Technology Education Program

Rhode Island College
Feinstein School of Education and Human Development
Department of Educational Studies

Fall 2010

Course Syllabus

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Office Hours: Monday & Wednesday 2:00 – 3:00 and by Appointment

I COURSE TITLE: TECH 406-01 Methods in Technology Education (4 Credits)

CLASS HOURS: Tuesday & Thursday *10:00 – 12:00*
CLASS ROOM: Whipple Hall 100

Communication Devices: Out of courtesy for other students and the instructor, please silence all communication devices (phones and pagers, etc.) during class time so that we may learn and work together undisturbed.

II PREREQUISITES: TECH 300 (B-), FNED 346 (B-)

- **ADMISSION TO THE TECHNOLOGY EDUCATION PROGRAM**
- Completion of 18 credit hours of required courses in the Technology Education major.
- Minimum cumulative GPA of 2.50.
- Minimum GPA in content area of 2.75.

III CATALOG DESCRIPTION: Students are introduced to a variety of teaching strategies involved in the daily instruction of Technology Education. Included are support materials and evaluation tools.

Relationship to Feinstein School and Professional Development

The Methods in Technology Education (TECH 406) serves as an introduction to teaching in the Technology Education classroom and laboratory. This course begins the work of preparing to become a professional teacher. Students study the planning, methods, development of content and curriculum, and teaching skills necessary to deliver appropriate Technology Education lessons. Students have ample opportunity to plan, act, and reflect, as advocated by the PAR model during this course. The observation experiences will emphasize the application of exemplary teaching skills, development of appropriate inclusion strategies, understanding of content, and evaluation of student work.

Students will reflect on, analyze, select, and implement new and contemporary methods, activities, and curricula related to technology education for the elementary classroom. Participants will be investigate and identify technological literacy initiatives (ITEA). Students will be prepared to teach Technology Education through a series of tutoring and micro-teaching lessons experiences; guided by the Rhode Island Beginning Teacher Standards.

Participants in this course should benefit from consistent best practice scenarios and the intentional use of models that explore global attitudes and diverse student populations in the technology education classroom. This Technology Education teacher preparation course is grounded in FSHED's Conceptual Framework and the PAR Model embraced by Rhode Island College.

IV TEXT: (Required)

Arends, R. (2009). *Learning to Teach*. 8th edition. Boston, MA: McGraw-Hill Higher Education

ITEA (2000/2002). *Standards for Technological Literacy. Content for the Study of Technology*. Reston, VA: ITEA

Selected Bibliography

Charles, C. M. (2000). *The Synergistic Classroom: Joyful Teaching and Gentle Discipline*. New York, NY: Longman

Helgeson, K., & Schwaller, A. (2003). Selecting Instructional Strategies for Technology Education. 52nd Yearbook of the Council on Technology Teacher Education. Peoria,IL: Glencoe

Martin, G. E., editor. (1995). *Foundations of Technology Education*. 44th Yearbook of the Council on Technology Teacher Education. Peoria,IL: Glencoe.

Morrison, G., Ross, S., & Kemp, J. (2004). *Designing Effective Instruction*. 4th Edition. Hoboken, NJ: John Wiley and Sons.

Petrina, S. (2007). *Advanced Teaching Methods for the Technology Classroom*. Hershey, PA: Information Science Publishing

Internet Resources

The Helpful 100: **http://edtech.tennessee.edu/~bobannon/helpful_hundred.html**

Unit Planning:
http://edtech.tennessee.edu/~bobannon/unit_plans.html
http://chiron.valdosta.edu/whuitt/col/instruct/instmdls.html

Classroom Management:
Classroom management profiles: **http://www.education.Indiana.edu/cas/tt/v1i2/what.html**
Classroom management resources: **http://www.geocities.com/Athens/Delphi/4127/tutor.html**
Creating Classroom climate: **http://www.education-world.com/a_curr/curr155.shtml**

Lesson Planning:
Lesson plans, teaching resources & education: **http://www.teachnet.com**
Lesson Planning: **http://edtech.tennessee.edu/~bobannon/lesson_plan.html**
Lesson Planning: **http://www.huntington.edu/education/lessonplanning/Plans.html**

