

**Rutgers, The State University of New Jersey
Graduate School of Education**

**Course Syllabus
Education & Computers
Spring 2021**


05:300:350:9A, or 05:300:350:97, or 05:300:350:98

3 Credits

ONLINE-Asynchronous
Instructor: Natalie O'Neil

Instructor: Natalie O'Neil	Email: natvaz18@gmail.com , n.oneil@sn.rutgers.edu
Phone Number: (973)972-9627	Location: Online
Office Hours: By Appointment	Prerequisites or other limitations: Admission to the Teacher Education Program
Mode of Instruction: Online, Asynchronous	Prerequisites: No

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>

	<p>SAS Core Curriculum Learning Goals Met by this Course: CCO-2 <i>Analyze the relationship that science and technology have to a contemporary social issue.</i></p> <p>For a complete list of Core Curriculum learning goals, see: https://sasoue.rutgers.edu/docman-docs/curriculum/858-revised-core-curriculum-5-2018-1/file</p> <p>For more information about the SAS Core see: https://sasundergrad.rutgers.edu/degree-requirements/core</p>
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Course Description: (as it appears in the GSE Catalog)

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.

Overall Course Learning Goals:

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.
- Provide discourse on social, equity, ethical, accessibility and legal issues surrounding the use of technology in learning and teaching.
- Analyze the relationship that technology has to equitable access to high-quality education.

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>

Standard One: Learner Development. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and



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across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

i. Performances:

2) The teacher creates developmentally appropriate instruction that takes into account individual learners' strengths, interests, and needs and that enables each learner to advance and accelerate his or her learning

iii. Critical Dispositions:

2) The teacher is committed to using learners' strengths as a basis for growth, and their misconceptions as opportunities for learning

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.

i. Performances:

3) The teacher designs instruction to build on learners' prior knowledge and experiences, allowing learners to accelerate as they demonstrate their understandings

ii. Essential Knowledge:

6) The teacher knows how to access information about the values of diverse cultures and communities and how to incorporate learners' experiences, cultures, and community resources into instruction.

iii. Critical Dispositions:

1) The teacher believes that all learners can achieve at high levels and persists in helping each learner reach his or her full potential

Standard Three: Learning Environments. The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.

i. Performances:

2) The teacher develops learning experiences that engage learners in collaborative and self-directed learning and that extend learner interaction with ideas and people locally and globally

ii. Essential Knowledge:

1) The teacher understands the relationship between motivation and engagement and knows how to design learning experiences using strategies that build learner self-direction and ownership of learning;

2) The teacher knows how to help learners work productively and cooperatively with each other to achieve learning goals

iii. Critical Dispositions:

3) The teacher is committed to supporting learners as they participate in decision-making, engage in exploration and invention, work collaboratively and independently, and engage in purposeful learning; and

4) The teacher seeks to foster respectful communication among all members of the learning community.

Standard Four: Content Knowledge. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches, particularly as they relate to the

Common Core Standards and the New Jersey Core Curriculum Content Standards and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.

i. Performances:

1) The teacher effectively uses multiple representations and explanations that capture key ideas in the discipline, guide learners through learning progressions, and promote each learner's achievement of content standards

7) The teacher uses supplementary resources and technologies effectively to ensure accessibility and relevance for all learners

iii. Critical Dispositions:

1) The teacher realizes that content knowledge is not a fixed body of facts but is complex, culturally situated, and ever evolving. He or she keeps abreast of new ideas and understandings in the field

Standard Five: Application of Content. The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

i. Performances:

1) The teacher develops and implements projects that guide learners in analyzing the complexities of an issue or question using perspectives from varied disciplines and cross-disciplinary skills

ii. Essential Knowledge:

4) The teacher understands how to use digital and interactive technologies for efficiently and effectively achieving specific learning goals

iii. Critical Dispositions:

3) The teacher values flexible learning environments that encourage learner exploration, discovery, and expression across content areas

