

Rutgers, The State University of New Jersey

05:300:350:98 Education & Computers

Fall 2016

Online

Instructor: Jen Chingwe	Email: jchingwe@rutgers.edu
Phone Number: 919-400-2745 (cell)	Location: Online
Office Hours: By appointment	Prerequisites or other limitations: None
Mode of Instruction: Online	Permission required: No
Web site: eCollege.rutgers.edu	Required Equipment: Computer microphone & camera

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 documentations: <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>.

Course Description

Education and Computers 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.

Course Learning Objectives

By the end of the course, you should be able to:

- Provide a foundation for using computers and technology effectively in the classroom.
- Improve understanding of computers and technology (both hardware and software) as necessary to support the first goal.
- Discuss 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.
- Demonstrate an 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.
- Employ basic principles of multimedia design for educational activities.
- Establish familiarity with trending topics in technology and provide assessment (both highlights and pitfalls) of those trends as they relate to learning and teaching.
- Provide discourse on the social, ethical, and legal issues surrounding the use of technology in learning and teaching.
- Examine and reconsider knowledge and beliefs about the role of technology in the classroom.
- Apply technology to develop students' 21st Century literacy skills, higher order skills, and creativity.

Course catalog description:

05:300:350 Education and Computers (3) 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.

Other description of course purposes, context, methods, etc.:

As an online course, students are expected to access the course daily to complete required assignments. The material covered in this course is practical and hands on. Students will explore a variety of online/web-based learning tools and work collaboratively with peers to explore how these tools can positively impact student learning and professional practice. Weekly class discussions, video reflections, and written essays will be assigned and due on specific due dates as assigned on the eCollege website.

Required texts:

Richardson, Will (2010). Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms. Third Edition. It is available at Amazon.com.



SAS Core Curriculum Learning Goals Met by this Course: ITR y

For list of Core Curriculum learning goals, see:

http://sas.rutgers.edu/component/docman/doc_download/413-summary-of-new-core-curriculum-learning-goals

For a list of Core Certified courses by learning goal, see:

<http://sasundergrad.rutgers.edu/core>

Teaching Standards:

This course is based heavily upon ISTE NETS standards located here: <http://www.iste.org/standards.aspx>

The course addresses the following **New Jersey Professional Teaching Standards (2015)**. You can find the complete listing of NJPTS here: <http://www.state.nj.us/education/code/current/title6a/chap9.pdf>

New Jersey Professional Standards for Teachers (2014)¹:

Standard Two: Learning Differences. The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards:

- (6) The teacher accesses resources, supports, and specialized assistance and services to meet particular learning differences or needs and participates in the design and implementation of the IEP, where appropriate, through curriculum planning and curricular and instructional modifications, adaptations, and specialized strategies and techniques, including the use of assistive technology.

Standard Six: Assessment. The teacher understands and uses multiple methods of assessment to engage learners in examining their own growth, to monitor learner progress, and to guide the

¹ <http://www.state.nj.us/education/code/current/title6a/chap9.pdf>

teacher's and learner's decision-making.

- (9) The teacher continually seeks appropriate ways to employ technology to support assessment practice both to engage learners more fully and to assess and address learner needs.

Standard Eight: Instructional Strategies. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

- (6) The teacher understands how content and skill development can be supported by media and technology and knows how to evaluate these resources for quality, accuracy, and effectiveness.

Standard Eleven: Ethical Practice. The teachers acts in accordance with legal and ethical responsibilities and uses integrity and fairness to promote the success of all students.

- (2) The teacher advocates, models, and teaches safe, legal, and ethical use of information and technology including appropriate documentation of sources and respect for others in the use of social media.

Council for the Accreditation of Education Professionals (2013)²:

Technology & Digital Learning

The Commission's standards include several references to applications of new technologies to educational situations:

- Standard 1 endorses the InTASC teacher standards in their entirety, and the performances, knowledge, and dispositions that are extensions of those standards include a score of references to applications of technology. Educators must know how to use technologies and how to guide learners to apply them. They must know how to use digital and interactive technologies for efficiently and effectively achieving specific learning goals.
- Standard 1 also states that providers are to “ensure that completers model and apply technology standards as they design, implement, and assess learning experiences to engage students and improve learning and enrich professional practice.”
- Standard 2 on clinical experiences refers to technology-enhanced learning opportunities as part of clinical experiences, as well as appropriate technology-based applications for selection, development, evaluation, and continuous improvement and retention of clinical educators. Clinical partnerships are to include technology-based collaborations, as well.
- Standard 3 on candidate quality states that providers present multiple forms of evidence of candidates developing knowledge and skills during preparation, including “the integration of

² http://caepnet.files.wordpress.com/2013/09/final_board_approved1.pdf
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technology in all of these domains.”

