

**University of Arkansas, College of Education and Health Professions
Curriculum and Instruction - Career and Technical Education**

I. Program Affiliation: Technology Education

Course Number and Title: TEED 2103: Technology & Society

Catalog Description: An examination of the complex relationships between society, values, and technological development in developed and under-developed nations.

Prerequisite: None

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Required Text: International Technology Education Association. (2000/2002/2007). Standards for technological literacy: Content for the study of technology. Reston, VA: Author.

Available online at: http://www.iteea.org/TAA/Publications/TAA_Publications.html

II. Relationship to knowledge Base:

This foundational course supports the “Specialty Studies” component of the Scholar-Practitioner model by providing the technology teacher education candidate with knowledge and tools needed to explore the complex relationships between humans, knowledge and skills, and technological development or proliferation. Few elements in our contemporary society are as pervasive as technology. Technology has often been considered an engine of social change. In this course, students will examine the interface between technology and society. The ability to foresee the social, personal, economic, and environmental consequences of technology development and use will be addressed.

Scholar-Practitioner Tenets: The following tenets are to be interwoven throughout all areas of the class. Scholar-practitioners are teachers, administrators, and counselors who value theory and research, comprehend theory and practice as being complementary and mutually reinforcing, and are committed to the enhancement of teaching, learning, and professional practice.

The scholar-practitioner is one who:

1. *accesses, uses, and/or generates knowledge.
2. *plans, implements, and models best practice.
3. *understands, respects, and values diversity.
4. *is a developing professional and a life-long learner.

5. *is knowledgeable about teachers and teaching, learners and learning, schools and schooling.
6. *communicates, cooperates, and collaborates with others.
7. *makes decisions based upon professional standards and ethical criteria

III. Goal:

This course is designed to provide the candidate with a foundational understanding of the complex relationships between technology, societies, politics, economics, and values.

IV. Competencies:

Upon successful completion of this course, students will demonstrate knowledge, skills and competencies in the following areas:

1. Describe the social, cultural, political, economic, geographic, and psychological contexts that impact living in a technological world
2. Explain the socio-cultural elements that determine the quality of life in technocratic societies
3. Analyze the role of technology in the development, success, and dilemmas of rural and urban societies in this nation and others
4. Describe the nature of historical and current social resistance to technological change
5. Critique the evolutionary process of technology and its impact on society, culture, politics, and the media
6. Explain the socio-psychological dimensions of work and the role of technology in causing major changes in the nature of work
7. Explain the complex dynamics that produce and shape social outcomes of technology
8. Demonstrate the use of the "sociological imagination" as the organizing device to identify patterns of social organization, social structure, and social institutions that define living in a technological world; and
9. Demonstrate the ability to complete an "appropriate technological" problem solving scenario that attempts to solve a social problem in an under-developed region of the United States or another nation

V. Content:

1. Technological Interfaces

- a. Rural America
 - 1. Technology: A natural process
 - 2. Resistance to change
 - 3. Creativity and innovation

- b. Development of agriculture and rural America
 - 1. Capital and mechanization
 - 2. The railroad as catalyst for change
 - 3. Specialization, selective breeding, fertilizer, and oil dependency
 - 4. Developing technologies: biotechnology and genetic engineering, global positioning and selective applications, etc.

- c. Rural America in transition: social and cultural change issues
 - 1. Diminishing population and increasing farm size
 - 2. Economic diversity: rural poor to successful farmers
 - 3. Rural mentality: collectivism to individualism
 - 4. The decline of the family farm
 - 5. Power and control: Independence to increasing dependence
 - 6. Shifting gender stereotypes/roles?
 - 7. Environmental issues, such as soil preservation and ground water pollution
 - 8. Global needs, domestic price stability, and politics (exports, imports, tariffs, and subsidies, etc.)
 - 9. The social consequences of the demise of the rural community
 - 10. The concept of progress and agriculture in other cultures

- d. Urban and suburban cultures
 - 1. The cause and effect of technology and society
 - 2. Historical development: the city and the fabric of society
 - 3. The importance of resources
 - 4. Transportation and communication
 - 5. Diversity of culture; the development of the arts
 - 6. Early city design

- e. Technologies crucial to the development of the modern city
 - 1. Transportation
 - 2. Communication
 - 3. Infrastructure and utilities
 - 4. Systems and the occasion for normal accidents
 - 5. Skyscrapers
 - a. Early barriers to height, solutions
 - b. Competition for the sky: monuments to the male ego?