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 teacher's and learner's decision-making.

i. Performances:

4) The teacher engages learners in understanding and identifying quality work and provides them with effective descriptive feedback to guide their progress toward that work;

5) The teacher engages learners in multiple ways of demonstrating knowledge and skill as part of the assessment process

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

i. Performances:

7) The teacher engages learners in using a range of learning skills and technology tools to access, interpret, evaluate, and apply information

ii. Essential Knowledge:

- 3) The teacher knows when and how to use appropriate strategies to differentiate instruction and engage all learners in complex thinking and meaningful tasks;
- 4) The teacher understands how multiple forms of communication (oral, written, nonverbal, digital, and visual) convey ideas, foster self-expression, and build relationships;
- 5) The teacher knows how to use a wide variety of resources, including human and technological, to engage students in learning

iii. Critical Dispositions:

- 3) The teacher is committed to exploring how the use of new and emerging technologies can support and promote student learning

The course, as part of RU-GSE's Teacher Education program, addresses components of CAEP (Council for the Educator Preparation) Standard 1 (2013). You can find the complete listing of CAEP standards here: <http://caepn>

Standard 1. Content and Pedagogical Knowledge: *"The provider ensures that candidates develop a deep understanding of concepts and principles of their discipline and, by completion, are able to use discipline-specific practices flexibly to advance all students toward attainment of college- and career-readiness standards."*

Specifically, this course includes *"references to applications of new technologies to educational situations"*:

- Standard 1.1 states that: *"Candidates demonstrate an understanding of the 10 InTASC standards at the appropriate level(s) in the following categories: the learner and learning; content; instructional practice; and professional responsibility. 10 InTASC standards are aligned to the NJPTS and include many references to applications of technology."*
- Standard 1.5 states that: *"Providers ensure that candidates model and apply technology standards as they design, assess learning experiences to engage students and improve learning; and enrich professional practice."*

Additionally, CAEP's May 2018 Handbook describes educational technology infusion as a "crosscutting theme" following elements are addressed by this course:

The technology crosscutting theme addresses incorporation of technology to improve the effectiveness of school and district instruction, enhance instruction, and manage student and assessment data while engaging students in the applications of technology experiences. In addition to Standard 1, as noted above, the CAEP Standards make explicit reference to applications of technology in Standard 3:

- Standard 3.4 states that: *"Providers present multiple forms of evidence to indicate candidates' developing content knowledge, pedagogical content knowledge, pedagogical skills, and the integration of technology in all of these domains."*

Course Website: Canvas

Class meeting times: There are no in-person class meetings, nor are there any required synchronous activities. All work is to be completed by assigned due dates.

Office: Virtual

Office Hours: By appointment virtually.

Required Reading: Jenkins, H. [Confronting the Challenges of Participatory Culture](#). MacArthur Foundation. 2009.

Various linked articles (found in the course on Canvas)

You will also need access to a microphone that can hook to your computer and a digital camera to participate in some of the multimedia portions of the class. Most computers today have these pre-installed. Inexpensive microphones can be purchased for fewer than 10 dollars that will do the trick. If there are any problems obtaining a digital camera please let me know. Cell phone cameras & microphones are usually fine. If you live locally you may be able to borrow one; if you wish to purchase one I can provide a recommendation.

Organization: The course is broken up into six modules so that you can focus on identified topics as we move through the course. The first three modules are designed to help you acquire knowledge of theory, background, and the various technology used. The second three modules of the course put theory into practice and allow you to apply technology. There will be an overarching web site project that runs the length of the course. It will parallel the modules we are studying and you'll fold the information you've learned in each module into that final project. There is a culminating paper assignment that fulfills the SAS Core standard ITR y.

Please check in often! Each module will have several activities and I anticipate you working on something most days. I've included a course checklist in the schedule so you'll know what is due when. Each module includes its own page that shows due dates and helps you stay organized. I may make updates to the modules as the course moves forward. These changes will be for clarity's sake. Assignments are set in stone, so if you work ahead you will not be penalized.

