GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
INSTRUCTIONAL TECHNOLOGY

EDCI 712
Technology and Learning
Spring Semester

PROFESSOR(S):
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COURSE DESCRIPTION

A. Prerequisites – EDCI 710
   Co-requisite – EDIT 713

B. Course description from the University Catalog: This three credit hour course is
designed to explore ways of knowing and theories of learning as they are reflected in and
influenced by technology. Attention will be paid to analysis, application, and evaluation
of current theories such as constructivism, multiple intelligences, the role of
symbolization in human cognition, the development of problem-solving and critical
thinking strategies, and the conditions of learning. Attention will be paid to the
relationship between technological forms and the nature and structure of human cognition
especially as it influences K-12 educational practice. In addition, the course will explore
the relationship between technology and the nature of individual learner attributes, of
learners in context, of special needs learners, of culture and of multiple cultures, and
issues of access, equity, and values.

NATURE OF COURSE DELIVERY

The course is structured around readings, reflections on those readings, class
projects, on-line discussions and activities, and participation in a series of model lessons
designed to reflect strategies for the integration of technology with the teaching/learning
process. Using this collection of activities, the methodology of the course seeks to build
clear bridges between technology know how, theoretical/research perspectives, and
classroom practice.

STUDENT OUTCOMES

This course is designed to enable students to:

1. develop an understanding of the complexities of human thought and intelligence(s);
2. develop an understanding of the role of symbolization in supporting human thought and
   intelligence(s);
3. develop an understanding of constructivist notions of learning;
4. develop an understanding of the relationships between the structure of information technologies and the structure of thought;
5. be able to use understandings gleaned from Objectives 1 through 4 to build appropriate bridges between learning theory and the design of learning opportunities for their own students.

PROFESSIONAL STANDARDS (International Society for Technology Education – NETS for Teachers)

1. Technology Operations and Concepts - Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:
   A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology
   B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

2. 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.
   B. apply current research on teaching and learning with technology when planning learning environments and experiences.
   C. identify and locate technology resources and evaluate them for accuracy and suitability.
   D. plan for the management of technology resources within the context of learning activities.
   E. plan strategies to manage student learning in a technology-enhanced environment.

3. 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.
   B. use technology to support learner-centered strategies that address the diverse needs of students.
   C. apply technology to develop students' higher order skills and creativity.
   D. manage student learning activities in a technology-enhanced environment.

4. Assessment and Evaluation - Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers:
   A. apply technology in assessing student learning of subject matter using a variety of assessment techniques.
   B. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
   C. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.
5. **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.
   B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
   C. apply technology to increase productivity.
   D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

6. **Social, Ethical, Legal, and Human Issues** - Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:
   A. model and teach legal and ethical practice related to technology use.
   B. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
   C. identify and use technology resources that affirm diversity
   D. promote safe and healthy use of technology resources.
   E. facilitate equitable access to technology resources for all students.

**REQUIRED TEXTS:**

7. Xeroxed article distributed in class.

**COURSE REQUIREMENTS, PERFORMANCE-BASED ASSESSMENT, AND EVALUATION CRITERIA**

A. **Requirements** –

   1. Students will read class readings to include the texts and a supplemental article.

   2. **Online Portfolio**: Throughout their program of study, students are required to create and continually revise a professional, online portfolio. This portfolio should not be a collection of what the student has done, but rather a reflection of what they have learned. Templates and assistance will be provided during class to assist students in the creation and maintenance of this portfolio. All exhibits in the online portfolio will
include a short reflection. At the end of the semester, a comprehensive, semester-wide reflection and supporting samples of work will be added to the portfolio reflecting student learning related the semester’s work.

3. **An Educational Playful World**: As a collaborative project, students will divide into groups of four. Each group will reflect on notions and understandings about the process of teaching/learning gleaned from class readings and experiences. Using their reflections, students will invent a playful world that is suited to the needs of learners. They will prepare the package for that product.

4. **Class Participation**: The class depends heavily on class participation and completion of in class activities. Points will be awarded for participation and completion of these activities.

B. **Performance-Based Assessments** - This course includes two performance-based assessments: an online portfolio and An Educational Playful World. These are described above in Requirements.

C. **Criteria for evaluation** - Assessment of each performance assessment is guided by a rubric. A series of rubrics to be distributed in class.

D. **Grading Scale**

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<thead>
<tr>
<th>Requirements</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Online Portfolio</td>
<td>30%</td>
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<tr>
<td>An Educational Playful World</td>
<td>40%</td>
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<tr>
<td>Class Participation</td>
<td>30%</td>
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<table>
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<th>Grade</th>
<th>Point Range</th>
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<tbody>
<tr>
<td>A</td>
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<tr>
<td>A-</td>
<td>90-93</td>
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<tr>
<td>B+</td>
<td>86-89</td>
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<tr>
<td>B</td>
<td>80-85</td>
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<tr>
<td>C</td>
<td>70-79</td>
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<tr>
<td>F</td>
<td>69-below</td>
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**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:**
All students must abide by the following:

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.
Students must agree to abide by the university policy for Responsible Use of Computing. See http://mail.gmu.edu and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.