OFFICIAL SYLLABUS

DISCIPLINE: EDET
COURSE: 620

A. Catalog Entry

EDET 620: Educational Technology: Applications, Applied Research and Integration
Three (3) credits lecture
Prerequisite: none

Catalog Description: Provides an overview of educational technology as a change-oriented academic field as well as a concept that defines a number of strategies for effectively facilitating learning. Students investigate strategies in which computer-based resources can be used to support the practice of professional educators. Students will apply research and educational technology skills within written exams and the development of electronic portfolio-based instructional resources. Students are expected to enter this course with basic computer knowledge and skills.

B. Detailed Description of Content of Course

Approach: Throughout the course, students investigate strategies in which computer-based resources are used to support the practice of professional educators. Students apply educational technology skills by collecting and organizing resources and evaluating the potential efficacy of a variety of technology-supported instructional strategies within the context of developing a web-based portfolio. Additionally, students read a number of research articles addressing effective strategies for integrating technology within the professional practice of educators and apply knowledge about research-based principles in reflection papers and written exams. Specific technologies and topics include:

- Current technological trends shaping education
- Practical classroom realities of technology integration
- Cognitive science and research-based attributes of effective technology-supported learning environments
- Equity of using technology in the classroom as it relates to socioeconomic, cultural and special needs of students or clients
- Strategies for using technology to support the development of learner-centered classrooms
- Emerging Web 2.0-type technologies in teaching and learning
- Copyright and Fair Use issues
- Presentation and website design principles
- Distance learning and videoconferencing strategies
- Interactive multimedia development
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 and methods for integrating technology into the classroom. The students create a series of technology projects that they can immediately integrate and implement within their field experiences 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

This course is designed to provide an overview of educational technology as a change-oriented academic field, as well as a concept that defines a number of strategies to effectively facilitate learning. Throughout the semester, students will investigate strategies in which computer-based resources can be used to support the practice of professional educators. Students will apply research as well as educational technology skills within two written exams, and collect/organize technology resources as well as evaluate the potential efficacy of a variety of technology-supported instructional strategies within the context of a web-based portfolio that reflects accomplishments related to personal professional development goals.

Goals, objectives, and assignments in this course address NCATE Standard 1c Professional and Pedagogical Knowledge and Skills. 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’s Technology Standards for Instructional Personnel (TSIPS). Additionally, codes are included that refer to the professional standards articulated by the following organizations: National Association for Gifted Children-Council for Exceptional Children (NAGC-CEC); National Association for the Education of Young Children (NAEYC)-Advanced Standards; Association for Childhood Education International (ACEI); National Council of Teachers of English (NCTE); American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD); National Council of Teachers of Mathematics (NCTM); National Middle Schools Association (NMSA); National Science Teachers Association (NSTA); National Council for the Social Studies (NCSS); Interstate New Teacher Assessment and Support Consortium (INTASC). VDOE Professional studies requirements in Curriculum and Instructional Procedures (technology)

Upon completion of this course the student will be able to:

- Identify and describe characteristics of effective technology-supported learning environment (NETS•T 5; TSIPS 8 VAC 20-25-30 H; NAEYC Advanced Core
Describe different ways in which the field of educational technology impacts the practice of professional educators (i.e. instructional planning, evaluation, management, professional development) (NETS•T 5; TSIPS 8 VAC 20-25-30 B & E; NAEYC Advanced Core Standard 5; ACEI 5.2; NCTE 3.6.1; AAHPERD 9.1; NMSA K3.5, K3.8)

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., Smartboard, wireless mobile handhelds), applications, and assistive technologies (e.g., Wikispace, Google Earth, educational podcasts) (NETS•T 1, 2, & 3; TSIPS 8 VAC 20-25-30 A, C, & G NAEYC Advanced Core Standard 4d; ACEI 3.1-3.4; NCTE 2.4, 3.2.1, 3.2.5, 3.6.2; AAHPERD 2.3, 5.2, 9.2; NCTM 8.7; NMSA K3.5, K3.8; NCATE 5b, 5d; INTASC 3, 6)

Apply effective instructional design to the development and/or use of various interactive media and applications, including research-supported principles associated with: Multimedia Use, Contiguity, Modality, Redundancy, Coherence, Personalization, Segmenting and Pretraining (NETS•T 1, 2, 3, 4, & 5; TSIPS 8 VAC 20-25-30 A, C, E, F, & G NAEYC Advanced Core Standard 4d; ACEI 3.1-3.4; NCTE 2.4, 3.2.1, 3.2.5, 3.6.2; AAHPERD 2.3, 5.2, 9.2; NCTM 8.7; NMSA K3.5, K3.8; NCATE 5b; INTASC 3)

Discuss how emerging technology innovations (i.e. augmented reality, multi-user virtual environments, online gaming, computer-supported collaborative learning, technology-assisted mentoring, social networking) shape the development of educational tools and resources (NETS•T 5; TSIPS 8 VAC 20-25-30 E & G NAEYC Advanced Core Standard 4d; 5; NCTE 4.5; NCTM 6.1; NCSS 1.8; INTASC 1)

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; NAGC-CEC 1:S1; NCATE 5b; INTASC 3)

Apply research-based principles to the evaluation of computer-supported instructional resources, instructional planning and evaluation strategies, and the selection of appropriate professional development experiences (NETS•T 5; TSIPS 8 VAC 20-25-30 G & H NAEYC Advanced Core Standard 4d, 5; NAGC-CEC 1:K7, 4:K2, 8:S4, 9:S7; ACEI 3.1-3.4, 5.1; NCTE 3.2.5; AAHPERD 2.3, 6.7, 8.2, 9.3; NCTM 6.1, 8.5; NMSA P3.9; NSTA 8a, 10a; INTASC 6, 9)

Apply technology-supported communication strategies to the development of meaningful learning environments as well as improve and increase the amount and type of interaction with all stakeholders in the teaching and learning enterprise (parents, administrators, teachers, experts etc.) (NAGC-CEC 6:S2, 10:S1-6, ACEI 5.2; NCTE 2.2, 4.5, AAHPERD 9.3; NCTM 6.1; NMSA K3.5, K3.8, P3.9; NCATE 5c, 7a, 7b; INTASC 4, 5, 6, 10)

E. Assessment Measures

The following types of assessments will be used to evaluate student learning and
achievement throughout the course:

- Individual course projects and written assignments included in a web-based portfolio and assessed using detailed analytic rubrics
- Written exams scored according to the nature of individual exam items.
- Class participation in discussions and small group activities

F. Other Course Information

For a detailed look at the course materials and assignments, please visit the EDET 620 website at: http://sherman.education.radford.edu/edet620