

**Education & Computer**  
**05:300:350:92:11691**  
**3 Credits**

Instructor: Jim Flakker	Jim.Flakker@gse.rutgers.edu
Phone Number (201) 213-6746	10 Seminary Pl
Office Hours: by appointment	Prerequisites or other limitations: None, basic familiarity with computers is recommended
Mode of Instruction: <input type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Hybrid <input checked="" type="checkbox"/> Online <input type="checkbox"/> Other	Permission required: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Directions about where to get permission numbers: from the instructor

	<p>SAS Core Curriculum Learning Goals Met by this Course: <b>ITR</b></p> <p>For list of Core Curriculum learning goals see:  <a href="http://sas.rutgers.edu/component/docman/doc_download/413-summary-of-new-core-curriculum-learning-goals">http://sas.rutgers.edu/component/docman/doc_download/413-summary-of-new-core-curriculum-learning-goals</a></p> <p>For a list of Core Certified courses by learning goal, see  <a href="http://sasundergrad.rutgers.edu/academics/requirements/core?layout=blog">http://sasundergrad.rutgers.edu/academics/requirements/core?layout=blog</a></p>
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**Course Access:** <http://onlinelearning.rutgers.edu/ecollege>

**Learning goals**

1. Provide a foundation for using computers and technology effectively in the classroom.
2. Improve understanding of computers and technology.
3. Think critically about the advantages and limitations of computers and computer-based technologies in the classroom.
4. Understand how teachers plan effective learning activities with computers and computer-enhanced technologies.
5. Develop a rich understanding of the roles of the NJCCCS for Technology, NETS-T, and NETS-S in teaching and learning.
6. Develop students' 21st Century Learning Skills using computer-enhanced technology.
7. Employ basic principles of multimedia design for educational activities.
8. Critique Internet and multimedia learning tools.
9. Critically analyze the role of technology in the classroom.

## **Course catalogue description**

Establishes a foundation for using the computer and technology in a variety of educational settings across all subject areas. The course is hands-on in nature, with focus on current trends. Additionally, learners can expect to discuss theory, practice, and social/philosophical issues related to the use of computers in education. Some familiarity with computers is recommended; no prior computer skills are required

## **Class materials:**

Required: DePietro Peter, Transforming Education with New Media: Participatory Pedagogy, Interactive Learning, and Web 2.0 (Counterpoints: Studies in the Postmodern Theory of Education), Peter Lang International Academic Publishers, NY, NY, 2013. ISBN 978-1433117947;

Not required but useful: Richardson, Will. Richardson, Will: Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms. Third Edition. Thousand Oaks, California. 2010. ISBN # 978-141297747

## **Grading and Activities**

You will be evaluated based on the following percentages

35% - Weekly discussions

35% - Bi-Weekly assignments

25% - Final Essay

## **Grading Policy**

Care, respect and integrity are expected in written and classroom exchanges. All written work, including postings on E-college, should be proofread for clarity, spelling, and grammatical errors. Please use language that is appropriate for the classroom setting and maintain a professional tone in both your E-college postings and classroom discussions. Outside sources, in any assignment, must be referenced appropriately. (APA or Chicago style is acceptable)

## **Description of activities**

For the purpose of this course, our week will run from Tuesday to Monday. So the week's assignments are due by the end of the night Monday.

## **Online Discussions:**

You will be expected to actively post in the course discussion thread for each week. The discussions will be centered on the weekly readings, which will be posted appropriately. Sufficient participation will consider both the number of posts and the quality of posts. At a minimum, you should respond at least once per question (numbered by me).

## **Bi-Weekly Assignments:**

Every other week there will be an assignment posted. These assignments will vary from week to week. They may be a one page written response or a new technology implementation plan. Instructions will be provided on a weekly basis.

Final Essay:

There is a culminating paper assignment that fulfills the SAS Core standard ITR y. This assignment is designed to help learners understand the uses of web-based tools that assist teachers in completing research necessary for their work. Specific details will follow on our course website.

**Tentative list of topics for discussions (by week)**

Week	Topic	Readings for Discussions
1	Introductions How Computers / Internet Works	<ul style="list-style-type: none"> <li>- “What’s inside my computer” How Stuff Works: A Discovery Company</li> <li>- “How Internet Infrastructure Works” How Stuff Works: A Discovery Company</li> </ul>
2	21 <sup>st</sup> Century Learning Purpose of Technology	<ul style="list-style-type: none"> <li>- Jenkins, H: Confronting the Challenges of Participatory Culture. MacArthur Foundation. 2009.</li> <li>- 21<sup>st</sup> Century skills whitepaper</li> <li>- Depiето Chapter 1</li> </ul>
3	Theoretical Foundations	<ul style="list-style-type: none"> <li>- Hung, D: Theories of Learning and Computer-Mediated Instructional Technologies. Educational Media International, v38 p281-87 Dec 2001.</li> <li>- Depiето Chapter 2</li> </ul>
4	Teaching Standards Lesson Planning	<ul style="list-style-type: none"> <li>- Read the New Jersey Core Content Curriculum Standards for Technology (2009). Skim over the standards to familiarize yourself with the main ideas. <a href="http://www.state.nj.us/education/cccs/standards/8/index.html">http://www.state.nj.us/education/cccs/standards/8/index.html</a></li> <li>- Read the ISTE NETS-T standards for teachers: <a href="http://www.iste.org/standards/nets-for-teachers">http://www.iste.org/standards/nets-for-teachers</a></li> <li>- Depiето Chapter 3</li> </ul>
5	Social Media / Web 2.0 Facebook/Twitter	<ul style="list-style-type: none"> <li>- Depiето Chapter 6</li> <li>- Depiето Chapter 8</li> </ul>
6 & 7	Multimedia Design Screen casts / webcast	<ul style="list-style-type: none"> <li>- Peters, D: Mayer's Principles for the design of Multimedia Learning. Sep. 2005.</li> <li>- Pugsley Design and Effective Powerpoint Presentations</li> </ul>
8	Distance Learning	<ul style="list-style-type: none"> <li>- McKee, T: Thirty Years of Distance Education: Personal Reflections. Int’l Review of Research in Open and Distance Learning, v11 n2 p100-109 May 2010. 10 pp.</li> <li>- Depiето Chapter 12</li> </ul>
9	Assistive Technologies	<ul style="list-style-type: none"> <li>- Shah, N: Special Education Pupils Find Learning Tool in iPad Applications Education Week, v30 n22 p1, 16-17 Mar 2013. 3 pp.</li> <li>- Other postings</li> </ul>
10	Cost of Technology	<ul style="list-style-type: none"> <li>- Depiето Chapter 11</li> </ul>
11	Power of Gaming	<ul style="list-style-type: none"> <li>- Depiето Chapter 14</li> <li>- DeKanter, N: Gaming Redefines Interactivity for Learning TechTrends: Linking Research &amp; Practice to Improve Learning, p26-32 May-Jun 2005.</li> </ul>
12 & 13	Legal, social, and ethical issues associated with implementing technology	<ul style="list-style-type: none"> <li>- Read article: Lawrence, S. Teachers Should Know Copyright from Wrong 2008.</li> <li>- Work on Portfolio assignment</li> </ul>
14	Term Paper	<ul style="list-style-type: none"> <li>- Work on Term Papers</li> </ul>