You'll need to start thinking about the project & the final essay as soon as you start the course. Take a look at the project page. You'll need to create a web site by the end of the course and I'd like that site to reflect your interests so that it is meaningful to you and is something you can use after the course ends.

Please read the "[The Traits of a Successful Online Learner](#)" before you get started. This will help you to understand what is expected of a student taking this course.

Here are some additional tips from Concordia University: [Tips for Success in Online Learning](#)

Ground Rules: We have a lot of material to cover. If you are finding the work to be overwhelming, let me know sooner rather than later. Remember, this course will require a total of 45 hours "meeting" time along with additional reading/study time.

The great thing about the course is that it is online, so you can choose when you can get the work done. This makes your learning very independent. To help you budget your time and understand my expectations, let me explain what this course is replacing. I have taught the summer/winter section face-to-face for many years now. In the past, we met 3 nights a week, 3

hours a day. Reading was assigned outside of classroom hours. I have designed the course in such a way that you'll need to be checking in often (almost daily).

My advice is to get things done earlier rather than later. The reason for this is simple. 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.**

E-mail 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.

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://academicintegrity.rutgers.edu/academic-integrity-policy/>. 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.

I am here to listen if you have any questions and concerns. You can reach me via e-mail at natvaz18@gmail.com, office phone, or through the course website. The course requires effort on your part and your grade will reflect that effort. This course is primarily about learning and teaching. I want you to see and understand the technological tools available to educators. More importantly, I want you to leave the class with new instructional strategies that promote higher order thinking skills. Most of all, I want this to be an enjoyable and enriching experience for you.

Assignments, Activities, and Projects:

There are three primary ways in which I will assess your learning in this course:

- 1) Each course module will have assignments and activities.
These will count for 40% of the final grade.
- 2) There will be an overarching web site project that will run during the length of the course. This web site will count for 40% of your final grade.
- 3) The SAS core standard assignment/final paper will run over several modules. This assignment will count for 20% of your final grade.

Grading:



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Grading will be on a 100 point scale:

A	90 - 100 points
B+	87 - 89 points
B	80 - 86 points
C+	77 - 79 points
C	70 - 76 points
D	60 - 69 points
F	0 - 59 points

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

Grading Policies: Care, respect, and integrity are expected in written and classroom exchanges. All written work, including postings 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 discussion postings and assignments. Outside sources, in any assignment, must be referenced appropriately (MLA style is expected).

Course Checklist

Date	Assignment	Points
9/1/26	Virtual Introduction	10
2/2	Module 1 Reading Thread	4
2/9	Module 2 Reading Thread	4
2/16	On Guard Games	6
2/18	Google Unit Review	10
2/23	Module 3 Reading Thread	4
3/2	Post Portfolio Website for Peer Review	NA
3/9	Post Feedback to 3 Portfolios	NA
3/11	Basic Portfolio Site Creation	10
3/23	Module 4 Reading Thread	4

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3/30	Module 5 Reading Thread	4
4/6	Final Portfolio Site Creation	20
4/13	Module 6 Reading Thread	4
4/20	Final Project	20
Total		100 points

Graded assignments cannot be missed except in case of a serious issue, when you have contacted the instructor PRIOR to the due date. 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 assignments without a sufficient reason will result in a grade of 0 for that portion of the course.

Late Policy: No credit will be given to late assignments, so use time management and get your work done by the due date!