Cooperative Learning: The Jigsaw Classroom**: http://www.jigsaw.org**

Content and Methods in Technology Education:
http://scholar.lib.vt.edu/ejournals/JTE/v5n1/editor.jte-v5n1.html

ITEA MEMBERSHIP FORM: https://www.iteaconnect.org/Forms/MembershipApp.htm

V COURSE OBJECTIVES:

Upon satisfactorily completing this course, the teacher candidate will demonstrate entry-level competency in:

1. Organizing and managing the learning opportunities for the technology education classroom/lab.
2. Designing instruction and assessment procedures for all students.
3. Designing and presenting age appropriate Technology Education lessons that are challenging and clearly explained.
4. Developing classroom & lab procedures that create a physically safe, well-organized environment.
5. Planning units and lessons that acknowledge different learning styles and learning needs.
6. Using appropriate classroom practices, procedures to create and manage a productive learning environment.
7. Developing instructional strategies for transition from classroom to lab.
8. Analyzing and critiquing lessons presented in the classroom.
9. Using information technology for the delivery of course content.
10. Identifying and using Internet resources for the development of course materials.
11. Recording data and observations related to classroom visits.
12. Reflecting and self-reporting on performance.
13. Adapting fair evaluation methods.

Standards Attained:
4 Micro-teaching Lessons, Reflections, Peer & Self-evaluation
RIBTS: 1.1, 1.2, 1.3; 2.1-2.7; 3.1, 3.2, 3.3; ***5.1-5.5***; 6.5, 6.6, 6.7; 10.3, 10.4; 11.1,11.2,11.3

4 Class Observation Sheets
RIBTS: 6.1, 6.4, 6.5, 6.6, 6.7;

Classroom Visit Entries
RIBTS: 2.1; 5.5; 7.1,7.3, 7.4; 8.1 - 8.4; 9.2,9.3; 10.2, 10.3

Reflection Artifact
***RIBTS*:** 2.6; 3.3; 4.2, 4.4; 6.7; 8.1-8.4; 9.5; 10.3;

Class projects/participation:-design brief, case study, informal writing, text analysis
RIBTS : 3.1, 3.2, 3.3; 4.1,4.2; 5.1, 5.2, 5.3, 5.4, 5.5; 6.6, 6.7

VI CONTENT OUTLINE

I. Introduction
- A. Course
- B. The scope and purpose of Technology Education
- C. Teaching and learning
  1. The role of the teacher
  2. The role of the learner
  3. Factors influencing learning
- D. The nature of the learner
  1. Developmental stages
  2. Needs and wants
  3. Social issues
  4. Personal psychological issues
  5. Physical issues

II Planning for learning
- A. Contrasting approaches
- B. Applying learning theory
  1. Domains and levels of learning
  2. Constructivistic and didactic approaches
  3. Developmental stages of the learner
  4. Behaviorism
  5. Cognitivism
- C. Long-range course and unit planning
- D. Lesson planning
  1. Parameters
  2. Behavioral objectives

3. Planning the physical learning environment

- E. Supporting Learning in Tech Ed
  1. Equipment
  2. Materials
  3. Instructional technology and support materials

4. Computer assisted instruction
5. Audio-visuals
6. Handouts
7. Evaluation of student performance
8. Further planning

III. Instructional support and techniques
A. Presentation (chalkboard, dry erase, overhead transparencies, computer presentation, etc.)
B. Handouts (instruction sheets, design briefs, etc.)
C. Manipulatives

IV. Teaching Strategies
A. Overview
1. Didactic vs. constructivistic approaches
2. The "Events of Instruction"
a. Gain attention.
b. Inform the learner of the objective.
c. Stimulate recall and prerequisite knowledge.
d. Present new information.
e. Provide guidance on relating new information to old.
f. Require the learner to use the information
g. Provide feedback on performance.
h. Assess the performance.

