

## OFFICIAL SYLLABUS

DISCIPLINE: EDET  
COURSE: 445

### A. Catalog Entry

EDET 445: Integration of Educational Technology

Three (3) hours lecture  
Prerequisite: None

#### ***Course Description:***

Prospective teachers will develop critical awareness of instructional technologies in order to successfully integrate technology into their teaching. The course begins with an overview of the latest research on how people learn. This cognitive science research serves as a diagnostic lens to evaluate the efficacy of the instructional technologies the class uses over the course of the semester. Prospective teachers will be introduced to techniques and methods through modeling and direct hands on experience in a wide array of technologies. Along the way, students will develop skills for identifying appropriate technologies and making decisions concerning when to integrate a technology.

### B. Detailed Description of Content of Course

Specific technologies and topics include:

1. Current technological trends shaping education
2. Practical classroom realities of technology integration
3. Cognitive science and research-based attributes of effective learning environments
4. Equity issues related to use of technology in the classroom & assistive technologies
5. Web 2.0 technologies such as Wikis, YouTube, and social networking
6. Google Earth
7. SMART Board
8. Augmented reality
9. Google Applications such as Picasa, Docs, Sites, Gmail, and Blogger
10. Copyright and Creative Commons, RSS
11. Presentation and website design principles
12. Distance learning and videoconferencing
13. Apple iLife software
14. Interactive Power Points
15. 2D/3D game/simulation editors such as Scratch and Alice

### C. Detailed Description of Conduct of Course

This course stresses hands-on experience with a variety of technologies found in classrooms across the Commonwealth of Virginia and models methods for integrating

technology into the classroom. The students create a series of technology projects that they can immediately integrate and implement within their blocking and future classrooms. This course utilizes a combination of lectures, hands-on activities, media, guest speakers, discussions, and projects to help participants understand the strengths and limits of current technologies for education. This course emphasizes practical applications of available technologies to meet the needs of diverse learners in a variety of educational settings.

#### **D. Goals and Objectives of the Course**

1. Goals, objectives, and assignments in this class address NCATE Standard 1c Professional and Pedagogical Knowledge and Skills
2. Goals, objectives and assignments in this class address Virginia Department of Education Teacher [VDOE] Licensure standards in Professional Studies requirements in Curriculum and Instructional Procedures for Prek-12, special education, and secondary education and Early/primary prek-3 education, elementary education, prek-6, and middle education: Demonstrated proficiency in the use of educational technology for instruction.

The codes included below refer to the International Society for Technology in Education (ISTE) National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers and the Virginia Department of Education Technology Standards for Instructional Personnel (TSIPS).

Upon completion of this course the student will demonstrate understanding of/ability to:

1. Identify and describe the four characteristics of an effective learning environment as explained in *How People Learn* (NETS•T 5; TSIPS 8 VAC 20-25-30 H)
2. Describe current leading-edge work in instructional technology in K-12 and higher education (NETS•T 5; TSIPS 8 VAC 20-25-30 B & E)
3. Identify and explain if and how these technologies add value to teaching and learning using research-based cognitive science as a diagnostic framework (NETS•T 5; TSIPS 8 VAC 20-25-30 G & H)
4. Integrate various instructional technologies to meet the needs of diverse learners in a variety of educational settings. These technologies include productivity software (e.g., Word, Power Point), interactive media (e.g., asynchronous threaded discussion sites, multi user virtual environments), instructional frameworks (e.g., web-based learning environments), devices (e.g., SMART Board, wireless mobile handhelds) and applications (e.g., Wikispaces, Google Earth, educational podcasts) (NETS•T 1, 2, & 3; TSIPS 8 VAC 20-25-30 A, C, & G)
5. Apply effective instructional design for various interactive media and applications (NETS•T 1, 2, 3, 4, & 5; TSIPS 8 VAC 20-25-30 A, C, E, F, & G)
6. Discuss how innovations such as augmented reality, multi-user virtual environments, online gaming, computer-supported collaborative learning, telementoring, and sociosemantic (social) networking are shaping the evolution of education (NETS•T 5; TSIPS 8 VAC 20-25-30 E & G)
7. Identify the implications for educational equity and diversity in the public K-12 system in relation to technology (NETS•T 4 & 5; TSIPS 8 VAC 20-25-30 H)

## **E. Assessment Measures**

The students are specifically assessed on the following items:

1. Class participation (real and online) & professional behavior
2. Weekly activities and projects
3. Quizzes and a final exam
4. Class presentations
5. Final projects consisting of four parts: a. Wikispace; b. Google Earth; c. SMART Board; and d. a project of their choosing, e.g., podcasts, video tutorials of technology skills, virtual reality, augmented reality, etc.

## **F. Other Course Information**