clear writing, personal engagement, and a well-argued position.

Thesis Paper/Poster (30%): Each student is required to write a topical paper or scholarly book critique and to create and present a poster based on that paper. As rough guidelines, the paper is expected to be approximately 3,000 words (minimum 2,500, absolute maximum 4,000) in length (excluding footnotes, bibliography, index, etc.). Further details, including topics and due dates, will be distributed separately. A **poster session** will be near the end of the semester.

OTHER COLLEGE MATTERS

STUDENTS' RIGHTS TO ASSISTANCE OR ACCOMMODATIONS-

Any student who feels s/he may need academic accommodations or access accommodations based on the impact of a documented disability should contact and register with the Coodinator of Services for Students with Disabilities in the Academic Skills (ASK) Center during the first week of class. The CSSD is the official officer to assist students through the process of disability verification and coordination of appropriate and reasonable accommodations. Students currently registered with the CSSD must meet with her to obtain a new accommodation memo for each semester. Marliss Van Der Zwaag, CSSD, L168, (712) 722-6490, mvdzwwag@dordt.edu

CHEATING POLICY (FROM STUDENT HANDBOOK)

A student should become aware of acceptable professional ethics in the use and misuse of written, oral, or graphic materials written or prepared by someone else. While much of this can be determined by a biblically-informed conscience, certain offenses appear more prevalent than others and therefore need identification.

1. Plagiarism is the unacknowledged use of written, oral, computer-accessed, or graphic materials which have been prepared by someone else.
2. Double-dipping means submitting a paper to two different professors in two different courses and receiving double credit for one effort without prior consent of the professors.
3. Falstaffing means submitting a paper or an assignment prepared by someone else as if it were one's own. A student who allows another student to use one of his/her papers or assignment is also guilty of falstaffing.

Each of these offenses and other forms of cheating will be handled according to the following procedures:

1. First offense: The student will receive an "F" on the test, exam, course paper, or class assignment, and the chairperson of the Student Life Committee will be informed of the incident. Records of offenses are maintained for the duration of a student's enrollment.
2. Second offense: The student will receive an "F" on the test, exam, course paper, or class assignment, will appear before the Student Life Committee and be placed on dismissal status for the duration of the student's enrollment. Dismissal status in this instance applies to any future academic dishonesty offense.
3. Third offense: The student will be dismissed from the college.

Appeals in such matters will be handled as outlined in the section "Complaints Regarding Instruction."

CALENDAR

Week	Topics	Reading Assignment
Jan 10, 12	Introductions Biblical Foundations of Science and Technology	Psalm 19; Colossians 1:15-20 *Biotechnology:* Sections 1-2.2 (Course Materials) *DLVK:* Chapters I-1, I-2, I-3, I-33
Jan 17, 19	What is Technology	*Biotechnology:* Section 2.3 (Course Materials) *Shaping a Digital World:* Chapter 1 *My iPhone made me do it!* (handout) *DLVK:* Chapters I-32, IV-5, IV-15, IV-44, IV-47
Jan 24, 26	Cultural Mandate and the Fall	*Shaping a Digital World:* Chapter 2, 3 *Putting the 'And' Back into Gen 2:15* (Course Materials) *Imaging God* (Handout) *DLVK:* Chapters I-35; IV-37
Jan 31, Feb 2	Norms for Technological Design	*Shaping a Digital World:* Chapter 4 - 6 *DLVK:* Chapters IV-19, IV-12, IV-23
Feb 7, 9	Historical Views of Work Thesis Workshop	*Fabric of this World:* Preface, Introduction, & Chapter 1 *DLVK:* Chapters III-16, IV-50 **(1ˢᵗ draft of Thesis statement due)**
Feb 14, 16	Biblical View of Work	*Fabric of This World:* Chapter 2 *DLVK:* Chapter V-4 **(2ⁿᵈ draft: Thesis statement due)**
Feb 21, 23	Work as Calling	*Fabric of This World:* Chapter 3 *DLVK:* Chapters II-9, II-13; IV-6
Feb 28, Mar 2	Design of Work	*Fabric of This World:* Chapter 4 *DLVK:* Chapters IV-7, IV-8
Mar 14, 16	*The Day After Trinity*	*DLVK:* Chapters I-12, I-15, IV-10
Mar 21, 23	Review	**MID-TERM EXAM**
Mar 28, 30	Intro to Ethics and Moral Reasoning	*Two-Cultures:* Section 7.4 (Course Materials) Ch 1-2 in *Ethics* *DLVK:* Chapters I-6, III-6, IV-34
Apr 4, 6	Ethical Frameworks and Social Experimenting	(**PAPER DUE: 4/6**) Ch 3-4 in *Ethics* *DLVK:* Chapter I-10, I-26
Apr 11, 13	Safety and Workplace Responsibilities/Rights	Ch 5-6 in *Ethics* *DLVK:* Chapter III-7, III-8, III-9
Apr 18	Truth and Computer Ethics	Ch 7-8 in *Ethics* *DLVK:* Chapter IV-22, IV-26, IV-28
Apr 25, 27	Environmental Ethics and Globalization	Ch 9-10 in *Ethics* *DLVK:* Chapter IV-32, IV-36, IV-33, IV-48
May 2	**FINAL EXAM SLOT (8:00 – 10:00)**	

COURSE SCHEDULE NOTES:

- The assignments listed indicate the readings to be completed ***in preparation for that week***. For example, the reading assignments listed for the week of January 17, 19 are to be completed prior to Thursday, January 19.

- Exams are comprehensive, covering all lectures (seminars) and readings assigned prior to the exam.