V. Types of Instruction
A. Presentation
B. Direct Instruction
C. Concept Teaching
D. Cooperative Learning
E. Individualistic learning
F. Problem-Based Instruction
1. Overview
2. Creative problem solving
3. Project-based curriculum
4. Scientific inquiry
G. Classroom Discussion
H. Didactic and Constructivistic Approaches
I. Learning and Study Strategies
1. Grouping Strategies
2. Co-curricular Strategies
3. Team Teaching
4. Values Clarification
5. Contracting

VI. Methodologies
A. Language-based
1. Discussion
2. Drill
3. Interviews
4. Lecture
5. Questioning
6. Role Playing
7. Student Presentations
B. Activity-based
1. Demonstration
2. Design Activities
3. Games
4. Learning Modules
5. Convergent Problem Solving
6. Historical
a. Case Studies
b. Futuring
c. Project
d. Simulations
e. Student Research
C. Using Learning Resources
1. School Resources
2. In-Room
3. Library
4. Experts
5. Computers
D. Community Resources
1. Guest Speakers
2. Field Trips
3. Events
4. Regional, State, National, and Global Resource
a. Internet
b. Events

VII. Implementing instruction
A. Personal characteristics
B. Presentation techniques
C. Using instructional technologies
D. Questioning techniques
E. Observation techniques
F. Motivational techniques
G. Recording techniques
H. Student performance evaluation techniques
I. Self-evaluation techniques

VIII. Evaluating and assessing
A. Purpose
B. Developing evaluation strategies and instruments
1. Written tests
2. Portfolio assessment
3. Rubrics, matrices and checklists
4. Peer assessment
5. Performance tests
6. Self-assessment
7. Assessing affective learning
C. Administering evaluation
D. Scoring, record keeping and reporting
E. Basic descriptive statistics

IX. Managing the classroom and laboratory
A. Organization of records
B. Health and safety considerations
C. Facility management
D. Managing students
1. Classroom control
2. Discipline
3. Task assignment

XI. Survival Skills

A. Finding, choosing, and getting an appropriate job
B. Self-image
C. Organizational skills
D. Interpersonal skills
E. Adapting to the job
F. Time management
G. Stress management
H. Paperwork, meetings, and duties

VII CLASS ATTENDANCE POLICY:

Methods students are expected to exhibit a high degree of professionalism reflected in their speech, manner, and dress. Prompt and consistent attendance is an essential dimension of professional behavior. Teacher candidates will attend all class meetings and all scheduled observations in the public schools. The nature of this class requires your complete cooperation in meeting deadlines and your classroom obligations. Failure to comply with these simple requests will automatically remove you from any chance of moving forward to Practicum.

Students should attend all class meetings and are responsible for all class work and assignments. At the beginning of each semester, instructors will distribute a syllabus, which may include attendance and/or class participation as a component of the course grade. Students who are absent must take the initiative to determine from the instructor what course work can be made up. Students who are absent on the day of an examination should make every effort to call the instructor (or department office) before the scheduled test.

....All students who incur or anticipate an extended absence (five or more consecutive days or more) should call the Office of Student Life at 456 - 8061, so that notice (not an excuse) may be sent to instructors. (p. 38 RIC Student Handbook)

- The policy of this class is that after the 2nd absence the final grade will be dropped one letter grade.
- **Three (3) unexcused absences from this class will result in a final grade of (F).**
- Absences are considered excused **only** when the student supplies official documentation of the nature of the absence. (i.e. attending physician's notice, court documents, obituaries, field trip memo)
- All exams and quizzes will be taken at the scheduled time. Make-up exams and quizzes may not be provided unless proper documentation is presented.

Accommodation Policy:
Students having any special needs (disabilities, problems of a personal nature or any other factor which may affect their performance in class or require special instructional strategies) should make these special needs known to the instructor during the First Week of the semester. Every effort to make accommodations will be made to insure that the student will have an opportunity to participate in all class activities.

VIII FIELD EXPERIENCES & LABORATORY EXPERIENCES AND HOURS:

During the first month of class, schedules will be developed for your field experiences. Each class member will be assigned a school and a time for visitation at the convenience of the cooperating teacher. It is crucial that you keep those schedules during the course of the semester. Deviation from the schedule can cause unwanted disruption in the classes you visit during the semester. In addition to your tutoring duties, you will be make four (4) observations; (two in middle schools & two in high schools) in a Technology Education classroom/laboratory.

Class time is reserved for providing instruction, reflection, and collaborating on class projects, and portfolio development. It will not be used to make observations or visits to schools for the purpose of tutoring.

IX NECESSARY MATERIALS:

Please come equipped with a writing implement and note pad during class sessions. You will be making observations throughout the course of this class.

Bring your textbooks to class for all sessions.

You must have a journal for your tutoring observations.