Grading Policy:

Your grade is based on a 100-point scale.

- A = 90 - 100
- B+ = 87 - 89
- B = 80- 86
- C+ = 77 - 79
- C = 70 - 76
- D = 60 - 69
- F = 59 and below

Each assignment has a point value out of 100, as follows:

Points	Assignment
40	Website Project - 40 points total Part 1: Proposal – 2/40 points Part 2: Rubric – 6/40 points Parts 3 & 4: Live Site/Multimedia – 14/40 points Part 5: Social Learning Component – 8/40 points Part 6: Reflection – 6/40 points Peer Review – 4/40 points
40	SAS Core Paper - 40 points total Pre-Work - Website selection (4/40 points) Section 1 - Introduction and the Mission, Structure, and Organization of the Website (9/40 points) Section 2 - Quality of the Website (9/40 points) Section 3 - Research (9/40 points) Section 4 - Theory and Closing (9/40 points)
4	Wiki Letter to Parents (group project)
3	Website Evaluation (in discussion)
3	Technology & Standards (in discussion)
10	Discussions (all others 1 point each)

Grades for each assignment will be posted in the "gradebook" tool on the eCollege web site as soon as they are complete.

Grading Policies: Care, respect, and integrity are expected in written and classroom exchanges. All written work, including postings on eCollege should be proofread for clarity, spelling, and grammatical

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errors. Please use language that is appropriate for the classroom setting and maintain a professional tone in discussion postings and assignments. Outside sources, in any assignment, must be referenced appropriately (either APA or Chicago style is acceptable)

Graded assignments cannot be missed except in case of a serious issue. If you miss an assignment for another reason, it is at my discretion whether or not to allow a make-up. If there are questions or an assignment cannot be completed, contact me as soon as possible. Illness will require a doctor's note. Missing any assignment without a sufficient reason will result in a grade of 0 for that portion of the course.

Late Policy: Any assignment in this course will be accepted late with a penalty of 1 point per day the assignment is late. My advice is to get things done earlier rather than later. Things happen. Your computer can crash. The power might go out. We have to get a lot of material covered in a short amount of time. It's best not to wait to the last minute. As Murphy's Law states: Anything that can go wrong WILL! If something does go wrong, contact me right away. ALWAYS back-up all data. That means having at least 2 copies of work on different storage media. It is your responsibility to make sure you have working equipment and a plan of action if you have problems.

Email Policy: Course updates and other important communication will occasionally be e-mailed to you. You are responsible for all course-related e-mail, so please check your mail regularly, and be sure you are not losing messages to a spam box. The course website on eCollege is populated with your e-mail address as it stands in the University directory at the time when you enroll in the course. If you change your address or you prefer a different address than the one the University has on record, you can change it by reading the instructions here: <https://onlinelearning.rutgers.edu/updating-email-in-ecollege>"

Academic Integrity Policy:

Any violation of academic honesty is a serious offense and is therefore subject to an appropriate penalty. Refer to <http://academicintegrity.rutgers.edu/integrity.shtml> for a full explanation of policies..

Web site: eCollege.rutgers.edu

Course Schedule by Week

Please note: If there is a discrepancy in the readings between the syllabus and eCollege, please go by the readings listed in eCollege.

Week	By the end of this week you will be able to....	Activities
<p>Week 1 (9/6 – 9/11)</p>	<p><i>Educational Technology & Theory</i></p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> • Describe educational technology and its role and impact in today's learning environments. • Articulate the key national and state standards for learners. <p>Readings:</p> <ul style="list-style-type: none"> • Definition of Educational Technology (2004). This is an interesting document - it provides a definition of educational technology and then outlines and meaning and perspective of each word in the definition. Read the definition then scan the details. • International Society for Technology in Education's (ISTE) National Education Technology Standards. Review the standards for students and teachers (both are two pages each). • NJ CCC Standards for Technology (see 2014 Standards 8.1 Educational Technology and 8.2 Technology Education review some of the Classroom Application Documents with sample activities for various grade levels). • NJ CCC Standards for Life and Careers (see 2014 Standards 9.1 Personal Financial Literacy, 9.2 Career Awareness, and 9.3 Career and Technical Education). Standards 8 and 9 both support 21st Century skills. 	<p>Discussion: Introduce Yourself</p> <p>Discussion: Standards</p>

