



Education and Computers (ITR)
05:300:350:05/Index: 17830
Department of Learning and Teaching
Graduate School of Education
Rutgers, The State University of New Jersey

Class Meets: Tuesday & Thursday/2:50 - 4:10 AM/ED-208
Course Instructor: Dr. James O’Kelly
Email: james.okelly@gse.rutgers.edu
Office Hours: By arrangement
Ecollege: <https://onlinelearning.rutgers.edu/ecollege-student-login>

Course Description (as noted in the GSE catalog)

Education and Computers establishes a foundation for using the computer in a variety of educational settings across all subject areas through programming, application programs, computer-based instruction, and social/philosophical issues of computers in education.

Overview

This course has been designed to address the New Jersey Core Content Curriculum Standards ([NJCCCS](#)) for Technology, the ISTE National Educational Standards and Performance Indicators for Teachers ([NETS-T](#)), and the ISTE National Educational Standards and Performance Indicators for Students ([NETS-S](#)).

Over the course of the semester students will address through readings, lectures, and discussions a set of topics pertinent to the use of computer technology in the classroom. Students will also learn to use a variety of computer programs and applications that will enhance their technology skills. Students should consider including these projects in their GSE portfolios as evidence of their technology skills.

Ecollege

Students will find a variety of documents and resources at the ecollege site for this course <https://onlinelearning.rutgers.edu/ecollege-student-login>.

Common Core Learning Goals (ITR)

- Employ current technologies to access information, to conduct research, and to communicate findings.

Specific Course Objectives

Students will be able to:

- Think critically about the advantages and limitations of computers and computer-based technologies in the classroom.
- Understand how teachers plan effective learning activities with computers and computer-enhanced technologies.
- Use computers and computer-enhanced technologies to support professional growth.
- Develop a rich understanding of the roles of the NJCCCS for Technology, NETS-T, and NETS-S in teaching and learning.
- Develop students' 21st Century Learning Skills using computer-enhanced technology.
- Critique Internet and multimedia learning tools.
- Develop skills in the use of several computer-based tools that can enhance students learning (e.g., Prezi, Google Docs, Smart Notebook).

Academic Integrity

Students are expected to comply with University guidelines for academic integrity. Violations of these guidelines include: cheating, fabrication, plagiarism, denying others access to information or material, and facilitating violations of academic integrity. Additional information about University's positions on academic integrity may found at http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf.

Attendance

This course adheres to the University policy for attendance. Basically, students are expected to attend class regularly, with the exception of unfortunate circumstances (serious illness, death in a family, court appearance). If such a circumstance does occur – particularly when an exam or quiz is scheduled – please contact the instructor, and the matter will be handled in a discreet and sympathetic manner.

Understandably, there are less severe circumstances that cause students to fail to attend class. In such cases, students should check with other students to get information about what was covered in class during that absence. *Please do not contact the instructor for a personal tutorial to make up that class. Such a one-on-one instructional session would be unfair to students who did manage to attend class, and work in the normal setting.*

If you expect to miss a class, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me. Be aware, however, that reporting an absence does not in any way obviate a student's course obligations.

Upon entering the computer lab for a class meeting, students should initial an attendance sheet that will be at a table near the front of the lab. This record will be the official record for the course.

Grades and Assignments

This course will employ a point system for grading. Students may earn up to 100 points. Each course assignment will be allotted a certain number of points. At the end of the semester the instructor will tally the points a student has accumulated for all the tasks, and assign a grade. (Please refer to chart.) There will be no extra-credit assignments in this course. Assignments that are submitted late will receive a two-point penalty for each day that they are overdue.

Reading Requirements

There will be readings for each class meeting. There is no textbook for this course. Articles for the course will be found in the Doc Sharing section of ecollege. Each set of readings for a class meeting is listed on a Word document that has a title that corresponds with the focus of the meeting. Please be sure to complete the reading prior to a class meeting (except for the first class meeting). The instructor will demonstrate how to access all required readings.

Course Materials and Tools

There is no need to purchase any materials for this course. The tools that will be used for projects (i.e., GO, WQ, and DS) in the course can be found on the Internet or on the computers in the GSE computer labs (i.e., IWB).

Students will need to have a Google account and a Prezi account in order to work on projects. Also, students should save their work on Google Drive.

Independent Projects (50 points; 12.5 points per project)

There will be four independent projects. Specific instructions will be uploaded to ecollege.

- Project 1: Graphic Organizers (GO)
- Project 2: WebQuests (WQ)
- Project 3: Digital Storytelling (DS)
- Project 4: Interactive Whiteboard Lessons (IWB)

Group Project/Final Exam (10 points)

- Creating a Presentation: What a Board of Education Should Know About... (PowerPoint)

Essay (20 points)

- TBA

Quizzes (20 points)

- Two quizzes that will be based on readings, lectures, lab activities, and explorations. Each quiz will be worth 10 points.