Come prepared with essential handouts and forms as required by the instructor

A notebook of some type will be used to archive all course materials

An appropriate portfolio for your work is required.

If you don't have a RIC e-mail address, get one ASAP. Class assignments, class communications, and announcements from FSHED will be delivered via BlackBoard.

Please be certain that you have access to the Internet; several assignments will require the use of WWW resources.

X METHODS OF INSTRUCTION:

Instructional strategies to reinforce content will include:
- Lecture
- Individual reports
- Individual projects
- Laboratory demonstrations
- Group interaction/Seminar
- Discussion / Question and Answer

XI EVALUATION:

Methods in Technology Education
Final Grades

4 Micro-teaching Lessons, Reflections, Peer & Self-evaluation	40%
Goals and Objectives	10%
2 Class Observation Sheets	10%
Class projects/participation – Lesson planning etc. Visit Journal	10%
Reflective practice artifact	10%
Final Project Micro-lesson in your school	20%
	100%

Grade Scale:

A	**100% - 96%**	**C+**	**79% - 76%**
A-	**94% - 90%**	**C**	**75% - 71%**
B +	**89% - 86%**	**C-**	**70%**
B	**85% - 81%**	**D**	**69% - 60%**
B-	**80**	**F**	**59% or less**

XII Recommendation to Continue in the Professional Sequence

Your evaluation in this course is based on your observed potential to teach, quality of work, attitude, and professional demeanor. You must be accepted into the Feinstein School of Education and Human Development in order to advance into practicum. If these elements are satisfactory, you will be recommended to advance to the Practicum in Elementary Education. You must pass this class with a B- or better.

A passing grade of B- and a positive recommendation from the Methods instructor is required to advance to practicum.***

****** Remember, to be accepted into the Practicum class, your Admission Portfolio must be approved by the Feinstein School. At the time of approval, it is best to meet with your advisor to be sure all prerequisites are met.***

TENTATIVE COURSE SCHEDULE
TECH 406 METHODS IN TECHNOLOGY EDUCATION

Charles H. McLaughlin Office: HBS 206
Phone: 456 - 8793
E-Mail: Cmclaughlin@ric.edu

Class Time: T- TH 10:00 – 12:00
Classroom: WH 103

Text code **(L2T) Learning to Teach**
(STL) ***Standards for Tech. Literacy***

Dates	Topic	Readings
Week 1 **August 31**	Introduction to the course Syllabus/Goals/Expectations Course Overview The Characteristics of Good Teaching	Review Syllabus
September 2	The Scope and Purpose of Technology Education RIBTS requirements Planning, Action, Reflection	Handouts
	Standards for Technological Literacy	*STL pp. v – 10*
	Developing Schedules for Visits	
Week 2 **September 7**	Getting to know the texts The basis for teaching *Effective Practice*	L2T Preface L2T pp. 2 - 39 *L2T pp. 20 - 29 (emphasize)*
	Overview of STLs	*STL pp. 11 - 20*
September 9	Lesson Plan Development Diversity in the Classroom	Handout/Examples L2T pp. 40 - 89
Week 3 **September 14**	Teacher Planning **Observation #1 Due**	L2T pp. 91 - 103
September 16	Specifics of Planning *Instructional Objectives* Taxonomies	L2T pp. 104 - 133 *L2T pp. 110 – 120 (emphasize)*
Week 4 **September 21**	Design Briefs, Tech Challenges & TLA's *Nature of Technology*	Handouts *STL pp. 21 - 54*
September 23	**MICROTEACHING #1** Learning Communities Motivating Students Classroom Structure	L2T pp. 134 - 156 L2T pp. 157 - 159 L2T pp. 160 - 173
Week 5 **September 28**	*Classroom Diversity* Special Needs Scenarios *Technology & Society*	L2T pp. 164 - 170 *STL pp. 55 - 88*
September 30	**Observation # 2 Due** Addressing Different Abilities in TE	**MICROTEACHING #1 Feedback** Handouts
Week 6 **October 5**	Classroom Management Classroom Research **MICROTEACHING #2**	L2T pp. 174 - 182
	Design	*STL pp. 89 - 112*