<p>Week 2 (9/12 – 9/18)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Define the behaviorist, cognitive, and constructivist learning theories and why they are relevant when implementing technology in the classroom. • Use learning theory to present your personal views on the relationship between teaching, learning, and technology. <p>Readings:</p> <ul style="list-style-type: none"> • Weselby, C. (2016). What is Differentiated Instruction? Examples of How to Differentiate Instruction in the Classroom. • Surgenor (2001). <i>Teaching Toolkit: How Students Learn 1</i>, UCD Teaching and Learning Resources. This is a great overview of learning theories - very clearly written. • Ertmer, P.A., & Newby, T.J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective. <i>Performance Improvement Quarterly</i>, 26(2), pp. 43 - 71. 	<p>Discussion: Learning Theories</p> <p>SAS Core Paper: Pre-work due 9/18</p>
<p>Week 3 (9/19 – 9/25)</p>	<p>Technology</p> <p>Learning Objective:</p> <ul style="list-style-type: none"> • Identify several broad types of technology and how they can be applied in the classroom to facilitate learning. <p>Readings:</p> <ul style="list-style-type: none"> • "5 Innovations from the Past Decade that Aim to Change the American Classroom. " • "We Need More Ed Tech, But Less Technology in the Classroom." • "Technology Integration for the New 21st Century Learner." • Ormiston, M., pp. 75-86. Must-Have Technology for the Ideal Classroom, in <i>Creating a Digital-Rich Classroom</i>. 	<p>Discussion: Technology Tools</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 4 (9/26 – 10/2)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Begin to consider ways to apply technology to develop students' 21st Century literacy skills, critical thinking skills, and creativity. • Identify the difference between academic and administrative software. <p>Readings:</p> <ul style="list-style-type: none"> • Richardson, Ch. 1, The Read/Write Web. • Ormiston, M., pp. 39-46 on Technology to Support Teaching and Learning in <i>Creating a Digital Rich Classroom</i>. PDF version of p. 40, Bloom's Digital Taxonomy for reference.\ • NCTE (National Council of Teachers of English) (2013). 21st Century Literacies. 	<p>Discussion: Technology & Standards</p> <p>SAS Core Paper: Section 1 - Intro, Mission due 10/2</p>
<p>Week 5 (10/3 – 10/9)</p>	<p><i>Networking</i></p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> • Consider how networking and the Internet have changed teaching and learning. <p>Readings:</p> <ul style="list-style-type: none"> • Ormiston, M., pp. 59-64 on Developing a Digital Rich Curriculum, in <i>Creating a Digital-Rich Classroom</i>. • The Advanced Google Searches Every Student Should Know, www.eSchoolnews.com • Jackson (2011). How the Internet is Changing the Way we Learn, The Atlantic (Link: http://www.theatlantic.com/technology/archive/2011/08/infographic-how-the-internet-is-changing-the-way-we-learn/243708/). Be sure to check out the helpful infographic. • Kaplanis (2013). How the Internet Changed the Learning Process (link: http://www.talentlms.com/blog/how-the-internet-changed-the-learning-process/), Instructional Design. 	<p>Discussion: Internet</p> <p>No assignment this week</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 6 (10/10 – 10/16)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Identify advantages and risks of Internet use in the classroom. • Analyze issues related to website validity and safety. <p>Readings:</p> <ul style="list-style-type: none"> • Read through the Internet Strategies sections (all 5) of the Thirteen.org, National Teacher Training Institute site. Although the site is a little dated, it has excellent information on integrated the use of the internet in the classroom. • Visit the site onguardonline.gov and look around. • Review the Critical Thinking Checklist and the Website Evaluation Tool by Alexander & Tate. You will use the Website Evaluation Tool for this week's discussion. • Wikipedia (2013). Child Internet Protection Act of 2000 (CIPA). Scan through. • Evaluating websites tutorial from Cornell, https://olinuris.library.cornell.edu/ref/research/webeval.html. • Tips for safe internet use in the classroom, https://archive.education.alberta.ca/teachers/resources/internettips/ • Pros and cons internet use in the classroom, http://blog.tophat.com/6-pros-cons-using-technology-classroom/ 	<p>Discussion: Website Evaluation</p> <p>SAS Core Paper: Section 2 – Quality of Website due 10/16</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 7 (10/17 – 10/23)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Locate and evaluate instructional support websites, classroom management and academic tools, and teaching resources that are available on the Internet. <p>Readings:</p> <ul style="list-style-type: none"> • Ormiston, M., pp. 97 - 108, Changing Professional Development, in <i>Creating a Digital Rich Classroom</i>. • The Impact of the Internet and Digital Tools on Teachers' Professional Development (this is Part IV of an article at this link: http://www.pewinternet.org/2013/02/28/how-teachers-are-using-technology-at-home-and-in-their-classrooms/ if you want to read the entire report). Pew Research Center, February 2013. • The Internet is the Best Tool for Professional Development, Educational Technology, January 2015. • Building and Maintaining an Online Professional Learning Community from LearnNC. 	<p>Discussion: Professional Development</p> <p>No assignment this week</p>
<p>Week 8 (10/24 – 10/30)</p>	<p>Collaboration</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> • Analyze the impact of social connections and participatory culture on facilitating learning. • Identify the elements of the Community of Inquiry theoretical framework for online teaching and learning. <p>Readings:</p> <ul style="list-style-type: none"> • Richardson, Ch. 6, The Social Web. • Richardson, Ch. 9, Social Networks. • Visit the Community of Inquiry website and review the theoretical framework presented. The Concept Map PDF is useful to look at as well. 	<p>Discussion: Social Learning</p> <p>SAS Core Paper: Section 3 – Research due 10/30</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 9 (10/31 – 11/6)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Identify and critique various social and collaborative tools and explain their role in teaching and learning. • Identify advantages of using weblogs and wikis to facilitate learning. <p>Readings:</p> <ul style="list-style-type: none"> • Richardson, Ch. 2, Weblogs in Pedagogy and Practice. • Richardson, Ch. 4, Wikis: Easy Collaboration for All. 	<p>Discussion: Social/Collaborative Tools</p> <p>SAS Core Paper: Section 4 – Theory & Closing due 11/6</p>
<p>Week 10 (11/7 – 11/13)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Analyze issues related to weblog and wiki safety. • Compare the roles of stakeholders (students, parents, teachers, community) in supporting the appropriate use of technology in education. <p>Readings:</p> <ul style="list-style-type: none"> • Richardson, Ch. 3, Weblogs: Getting Started. • Visit the site mentioned in Richardson, Chapter 3, related to blogging policies. • Check out some good educator blogs here and here. 	<p>Discussion: Safety</p> <p>Website Project: Part 1 – Proposal due 11/13</p> <p>Assignment: Blog Letter to Parents – Form a team of two for next week’s assignment (<i>see Discussion: Find a Partner for this purpose</i>)</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 11 (11/14 – 11/20)</p>	<p>Multimedia</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> • Describe multimedia learning theory. • Analyze how audio/visual media support teaching and learning (Web 2.0 multimedia). <p>Readings:</p> <ul style="list-style-type: none"> • Mayer's 12 Principles of Multimedia Learning (PDF) • Richardson, Ch. 7, Fun with Flickr: Creating, Publishing, and Using Images Online. • Richardson, Ch. 8, Podcasting, Video and Screencasting, and Live Streaming: Multimedia Publishing for the Masses. 	<p>Discussion: No discussion this week</p> <p>Website Project: Part 2 – Rubric due 11/20</p> <p>Assignment: Blog Letter to Parents due 11/20 (team assignment)</p>
<p>Week 12 (11/21 – 11/23)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Describe multimodal literacies and how they support differentiated learning. • Understand copyright and fair use related to audio and visual media. <p>Readings:</p> <ul style="list-style-type: none"> • Multimodal Literacies and Technology -- http://www.ncte.org/governance/MultimodalLiteracies. • Stern, J. (2015). Enhancing Learning Through Differentiated Technology. (Article from Edutopia.org) • Lawrence, S. (2008). Teachers Should Know Copyright from Wrong, 2008. • Visit http://creativecommons.org - A nonprofit organization that increases sharing and improves collaboration by giving users permission to use selected images, video clips, audio clips, and other media. Take a look around. <p>Thanksgiving Recess 11/24 – 11/27</p>	<p>Discussion: Multimodal Literacies</p> <p>Website Project: Parts 3 & 4, Live Website / Multimedia due 11/27</p> <p>Find a peer review partner for the Website Project (<i>see Discussion: Find a Peer Review Partner for this purpose</i>)</p>