**Academic Integrity:**

All issues of academic integrity are referred to the Rutgers University policy on academic integrity. This policy can be found in detail on the University website at: <http://teachx.rutgers.edu/integrity/policy.html>. I expect that you will comply with standards of academic integrity in this course. Assignments should be your own work, except in the case of a required group product. The consequence for violating policies of academic integrity and other elements of the student code of conduct are serious and can have a tremendous negative impact on your academic progress and future career.

**Absence Policy:**

Students are expected to attend all classes; if you expect to miss one or two classes, 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.

**Disability Policy:**

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>

**Teaching Standards:**

This course will be based heavily upon ISTE NETS standards located here: <http://www.iste.org/standards.aspx>. In addition, the course addresses the following New Jersey Professional Teaching Standards as they relate specifically to the area of computers and technology. You can find the complete listing of NJPTS here: <http://www.state.nj.us/education/profdev/profstand/standards.pdf>

## Subject Matter Knowledge

**Teachers know and understand:**

1.4: Concepts inherent in numeracy to enable students to represent physical events, work with data, reason, communicate mathematically, and make connections within their respective content areas in order to solve problems.

**Teachers value and are committed to:**

- 1.6: Enthusiasm for the discipline(s) they teach and in making connections to everyday life. Teachers engage in activities to:
- 1.8: Make effective use of multiple representations and explanations of disciplinary concepts that capture key ideas and link them to students' prior understanding.
- 1.9: Evaluate teaching resources and curriculum materials for their completeness, accuracy and usefulness for representing particular ideas and concepts.

## **Human Growth and Development**

### **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.

### **Teachers value and are committed to:**

2.5: The belief that all children and adolescents bring talents and strengths to learning.

2.6: Appreciation for multiple ways of knowing.

### **Teachers apply:**

2.9: Learning theory to accommodate differences in student intelligence, perception, cognitive style and achievement levels.

## **Diverse Learners**

### **Teachers know and understand:**

3.4: The negative impact of bias, prejudice, and discrimination on students and society.  
Instructional Planning and Strategies

### **Teachers know and understand:**

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.

4.4: A variety of instructional approaches and the use of various technologies, to promote thinking and understanding.

Teachers value and are committed to:

4.5: The development of students' critical thinking, independent problem-solving and performance capabilities.

Teachers engage in activities to:

4.6: Identify and design instruction appropriate to students' stage of development, learning styles, strengths and needs.

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.

Assessment

### **Teachers engage in activities to:**

5.7: Enhance their knowledge of learners and evaluate students' progress and performance using a variety of formal and informal assessment techniques to modify teaching and learning strategies.

## **Learning Environment**

### **Teachers know and understand:**

6.2: How the classroom environment influences learning and promotes positive behavior for all students.

Teachers value and are committed to:

6.4: The role of students in promoting each other's learning and recognize the importance of peer relationships in creating a climate of learning.

6.6: The expression and use of democratic values in the classroom.

**Teachers engage in activities to:**

6.7: Maintain a learning community in which students assume responsibility for themselves and one another, participate in decision-making and work collaboratively and independently. 6.12: Prepare students for and monitor independent and group work that allows for full and varied participation of all individuals.

### **Special Needs**

**Teachers engage in activities to:**

7.7: Meet the needs of all learners by using a wide range of teaching techniques to accommodate and modify strategies, services and resources, including technology.

### **Communication**

**Teachers know and understand:**

8.1: The power of communication in the teaching and learning process.

**Teachers engage in activities to:**

8.7: Model effective communication strategies and questioning techniques in conveying ideas and stimulating critical thinking.

### **Collaboration and Partnerships**

**Teachers know and understand:**

9.9: Institute parent/family involvement practices that support meaningful communication, parenting skills, enriched student learning, volunteer and decision-making opportunities at school and collaboration to strengthen the teaching and learning environment of the school.

### **Professional Development**

**Teachers know and understand:**

10.1: How education research and other methods of inquiry can be used as a means for continuous learning, self assessment and development.

**Teachers value and are committed to:**

10.3: Professional reflection, assessment and learning as an ongoing process.

10.4: Collaboration with colleagues to give and receive help.