UNIVERSITY OF MARYLAND

EDUC 478
Using Information Technology In Schools

The University of Maryland, College Park
College of Education
Outreach Programs

Educational Technology Outreach

**How this course meets the ISTE/NETS Foundations for All Teachers
and MSDE Teacher Technology Standards**

Course Title: Using Information Technology In Schools

Completion of any course does not certify competency in the identified area: however, it will contribute to development of the competency

I. Technology Operations and Concepts
Teachers demonstrate a sound understanding of technology operations and concepts.

Teachers:

A. demonstrate introductorily knowledge, skills, and understandings of concepts related to technology	yes
B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies	yes

II. Planning and designing learning environments and experiences
Teachers plan and design effective learning environments and experiences supported by technology.

Teachers:

A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.	yes
B. apply current research on teaching and learning with technology when planning learning environments and experiences.	yes
C. identify and locate technology resources and evaluate them with accuracy and suitability	yes
D. plan for the management of technology resources within the context of learning activities	yes
E. plan strategies to manage learning in a technology-enhanced environment.	yes

III. Teaching, learning, and the curriculum
Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.

Teachers:

A. facilitate technology-enhanced experiences that address content standards and student technology standards.	yes
B. use technology to support learner-centered strategies that address the diverse needs of students.	yes
C. apply technology to develop students' higher order skills and creativity.	yes
D. manage student learning activities in a technology-enhanced environment.	yes

IV. Assessment and evaluation
Teachers apply technology to facilitate a variety of effective assessment techniques and evaluation strategies.

Teacher:

A. apply technology in assessing student learning of subject matter using a variety of assessment techniques.	yes
B. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.	yes
C. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity	yes

V. Productivity and professional practice
Teachers use technology to enhance their productivity and professional practice.

Teachers:

A. use technology resources to engage in ongoing professional development and lifelong learning	yes
B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning	yes
C. apply technology to increase productivity	yes
D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning	yes

VI Social, Ethical, Legal, and Human Issues
Teachers understand the social, ethical, legal, and hum issues surrounding the use of technology in PK-12 schools and apply that understanding in practice.

Teachers:

A. model and teach legal and ethical practice related to technology use.	yes
B. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.	yes
C. identify and use technology resources that affirm diversity.	yes
D. promote safe and healthy use of technology resources.	yes
E. facilitate equitable access to technology resources for all students.	yes

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SYLLABUS

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Office Hours:	By appointment
Credits:	3 credits
Time:	Spring semester

Description of Course Experience:
Course Goals:

To introduce students to the strategies, resources, tools and organizational concepts for using technology to facilitate classroom learning and school administrative functions. Major topics of interest include

- Building expertise in locating, retrieving, archiving and evaluating information from such digital sources as email, the Internet and district-adopted software and learn to utilize and evaluate the effectiveness of strategies for sharing knowledge gained through such sources.

- Introducing the logic of a backward design approach to curriculum planning, assessment, and instruction utilizing technology integration strategies

- Criteria selection in matters of understanding; design standards for quality control; and misconceptions and misunderstandings toward integrating technology into the classroom

- Locating, accessing, retrieving, evaluating, and archiving information pertaining to their MSDE assessment scores, state and national content standards, and performance assessment tasks

- Building skills and confidence in participants abilities to determine the best tools and methods to locate and present information, and to develop the ability to evaluate information, investigate the various resources available to researchers and educators, and present their findings in intellectual and practical settings

- Examining the uses of and current issues related to research based best practices in integrating technology in the educational setting

- Exploring the advantages and concerns with research-based justifications for educational technology

- Building expertise in accessing and using exemplary technology resources to facilitate inquiry-oriented activities in the classroom.

Throughout the course, a hands-on, learner-centered approach will enhance student ability to explore and contribute to best practices in the use AND the infusion of technology to enhance student learning and motivation to learn.

Objectives:

1. Review research on technology effectiveness, rationales and concerns for using technology, and best practices in integrating technology in the educational setting.

2. Review literature on effective technology-enhanced instruction in the classroom that utilizes the backward design model.

3. Explore the general categories of educational technology software resources: instructional software, software tool, multimedia, hypermedia, distance learning, and virtual reality environment.

4. Explore MSDE data in developing a framework for establishing curricular priorities.

5. Utilize state and national content and technology standards in designing technology-enhanced instruction and school technology plans.

6. Utilize a backward design framework to design technology-enhanced instruction, which incorporate state and national content and technology standards.