Week	By the end of this week you will be able to....	Activities
<p>Week 13 (11/28 – 12/4)</p>	<p>Technology Integration</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> • Identify pros and cons of distance and blended learning. • Discuss the social, ethical, and legal issues surrounding the use of technology in learning and teaching. <p>Readings:</p> <ul style="list-style-type: none"> • McKee, T. (2010). Thirty Years of Distance Education: Personal Reflections. • Pape, L. (2010). Blended Teaching and Learning. 	<p>Discussion: Peer Review of Website Project (<i>work with your selected partner</i>)</p> <p>Website Project: Part 5 - Social Learning due 12/4</p>
<p>Week 14 (12/5 – 12/10)</p>	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Identify emerging technologies that may affect teaching and learning. • Considering - Where do we go from here? <p>Readings:</p> <ul style="list-style-type: none"> • Richardson, Ch. 10. What it All Means. • Ormiston, M., pp. 109-111. Epilogue in Creating a Digital-Rich Classroom. 	<p>Discussion: Emerging Technologies</p> <p>See Week 13 for Discussion: Peer Review of Website Project – your peer review is due 12/10</p>
<p>Week 15 (12/11 – 12/18)</p>	<ul style="list-style-type: none"> • No classwork this week. 	<p>Website Project: Part 6 – Reflection due 12/18</p>