- f. Emerging urban patterns: social dynamics and the role of technology
 - 1. Suburbs to megaburbs
 - 2. Beltways and the growth of commercial centers away from the core
 - 3. City planning
 - 4. Technology and the reversal of urbanization in the U.S.
 - 5. The influence of technology on urban culture
 - 6. The concept of progress

- g. Urban issues and trends: developing countries and America
 - 1. Power and control
 - 2. Socialization and isolation in the city:
 - 3. Poverty and distribution of resources
 - 4. Social stratification
 - 5. Housing
 - 6. Crime
 - 7. Transportation
 - 8. Environmental issues unique to the urban environment
 - 9. Strategies for modifying the urban environment; revitalizing the city core

- h. The media and society
 - 1. Historical perspective: the printing press: economic, social, political, religious, psychological, and cultural consequences; precursor of mass communication
 - 2. 20th century technologies: technology as mediator
 - a. Television
 - i. Controversial issues: the good, the bad, and the ugly: stimulating violence; accommodating a passive lifestyle
 - ii. Shaping world views
 - iii. Shaping personal values, beliefs, and self-image
 - iv. Influencing the political process
 - b. Internet, the Web, and virtual reality
 - i. Communication
 - ii. Does information equal knowledge
 - iii. Is the Internet the equalizer in society
 - iv. "A chip in every product;" will it change society?
 - 3. Environmental issues: noise and information overload
 - 4. The concept of progress
 - 5. Power and control: who controls the media?

- i. Social/technological transformations
 - 1. Agriculture to manufacturing to service sector
 - 2. Technology - a major force of change
 - 3. Increased use of automation
 - 4. Globalization of business
 - a. The technologies
 - b. Effect on under-developed and developing countries

- c. The major players
- d. The green revolution
- 5. The questions of power and control

j. Technology and the concept of progress

2. Solving problems with technology

- a. Technological problem solving
- b. The design loop
 - 1. problem identification
 - 2. problem clarification
 - 3. ideation
 - 4. Drawing, sketching, and designing solutions
 - 5. Solution implementation
 - 6. Testing and evaluation
 - 7. Communicating results

3. Appropriate technology

- a. Concepts and definitions
- b. Goals, theories and history of appropriate technology
- c. Introduction to the literature of appropriate technology
- d. Appropriate technology in developing regions
- e. Photovoltaic and pedal-power
- f. Agriculture and shelter technologies
- g. Impacts, culture, and society
- h. Sustainability and nationalism
- i. Model and prototype development

VI. Evaluation:

All assignments must be completed on or before the due date. Grades for participating students will be calculated based on completion of the following assignments and activities:

- **Class Attendance and Participation/Daily Assignments:** Students are expected to come to every class and participate in all discussions and activities. **200 points**

- **Reading/Lecture/Video Assignments:** Students are required to prepare for and respond to questions from various reading assignments, videos, and lectures throughout the course of the semester. **200 points**
- **Technology Assessment Presentations:** Students will make a presentation on the impacts of a given technological device or system and develop appropriate technology solutions for a given culture or society. The paper should describe the technology (e.g., cloning of sheep) and then identify and discuss the implications for individuals and society. Also, students will describe the extent to which society and cultural values have made it possible for the technology to be developed and have shaped the technology. **50 points**
- **Technology Assessment Reflection Paper:** Students will write a paper (3-5 pages) summarizing their Technology Assessment Presentation. It will include a self-evaluation of the presentation, and a reflection of the process involved. **50 points**
- **Midterm and Final Exam - 200 points**

VII. Syllabus Change

The instructor reserves the right to make changes as necessary to this syllabus. If changes are made, advance notification will be given to the class.

VIII. Grading Scale

The following scale will be used to determine the final grade in the course:

Final Percentage	Final Grade
90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
Below 60%	F

IX. Academic Honesty

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail.

Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' which may be found at <http://provost.uark.edu/> Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

X. Accommodations

Students with disabilities requesting reasonable accommodations must first register with the Center for Educational Access (CEA). The CEA is located in the Arkansas Union, room 104 and on the web at: <http://www.csd.uark.edu/>. The CEA provides documentation to students with disabilities who must then provide this documentation to their course instructors. Students with disabilities should notify their course instructors of their need for reasonable accommodations in a timely manner to ensure sufficient time to arrange reasonable accommodation implementation and effectiveness. A typical time frame for arranging reasonable accommodations for students who are registered with the CEA is approximately one to two weeks.

XI. Classroom Behavior

Appropriate classroom behavior is expected of the instructor and all students. Inappropriate and disruptive classroom behavior (including the use of cell phones and laptops) will not be tolerated and will result in possible removal from the class and or disciplinary action as per the student handbook.

XII. Inclement Weather

Class will not meet if the University is closed for inclement weather. University closing announcements are also made on KUAF Radio, 91.3 as well as local radio and television stations. The University's inclement weather site is updated frequently on both UARKINFO and at: <http://emergency.uark.edu/14701.php>. If Fayetteville Schools are closed we will not meet for class.