7. Explore effective strategies for accessing and using technology resources (Web Quests, e-portfolios, Treasure Hunts, Scavenger hunts and various software) to facilitate inquiry-oriented activities in the classroom.

8. Evaluate software applications for enhancing instruction and school administration.

9. Evaluate the pedagogical potential of multimedia sources.

10. Review and discuss assistive technology options and resources for students with special needs.

11. Review and discuss technology-enhanced options and materials for culturally diverse populations.

12. Review and discuss equity, ethical and legal issues in using technology in schools.

13. Share knowledge of important issues and trends related to technology-enhanced content utilizing a backward design framework through online collaborative group discussions and reflect upon student experiences in a Web enhanced/Web-based course .

Readings:

Texts:

Roblyer, J.D., and Edwards, J. (2000). *Integrating Educational Technology into Teaching*. Upper Saddle River, New Jersey: Merrill [ISBN 0-13-974387-1] Order Online

Readings can be downloaded from the course website as well as from other sources.
These reading assignments will be periodically updated on the course website.

Additional Recommended Text:

Additional recommended readings are included in this syllabus. Others can be found at:
www.edtechoutreach.umd.edu

Methodology:

This course will utilize a combination of face to face and on-line lecture and reading materials, hands-on experiences, explorations of multimedia resources, guest speakers, virtual field trips, discussions and projects to help participants understand the strengths and limits of strategies for integrating information technology in the educational setting. Detailed information about topics for each class is included in this syllabus.

Course Expectations and Procedures:

1. Students are expected to obtain and actively use a computer account with access to the Internet and WebCT discussion site (the University provides such accounts free to enrolled students.) Students are expected to use anti-virus software and backup all work.

2. Completion of assigned tasks and readings prior to each class is required in order to facilitate student learning.

3. It is expected that students will initiate, participate in and facilitate on-line discussions on course topics, issues and readings.

4. If you have a documented disability and wish to discuss academic accommodations please contact me as soon as possible.

5. Students missing the deadline for an assignment must make immediate arrangements with the instructor to fulfill that requirement before the next class session.

6. Please carefully edit all written assignments. A lack of care in proofreading or composition can negatively effect your final grade. For more information, see on line sources

7. The citation style employed should be accurate, acceptable, and recognizable (MLA, Chicago or APA) practice. The American Psychological Association (APA: http://www.apa.org) style of citation is preferred.

8. The University of Maryland has developed a policy describing appropriate academic conduct. Turning in assignments that use substantial portions of the work of others without attribution is considered plagiarizing and is specifically prohibited. Please review information regarding the Honor Code and other academic integrity policies at: http://www.inform.umd.edu/CampusInfo/Departments/JPO/code_acinteg.html .

Grading Policy:

Grades will be based on the content, clarity of writing and creativity of work in assignments completed for this course. The extent and quality of participation in course discussions (face to face and virtual) will also be evaluated in determining the final grade. The relative portion of the grade assigned to each course component will include:

25%   In-class and online discussions and activities from course materials.
20%   Paper/Project 1
20%   Paper/Project 2
20%   Paper/Project 3
15%   A reflection paper or electronic portfolio that capstones course activities

The evaluation criteria for this course are described in more detail in the grading rubric.

Educational Technology Outreach Grading Rubric

Letter Grade	Extent, Quality and Creativity of Work	Completeness of Work	Timelessness of work	Participation in discussions
A+	Exceptional Quality and insight; honors spirit of task; a rare and valuable contribution to understanding	100% complete (or beyond); a model for others to follow; honors spirit of task	100% on time	insightful, thoughtful and stimulating contributions to discussions; beyond what is normally expected; 100%
A	Convincingly on target with the purpose of the assignment; evidence of growth; learning difficult to refute; worthy contribution to our understanding; reader not distracted by errors in grammar, writing flow, spelling or punctuation	What is missing may not be missed; accurate; a whole product	Almost always on time; rare but forgivable tardiness	Thought provoking discussions; 100% contribution
A-	Fulfills all primary requirements of the assignment; some evidence of growth; learning difficult to refute; contribution to our understanding; reader not distracted by errors in grammar, writing flow, spelling or punctuation	A whole product but lacks "the extras"; accurate; on target with regard to task	Almost always on time; rare but forgivable tardiness	At least 95% contribution to discussions; dialogue thoughtful and insightful but lacks vigor or conviction
B+/B	Competent and worthy; provides credible evidence of learning and growth; may not completely honor spirit of task; perhaps an "off-day"; errors of grammar, spelling,	Moderate shortcomings; minor elements missing; affects instructor's ability to see the product	Late and/or often enough to alarm instructor; not necessarily	Moderate participation with some insightful comments