	Module 1: Course Introduction
Agenda	<ul style="list-style-type: none"> · Introductions · Syllabus · Learning for the 21st Century · Technology Standards · Theoretical Foundations · Professional Portfolio Proposal
Tasks	<p>Readings:</p> <ul style="list-style-type: none"> ● Read the syllabus and watch this introduction video. If you have any questions about the course, you can e-mail me. ● Read: The Traits of a Successful Online Learner ● Read: Here are some additional tips from Concordia University: Tips for Success in Online Learning ● Read the Partnership for 21st Century Skills whitepaper: http://www.p21.org/storage/documents/aacte_p21_whitepaper2010.pdf ● Read the New Jersey Core Content Curriculum Standards for Technology (2014). Skim over the standards to familiarize yourself with the main ideas. http://www.state.nj.us/education/cccs/2014/tech/ ● Read/Browse ISTE's NET standards: http://www.iste.org/standards ● Read Tarman, B: The Digital Divide in Education. Paper presented at the Annual International Standing Conference for the History of Education. (Sao Palo, Brazil, Jul 2003). Read pp. 1-12, then 18-24. https://login.proxy.libraries.rutgers.edu/login?url=http://search.ebscohost.com.proxy.libraries.rutgers.edu/login.aspx?direct=true&db=eric&AN=ED508213&site=ehost-live <p>Assignments:</p> <ul style="list-style-type: none"> ● Introductions ● Participate in a threaded discussion ● Portfolio Web site project proposal.

	Module 2: Participatory Culture & Its Tools: In this module you will learn about both hardware and software and how they contribute to the classroom. It also will examine ways in which networking and the Internet have changed learning & teaching. In addition, the module will look at site safety and validity. It will also introduce you to the introductory concepts of Participatory Culture and have you engage in them yourself.
Agenda	<ul style="list-style-type: none"> · Hardware overview · Software overview · Project rubric · Introduction to basic networking · Web evolution as it pertains to teaching · Safety and validity online



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Tasks	<p>Readings</p> <ul style="list-style-type: none"> ● Read “Executive Summary”: Jenkins, H. Confronting the Challenges of Participatory Culture. MacArthur Foundation. 2009. ● Read article: Strickland, J: What’s inside my computer? How Stuff Works: A Discovery Company. (Click on link above to read article) ● Read article: DeKanter, N: Gaming Redefines Interactivity for Learning TechTrends: Linking Research & Practice to Improve Learning, p26-32 May-Jun 2005. (Click on link above, login to ERIC, and click on “PDF Full Text”.) ● Read article: Wetschler, E: Going Out of Print District Administration: Solutions for School District Management. Feb. 2011. ● Read article: Tyson, J: How Internet Infrastructure Works How Stuff Works: A Discovery Company. ● Read Richardson Ch. 1: The Read/Write Web · Read over "Information Literacy Resources" provided by Alan November. Take a look at some of the sites and identify what might be false or misleading. ● OnGuard Online! is a site by the Federal Trade Commission that breaks down complex security issues into simple explanations, games and videos. Take a look around! ● GetNetWise is a site that has a lot of information for children regarding their privacy and security. There are plenty of things that are applicable to everyone and anything for kids. Must read for teachers using the web in their classrooms. <p>Assignments</p> <ul style="list-style-type: none"> ● Participate in a question & answer threaded discussion ● Chose and play three games on the “OnGuard” site. When you complete a game, take a screenshot and paste all 3 on a doc to be submitted for grading. ● Google for Education Training Center, Fundamentals Training: https://edutrainingcenter.withgoogle.com/fundamentals/course?reset=ZB9SK1XC : Complete at least 5 of the Units. Upload Screenshots of EACH Unit Review score as evidence of completion.
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	Module 3: Communication: Lev Vygotsky said that learning is the result of collaboration to construct common cores of knowledge. This module discusses ways in which technology can support Vygotsky's ideas.
Agenda	<ul style="list-style-type: none"> ● Appreciate the changes and challenges presented by “Participatory Culture” in today’s digital society. ● Learn about blogs, wikis, and other social media and how such tools might be used in the classroom ● Discuss issues in implementation of such tools in the classroom.
Tasks	<p>Readings</p> <ul style="list-style-type: none"> ● Read “The Needed Skills in the New Media Culture” & “Enabling Participation” in: Jenkins, H. Confronting the Challenges of Participatory Culture. MacArthur Foundation. 2009. ● Read article: “Vygotskian and Post-Vygotskian Views on Children’s Play” ● Read Article: “Vygotskian Perspective of Teaching-Learning” ● Read summary of Vygotskian Theory