October 7	Preparing for Effective Classroom Management	L2T pp. 183 – 197 L2T pp. 198 - 209
Week 7 **October 12**	**NO Class on the 12th Monday Schedule** *Abilities for a Technological World*	**MICROTEACHING #2 Feedback** *STL pp. 113 - 138*
October 14	Assessment and Evaluation for the Classroom & School Testing Strategies Alternative Assessments Assessment Types	L2T pp. 210 - 228 L2T pp. 229 - 238 L2T pp. 239 - 246 L2T pp. 247 - 254
Week 8 **October 19**	Presentation Planning *The Designed World*	L2T pp. 258 - 267 *STL pp. 139 – 197*
October 21	Conducting Presentation Lessons **MICROTEACHING #3**	L2T pp. 270 - 287
Week 9 **October 26**	Direct Instruction Model Planning Direct Instruction Lessons	L2T pp. 290 - 309
October 28	Managing the Learning Environment **Observation #3 Due**	L2T pp. 310 - 317
Week 10 **November 2**	Concept Teaching *Higher Level Thinking* *The Nature of Concepts* Assessing Strategies	L2T pp. 318 - 343 *L2T pp. 321 – 326 (emphasize)* L2T pp. 338 - 339
November 4	Concept Mapping	Handouts **MICROTEACHING #3 Feedback**
Week 11 **November 9**	Cooperative Learning Planning Cooperative Lessons Learning Environment Assessing Cooperative Learning **MICROTEACHING #4** **Veterans' Day: School Closed**	L2T pp. 348 - 354 L2T pp. 358 - 369 L2T pp. 370 - 374 L2T pp. 375 - 382
November 11		
Week 12 **November 16**	Problem-based Instruction Conducting PBI	L2T pp. 384 - 393 L2T pp. 394 – 406
November 18	Learning Environment **OBSERVATION #4 DUE**	L2T pp. 406 - 409
Week 13 **November 23**	Assessment of PBI **Thanksgiving Break**	L2T pp. 409 - 416
November 25		
Week 14 **November 30** **December 2**	Conducting Class Discussion Planning for Discussion Managing Discussions Assessing	L2T pp. 418 - 427 L2T pp. 428 - 439 L2T pp. 440 - 443 L2T pp. 444 - 451

Week 15 **December 7** **December 9**	Connecting Models Differentiated Instruction Management and Assessment	L2T pp. 452 - 463 L2T pp. 464 – 473 L2T pp. 474 - 480
December 9	**School lesson portfolio due** **And reflection**	

REFLECTIVE PRACTICE IN TEACHING TECHNOLOGICAL LITERACY

TECH 406: METHODS IN TECHNOLOGY EDUCATION

PURPOSE

As part of this course pre-service secondary education teachers plan, prepare and present four "microteaching" lessons. These lessons integrate literacy strategies and content materials to teach brief lessons and conduct related assessments. Each microteaching lesson generates a number of materials, including a lesson plan, resources, handouts, a videotape record, a peer response (based on participation and review of the videotape), a self-reflection (based on experience of presentation, the videotape and review of plan and materials), and an instructor assessment (based on the lesson plan, videotape, peer response and presenter's reflection).

PRODUCT

Candidates will ***select one microteaching lesson and accompanying materials*** to reflect on what she or he has learned from the microteaching experiences. This final reflective discussion will be retrospective, cumulative, and prospective, explicitly connecting these dimensions with the relevant Rhode Island Beginning Teacher Standards and the Standards for Technological Literacy (STL). As such, this reflection will take account of the peer feedback and instructor assessment and all of the microteaching lessons, while using a focal lesson for discussion.

The written discussion will have three parts that address the following:

CUMULATIVE

What are the reasons for choosing the lesson? This part of the discussion will reference which RIBTS and discipline-specific standards (*STL*) are met, to discuss how literacy practices are integrated into content instruction and to explain the rationale for those instructional choices in meeting these standards. How has the candidate's understanding of and approach to teaching changed through the conducting the microteaching lessons?

RETROSPECTIVE

How does this lesson document the candidate's growth and learning to teach? How does this lesson compare and contrast with the other lessons? How does it build on, improve upon, depart from or exceed some aspect of another lesson?

PROSPECTIVE

Describe the aspects of the lesson less accomplished than others. How does this lesson reveal further challenges for learning and development? What areas for professional growth are suggested by reviewing this lesson?