

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT**  
**Integration of Online Learning in Schools**

**EDIT 563**  
**Teaching with Computer Graphics**  
**(1 credit hour)**  
**NET**

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**COURSE DESCRIPTION:** Explores and develops expertise with the various graphic programs available for constructing visual images. The course will address draw and paint programs, scanning and editing images, and using visual communication to support K-12 learning.

**NATURE OF COURSE DELIVERY:** This course is delivered online using asynchronous communication tools. The course is structured around class projects, discussions and activities, and participation in a series of model lessons designed to reflect strategies for the integration of telecommunications with the teaching/learning process. Using this collection of activities, the methodology of the course seeks to build bridges between technology know how and classroom practice.

### **LEARNER OUTCOMES**

This course is designed to enable students to:

1. Develop comprehensive understanding of the mechanics associated with using a variety of graphics programs; **I-A, I-B**
2. Develop comprehensive understanding of the mechanics associated with importing, exporting, and editing images; **I-A, I-B**
3. Use graphics tools to support their own learning and their professional development; **I-B, V-A, V-B, V-C, V-D**
4. Understand curricular and instructional models related to using graphics to promote student learning; and **II-A, II-B, II-C, II-D, II-E, III-A, III-B, III-C, III-D, VI-A, VI-B, VI-C, VI-D, VI-E**
5. Design one lesson plan for their grade and/or subject matter interests that incorporates graphics as part of the learning activity. **II-A, II-C, IV-A, IV-B, IV-C, VI-A, VI-B, VI-C, VI-D, VI-E**  
\* Coding in **bold** reflects ISTE NETS Standards for all teachers.

### **PROFESSIONAL STANDARDS**

The Integration of Technology in Schools Online Certificate program is guided by the International Society for Technology Education's National Educational Technology Standards for Teachers (NETS for Teachers). These standards are addressed iteratively throughout the 36 credit hour program of which this course is a required component. The NETS for Teachers can be accessed at [http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_for\\_Teachers\\_2008.htm](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_for_Teachers_2008.htm), and a printed version is distributed during the first class of the semester. The NETS for Technology Leaders are added to the professional standards during the final 12 credit hours of the program – again addressed iteratively throughout course assignments, activities, and topics.

## REQUIRED TEXTS

1. Norton, P., & Sprague, D. (2001). *Teaching With Technology*. Needham, MA: Allyn & Bacon.

## COURSE REQUIREMENTS, PERFORMANCE-BASED ASSESSMENTS, AND EVALUATION CRITERIA

### A. Requirements

1. Participation is mandatory, as discussions, readings and activities are important parts of the course.
2. Each student is expected to complete all readings and participate in all discussions.
3. Each student is expected to participate in and complete all projects.
4. Students who must miss online activities are responsible for notifying the instructor (preferably in advance) and for completing any revised assignments, readings, and activities.
5. All assignments must be completed electronically. Assignments are to be submitted on the date due. Late assignments will not be accepted without making prior arrangements with the instructor.

### B. Performance-based assessments

1. Portfolio (10 points): Throughout the certificate program, students will be required to create and continually revise a professional portfolio. This portfolio should not be a collection of what the student has done, but rather a reflection of what they have learned. A section will be added to the portfolio reflecting student learning related to graphics and the teaching/learning process. **Performance-based outcome for objective 3.**
2. Graphics Lesson Plan (30 points): Students will create 3 mini lesson plans (10 points each) that includes some aspect or aspects of graphics as part of the overall design. A format for the lesson plan will be provided to students in class. **Performance-based outcome for objectives 1, 2, 4, & 5.**
3. Class Participation (10 points): The class depends heavily on class participation and completion of in class activities. Points will be awarded for participation and completion of these activities.
4. Mentor-Mentee Discussions (50 points): On-going email discussions with mentor about the activities and connection to professional practice are an integral part of this course.

### C. Criteria for evaluation

Since this is a graduate level course, high quality work is expected on all assignments and in class. Points for all graded assignments will be based on the scope, quality, and creativity of the assignments. All assignments are due at the beginning of class. Late assignments will not be accepted without making arrangements with the instructor.

Points will be assigned to all graded assignments using a rubric process. Both class participants and the course instructor will be involved in assessment of graded assignments. Prior to the due date for any assignment, the student will participate in the development of an assessment rubric. This rubric will result from a discussion of applicable course objectives and an elaboration of qualities and components associated with excellence in completion of the assignment.

When assignments are presented on the designated due date, class participants and the instructor will complete an assessment of the assignment using the rubric created in class. Class participants' ratings on the rubric will be averaged. Then the class participants' average will be averaged with the instructor's ratings on the rubric to compute a final point value for assignments. In this way, the development of the rubric will inform the final completion of the assignments as well as serve as the instrument for assessment and determination of points awarded.

#### Three Mini-Graphics Lesson Plans

Criteria	Well Planned and Articulated 5	Present but Needs Elaboration 3	Unclear or Weak Links 1
1. Each mini-lesson plan is clearly linked to curriculum standards.			
2. I have provided a clear overall description of the unit and clearly shown how this lessons fits into my overall design.			
3. The use of computer graphics fits seamlessly into each mini-lesson. It is a well-integrated and appropriate part of the lesson plan.			
4. Each mini-lesson plan includes a thoughtful understanding of the role of an authentic problem, a clear outcome, thinking skills, and mechanical (software) skills in the overall lesson.			
5. Each mini-lesson plan presents a clear sequence of instruction and an appropriate time frame.			
6. Each mini-lesson plan includes an evaluation strategy.			

## D. Grading scale

Requirements	Percentage
Portfolio	10%
Graphics Lesson Plan	30%
Participation	10%
On-Going Discussion with Mentor	50%

Grade	Point Range
A	94-100
A-	90-93
B+	86-89
B	80-85
C	70-79
F	69-below

## COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

### Student Expectations

1. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
2. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
3. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
4. Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
5. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
6. Students are expected to exhibit professional behaviors and dispositions at all times.

### Campus Resources

7. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a

wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].

8. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

The College of Education & Human Development is committed to the following five values: collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/>

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>].

### PROPOSED CLASS SCHEDULE

Class	Class Topics	Weekly Assignments
Week One	Introduction to Syllabus Da Forms, Da Forms Introduction to graphics tools Introduction to Draw Programs Making a geometric mask Adding Color and Texture Downloading Images from the Internet	Add a 3 <sup>rd</sup> Dimension to your mask and bring to class Find an Internet image and save it on a disk
Week Two	Activity/Discussion on reading Introduction to Paint Programs Take off your shoe! Print Loading and Editing Images Print Introducing a Time Capsule and Dividing into Groups	Read Norton & Sprague chapter on graphics
Week Three	Discussion of Readings - A Concept Map Importing Images – Scanning and/or Digital Cameras Work on Time Capsule	Begin working on lesson plan Begin work on Portfolio
Week Four	Work on Time Capsule Create a rubric for assessing Time Capsules	Finish Portfolio Finish lesson plan
Week Five	Finish Time Capsule Analysis and Presentation of Time Capsules <b>Lesson Plan Due</b> <b>Portfolio Due</b>	