	punctuation distract the reader	as a whole	chronic	
B-	Passable; only enough to get by; needs more proofreading or writing skills	Sufficient; least you could do and justify	Some tasks could be late	Barely participates in discussion; class contributions add little insightfulness and do not provoke further discussion
C	Undergraduate level/quality; unsophisticated; exhibits little course concept or concepts	Evidence of learning or growth insufficient	Excessively or repeatedly late	Limited participation in discussion; Little if any preparation or thought in dialogue
F	Unacceptable	Difficult to recognize as the assigned task or not turned in at all	Missing/not submitted	Little if any participation in discussions

Tentative Course Outline/Schedule

Week 1:   **Face to Face (F2F)**

- Welcome and Introduction
- Using WebCT
- Pre-course Survey/Assessment (Online in WebCT)

- Introduction and Background on Integrating Technology in Education
- Information Technology, Educational Technology, Instructional Technology, Technology Fluency
- Learning Theories and Integration Models

Week 2:   **Standards**
                               IT in the Work place

- Standards, Standards, Standards and more Standards
- IT skills in the Workplace

- Activity: Review of

- ISTE
- NETS/ Teacher and Student
- TSSA
- NCREL
- MSDE
- Other IT professional Protocols

- Future jobs/trends and IT knowledge

Week 3:   **Data**

- School achievement -*Advanced Search Exercise-Scavenger Hunt*
  - individual school's performance using the mdk-12 site (MSPAP,CBR)
  - Functional Tests
  - Other data analysis
    - MBRT Technology Inventory
      - Individual technology inventory
    - US Census Data
    - University Data
    - Work Force Data

- How to interpret the data

Ideas for Project/Paper 1 Due
Week 4   **Backward Design**

- Backward Design Process
- Backward Design Process (Group Activity- in discussion area)
  - *Identify Desired Results of Mock School or training situation*
  - individual school demographics (socio-economic/ethnic/gender/FARMS)
  - Identification of content areas for which additional instruction needs to be developed

Week 5:   **Rubrics**
Using Instructional Software in Teaching and Learning

- Using Rubrics for acceptable evidence
- CAI vs. CBI/CBL
- Instructional Software Functions:
  - Drills
  - Simulations
  - Tutorials
  - Instructional Games
  - Problem Solving
- ILS

- Courseware evaluation and selection

Paper/Project 1 Due

Week 6:   **Productivity Software & Other Software Tools**

- Software Tools
  - Word Processors
  - Spreadsheets
  - Databases
  - Desktop Publishing& Desktop Publishing software
    - Letterhead
    - Flyers and Posters
    - Brochures
    - Newspapers/Magazines
    - Lesson Plan Templates
    - Calendars
    - Booklets
    - Certificates

Week 7:   **More Software Tools and Applications**

- Generators
  - Worksheets
  - Tests
  - Quizzes
  - Puzzles
  - IEP
- Data Collection & Analysis (of student info)
  - Grade books
  - Statistical Packages
  - Qualitative Software
  - CMI & CAI
  - Computer based Learning systems
- Graphics Tools/Planning and Organizing Tools
  - Word/Word Art
  - Kid Pix
  - Adobe Photoshop
  - Printshop
  - Kidspiration
  - Inspiration

Week 8:   **More Software Tools and Applications**

- Other Data Collection & Analysis
    - Probes
    - Graphing Calculators
    - PDA
- Using Research and Reference Tools
    - Electronic Encyclopedias/Sources
    - CD-ROM

Ideas for Project 2/Paper 2 due

Week 9:   **Hyper and Multimedia Resources**
Internet Resources

Week 10:   **Internet Resources**
Exploring web-based/multimedia materials through a *Scavenger Hunt*
- Applying Search Strategies through a *Treasure Hunt*
- Continuum of assessment types

Project/Paper 2 Due

Week 11:   **Integration of Resources into the Classroom**

Ideas for Project/Paper 3 Due

Week 12:   **Cyberethics**

Week 13:   **Diversity**

Week 14:   **Research on Technology Integration**

Week 15:   **Future Directions**

Final project/paper and Reflection or portfolio due