I. TITLE: Exploring Diverse Technological Systems

II. COURSE DESCRIPTION:
This course provides an overview of diverse technological systems. It explores technological aspects of how technology is designed, and used to meet the wants and needs of individuals and society. The problem-solving and design processes are examined in the context of production, communication and transportation systems. Emphasis is placed on teaching technical content and using the systems approach to develop technical understanding, rudimentary technical skills and problem solving expertise in the technology education classroom/laboratory setting.

III. PURPOSE:
The purpose of this course is to provide a broad understanding of the technological systems approach to teaching and understanding technological interconnectivity. This course will include information about: a) production, communication and transportation systems, b) trends in instructional delivery systems in technology education, c) linking instruction to the mission, goals and objectives of technology education, and d) teaching technology education using the national standards.

IV. COURSE OBJECTIVES:
Class activities will be centered on the attainment of the course objectives listed below. These objectives are understood to be reflective of, but not limited to those behaviors advocated by the Kentucky Education Reform Act (KERA) guidelines. Following each objective, and enclosed in parentheses, are numbers that reference the Kentucky Teacher Standards for Preparation and Certification (KTS). Upon successful completion of this class, students will be able to:

A. Integrate academic and technical knowledge. (KTS #2, 4, 1)
B. Experience application of problem solving, research, experimentation and establishment of enterprises as learning techniques in the technology education classroom. (KTS #2, 4, 1)
C. Demonstrate understanding of the methods of technology education. (KTS #2, 4, 1)
D. Demonstrate insight into the learning process and necessary elements of experiential classroom instruction. (KTS #2, 4, 1)
E. Identify appropriate content based on goals and objectives of the technology education program and link to Kentucky and national standards for technology education. (KTS #2, 9, 1)
F. Demonstrate an understanding of various aspects of technological systems, outcomes and impacts. (KTS #2, 4, 1)
G. Use the professional and technical literature and journals within technology education and related fields as resources when developing instructional materials. (KTS #1)
H. Use computers and other technologies in the technology education classroom. (KTS #6)

The COE Theme of Educator as Reflective Decision-Maker is addressed in this course by requiring students to reflect on professional and technical literature and journals within technology education and related fields as resources when developing instructional materials.

The EPSB Themes of Closing the Achievement Gap and Diversity are explored in the course through integration of academic and technical knowledge, thereby making learning more relevant, and through demonstrating insight into the learning process and necessary elements of the experiential classroom and its effect on meeting the needs of diverse types of learners.

V. CONTENT OUTLINE:
A. Technology as a system
B. Inputs to technological systems
C. Technological processes
D. Outputs, feedback and control
E. Production tools
F. Problem solving and design processes
G. Developing and evaluating design solutions
H. Technological artifacts
I. Resource management
J. Manufacturing and constructing
K. Using and servicing
L. Technology to communicate
M. Technology to transport
N. Energy and technology
O. The technological enterprise

VI. INSTRUCTIONAL ACTIVITIES:
A. Lecture
B. Demonstration
C. Discussion
D. Small group problems and activities
E. Individual problem solving activities

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES:
none

VIII. RESOURCES:
none

IX. GRADING PROCEDURES:
90-100% A
X. ATTENDANCE POLICY:
This course adheres to the attendance policy published in the current MSU Undergraduate Bulletin.

XI. ACADEMIC HONESTY POLICY:
This course adheres to the academic honesty policy stated in the current MSU Undergraduate Bulletin.

Note: Faculty reserve the right to invalidate any examination or other evaluative measures if substantial evidence exists that the integrity of the examination has been compromised.

XII. TEXT AND REFERENCES: none

XIII. PREREQUISITES:
none

XIV. STATEMENT OF AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY:
Murray State University does not discriminate on grounds of race, color, gender, sexual orientation, religion, national origin, age, disability, or veteran's status in providing any educational or other benefits services of Murray State University to students or those applying for admission at Murray State University. Murray State University attempts to provide equal opportunity in all areas of student admissions, financial aid, employment, and placement and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities. For information regarding nondiscrimination policies contact the Office of Equal Opportunity, 270-809-3155.

XV. FLAG SYSTEM/CONTINUOUS ASSESSMENT:
Student progress is continuously assessed throughout the teacher preparation program. Appropriate professional characteristics and dispositions, in addition to academic achievement, are assessed. Positive and negative flags are submitted by faculty to Teacher Education Services and then presented to admissions committees. Negative flags are carefully reviewed to make a determination as to whether a student should be denied admission OR if a professional development plan will be designed for the student’s progress towards program completion. NEGATIVE FLAGS MAY BE GROUNDS FOR DENIAL OF ADMISSION TO TEACHER EDUCATION AND/OR STUDENT TEACHING.

*****ALL STUDENTS (MALE AND FEMALE) MUST NOT WEAR HATS, CAPS, OR HEAD “DRESSINGS” DURING CLASS MEETINGS OR FIELD EXPERIENCES.
ALL STUDENTS MUST DRESS APPROPRIATELY AS PER TEACHER EDUCATION SERVICES GUIDELINES DURING FIELD EXPERIENCES.

ALL CELL PHONES, BLACKBERRIES, LAPTOP COMPUTERS, PAGERS, AND OTHER ELECTRONIC DEVICES MUST BE TURNED OFF DURING CLASS MEETINGS AND FIELD EXPERIENCES.

Note: The instructor of this course recognizes that in today’s world cell phones, blackberries, laptop computers, pagers, and other electronic devices are a familiar and many times needed form of communication for students. It is the policy of this instructor that any of the above mentioned devices shall not be allowed in class and/or labs without the prior consent of the course instructor. This shall include verbal calling, incoming calls, e-mail, text message, and use of cell phone calculator on tests and quizzes. All electronic devices must be powered off and out of the sight and use (i.e. kept in a bag or purse). Should any of these devices be visible, ring, or other form of unauthorized usage which is interruptive to the class or lab, the student may be asked to leave class and not return for that class/lab period. Upon prior consent of the instructor a student may obtain permission to use any of these devices in case of emergency or in family critical situations.

Note: The instructor reserves the right to make any changes in course activities deemed necessary during the semester.