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	<ul style="list-style-type: none"> ● Read article: “gifted students in the 21st century: using vygotsky's theory to meet their literacy and content area needs” ● Review the Safe Kids Worldwide website: & peruse Safe Kids Worldwide: http://www.safekids.org/ ● Read “Digital Readiness Gaps” by Dan Horrigan http://www.pewinternet.org/2016/09/20/digital-readiness-gaps/ <p>Assignments</p> <ul style="list-style-type: none"> ● Participate in a threaded discussion ● Share and provide feedback on portfolio site ● Submit basic portfolio site project
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	Module 4: Multimedia for Learning: The purpose of this module is to examine and discuss the role multimedia can play in the classroom.
Agenda	<ul style="list-style-type: none"> ● Audio/visual technology: Theory and effective classroom use. ● Discussion of Web 2.0 multimedia (Podcasting, Screencasting, Live streaming, and more) ● Fair use for copyrighted materials
Tasks	<p>Readings</p> <ul style="list-style-type: none"> ● Read “Why We Should Teach Media Literacy: Three Core Problems” & “What Should We Teach? Rethinking Literacy” & “Core Media Literacy Skills”: Jenkins, H. Confronting the Challenges of Participatory Culture. MacArthur Foundation. 2009. ● Watch Jenkin’s YouTube video on Participatory Culture: https://youtu.be/1gPm-c1wRsQ ● Read article: Multimodal Literacies NCTE (National Council of Teachers of English) 2008. ● Read blog: Peters, D. Mayer's Principles for the design of Multimedia Learning. Sep. 2005. ● Read article: Lawrence, S. Teachers Should Know Copyright from Wrong 2008. <p>Assignments</p> <ul style="list-style-type: none"> ● Participate in threaded discussion ● Work on Portfolio site

	Module 5: Integrating Technology into the Classroom: The purpose of this module is to bring together the various concepts we have discussed thus far and summarize the various challenges and solutions inherent with technology implementation. Additionally, the module looks at distance learning and the future of technology in learning and teaching.
Agenda	<ul style="list-style-type: none"> ● Legal, social and ethical issues associated with implementing technology in schools ● Distance learning ● What it all means & where do we go from here?
Tasks	Readings



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	<ul style="list-style-type: none"> ● Read “Who Should Respond? A Systemic Approach to Media Education” & “The Challenge Ahead: Ensuring that All Benefit from the Expanding Media Landscape” in: Jenkins, H. Confronting the Challenges of Participatory Culture. MacArthur Foundation. 2009. ● Read article: McKee, T: Thirty Years of Distance Education: Personal Reflections. International Review of Research in Open and Distance Learning, v11 n2 p100-109 May 2010. 10 pp. (Click on link above, login to ERIC, and click on “Full Text from ERIC”.) ● Read article: Pape, L: Blended Teaching and Learning. Education Digest: Essential Readings Condensed for Quick Review, v76 n2 p22-Oct 2010. 6 pp. (Click on link above, login to ERIC, and click on “PDF Full Text”.) <p>Assignments</p> <ul style="list-style-type: none"> ● Participate in threaded discussion posts ● Final Portfolio Site Creation (includes all multimedia, hyperlinks, communication features and revised content based on prior feedback)
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	Module 6: The purpose of this module is to Reflect on the course, what you learned and how you are engaging in Participatory Culture
Agenda	<ul style="list-style-type: none"> ● How to engage in professional growth? ● Increasing educator efficiency ● Become an inspiration to learners
Tasks	<p>Readings</p> <ul style="list-style-type: none"> ● Read “Service Learning and Civic Participation” ● Read: “Civic Engagement through Digital Citizenship” <p>Assignments</p> <ul style="list-style-type: none"> ● Participate in threaded discussion posts ● Complete the final project