Course Activities: Important Dates		
<i>Activity</i>	<i>Date Assigned</i>	<i>Date Due</i>
Project 1/GO	1/23	2/13
Project 2/DS	2/13	3/6
Quiz 1	1/21- 3/4	3/6
Project 3/WQ	3/6	4/10
Essay	2/18	4/23
Project 4/IWB	4/10	4/29
Quiz 2	3/6 – 4/29	5/1
Group Project/Final Exam	3/11	TBD

Grading Scheme	
Grade	Points
A	90 - 100
B+	85 - 89
B	80 - 84
C+	75 - 79
C	70 - 74
D	60 - 69
F	> 60

Course Schedule			
Readings/Lectures/Presentations/Explorations			
<i>Mtg.</i>	<i>Date</i>	<i>Main Topic</i>	<i>Readings</i>
1	1/21	21 st Century Learning and Teaching	ecollege
3	1/28	Theories of Learning and Educational Technology	ecollege
5	2/4	“The Standards” and Educational Technology	ecollege
7	2/11	Thinking Skills and Educational Technology	ecollege
9	2/18	Visual Learning and Multimedia	ecollege
11	2/25	Instructional Software	ecollege
13	3/4	The Internet and Instructional Resources	ecollege
15	3/11	Assessment and Educational Technology	ecollege
17	3/25	Professional Development and the Internet	ecollege
19	4/1	Distance Teaching and Learning	ecollege
21	4/8	Web 2.0/Social Media in Learning	ecollege
23	4/15	Designing Effective Lessons with Technology	ecollege
25	4/22	Assistive Technology and UDL	ecollege
27	4/29	Scratch	ecollege
Computer Lab Activities			
<i>Mtg.</i>	<i>Date</i>	<i>Activity</i>	<i>Readings</i>
2	1/23	Graphic Organizers	Project Packet 1
4	1/30	Graphic Organizers	Project Packet 1
6	2/6	Graphic Organizers	Project Packet 1
8	2/13	Digital Storytelling	Project Packet 2
10	2/20	Digital Storytelling	Project Packet 2
12	2/27	Digital Storytelling	Project Packet 2
14	3/6	Quiz 1/WebQuests	Project Packet 3
16	3/13	WebQuests	Project Packet 3
18	3/27	WebQuests	Project Packet 3
20	4/3	WebQuests	Project Packet 3
22	4/10	Interactive White Boards	Project Packet 4
24	4/17	Interactive White Boards	Project Packet 4
26	4/24	Interactive White Boards	Project Packet 4
28	5/1	Quiz 2/Interactive White Boards	Project Packet 4
Final Exam = TBD			

New Jersey Professional Teaching Standards

This course addresses these areas of the NJPTS:

Knowledge

Teachers know and understand:

- 2.1 How students construct knowledge, acquire skills and develop habits of mind and how to use instructional strategies that promote student learning;
- 2.2 How student learning is influenced by individual experiences, talents and prior learning, as well as language, culture, family, and community values; and
- 2.3 How to identify and teach to the developmental abilities of students, which may include learning differences, visual and perceptual differences, cultural and socio-emotional differences, special physical or emotional challenges and gifted and talented exceptionalities.
- 4.1 How to plan instruction based on students' needs, developmental progress and prior knowledge;
- 4.2 Available and appropriate resources and materials for instructional planning;
- 4.3 Techniques for modifying instructional methods, materials and the environment to help all students learn; and
- 4.4 A variety of instructional approaches and the use of various technologies, to promote thinking and understanding.
- 8.1 The power of communication in the teaching and learning process.

Dispositions

Teachers value and are committed to:

- 2.4 The educability of all children and adolescents;
- 2.5 The belief that all children and adolescents bring talents and strengths to learning;
- 2.6 Appreciation for multiple ways of knowing;
- 2.7 The diverse talents of all students and to helping them develop self-confidence and subject matter competence; and
- 2.8 The belief that all children and adolescents can learn at high levels and achieve success.
- 3.5 Respect for individual and cultural differences, and appreciation of the basic worth of each individual and cultural group; and
- 3.6 The diversity of learning that takes place in the classroom, respect for the talents and perspectives of each student and sensitivity to community and cultural norms.
- 4.5 The development of students' critical thinking, independent problem-solving and performance capabilities.
- 5.3 The belief that students' strengths are the basis for growth and their errors are opportunities for learning.
- 7.3 The belief that children and adolescents with special needs can learn at high levels and achieve success.

Performances

Teachers apply:

- 2.9 Learning theory to accommodate differences in student intelligence, perception, cognitive style and achievement levels.
- 3.7 Create a learning community in which individual differences are respected;
- 3.8 Learn about the diverse students they teach, and the students' families and communities;
- 3.9 Use strategies to support the learning of students whose first language is not English; and
- 3.10 Use knowledge of students and their lives to design and carry out instruction that builds on students' strengths while meeting their needs and taking into account issues of social class, gender, race, ethnicity, language, sexual orientation, age and special needs.
- 4.6 Identify and design instruction appropriate to students' stage of development, learning styles, strengths and needs;
- 4.7 Plan instruction based on knowledge of classroom, school and community culture;
- 4.8 Evaluate teaching resources and curriculum materials for their comprehensiveness, accuracy and usefulness for representing particular ideas and concepts;
- 4.9 Identify strategies to create learning experiences that make subject matter meaningful for students, address a variety of learning styles, encourage students to pursue their own interests and inquiries and help students connect their learning to personal goals;
- 4.10 Plan and develop effective lessons by organizing instructional activities and materials, incorporating a wide range of community and technology resources, to promote achievement of lesson objectives