Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT
(e.g., CSE)

EDS
(e.g., 1301)

2

0

3

COURSE NO.

TERMINAL TO BE ADDED TO THE FILE

Spring 2013

TERM TO BE ADDED TO THE FILE

CREDIT HOURS

LECTURE HOURS

LAB HOURS

CONTACT HOURS (CEU ONLY)

DEPARTMENT
(e.g., Education and Interdisciplinary Studies)

SCHEDULE TYPE

Lecture (A) and Field (J)

(e.g., Lecture, Lab or Special Topics/Project)

COLLEGE OF AERONAUTICS – 23

COLLEGE OF SCIENCE – 26

NATHAN M. BISK COLLEGE OF BUSINESS – 24

EXTENDED STUDIES DIVISION / NATHAN M. BISK COLLEGE OF BUSINESS – 90

COLLEGE OF ENGINEERING – 1

COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS – 25

COMPUTER TITLE

Restricted to 25 characters, including spaces

Inquiry-Based Lesson Design

CATALOG TITLE

Restricted to 350 characters, including spaces

Acts as second step in exploring teaching in science or mathematics. Covers the middle school environment. Includes inquiry-based lesson analysis, design and assessment. Requires students to be assigned according to interest to a middle school mentor teacher. Includes observation and teaching three quest inquiry-based lessons as part of student team.

This description has been approved by the catalog office

Emmy

8/21/12

Catalog Director

Date

In addition, please attach a course syllabus and/or more detailed description.

RESTRICTIONS

Prerequisite EDS 2502

Course Number

Corequisite

Course Number

and or

A, B, C, D, F

A, B, C, D, F, CEU/Audit

CEU

S, U

P, F

Other

ADDITIONAL RESTRICTION

(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information and the date/term the course may be removed from the system.

SUBJECT

Alpha Prefix (e.g., CSE)

COURSE NO.

(e.g., 1301)

TERM TO INACTIVATE

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Katie Hargreaves

8/22/12

Date

Chair, Graduate Council

Date

OR

Department Head/Program Chair

8/12/11

Date

Dean or Associate Dean

8/23/12

Date

Chair, Undergraduate Curriculum Committee

Date

CATALOG DIRECTOR

These changes/additions have been made for the University Catalog/policy management system and entered into the BANNER term named above.

Catalog Director

Date

REGISTRAR’S USE ONLY

SCACRESC

SCADETL

SCAPREQ

SCBASE

SCARES

Operator Initi.

Date

Florida Institute of Technology • Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-814 • Fax (321) 674-7827

RGR-122-1011
Course Syllabus: FIT4UTeach – EDS 2503
Special Topics: “Step 2: Inquiry-Based Lesson Design”
Spring 2013

Instructor(s): Mr. Joe Laub (Science) and Mrs. Melissa Young (Mathematics)
Instructor: Laub  
Office Location:  
Office Phone:  
Cell Phone:  
Office Hours: or by appointment.  
E-mail: jlaub@fit.edu

Course Prerequisite
An interest in exploring teaching; Undergraduate major in mathematics, technology, engineering, or science. Approval of the FIT4UTeach Co-Director.

FIT Angel Courses Online Courses Online Website

Advisement: Please email for an appointment

Course Requirements
Students must be able to:
- Create and modify lesson plans in Microsoft® Word
- Upload and download Microsoft® Word and Adobe documents to Angel Courses Online
- Complete assignments posted on the course website
- Travel off campus 5 times per semester during the school day to observe and teach lessons

If assistance is needed to meet these requirements, please see your instructor. Help is available upon request. Office Hours: By appointment.

Prerequisites: Step 1 and an interest in exploring the career of teaching.

Required Supplies: USB flash drive (1GB or more storage capacity, recommended)

Course Rationale
Students who want to explore teaching careers become familiar with the middle school setting by observing and discussing the middle school environment, and by teaching several lessons to a middle school class. They build upon and practice lesson design skills that were developed in Step 1 and also become familiar with excellent science and mathematics curricula for the middle school setting. As a result of the Step 2 experiences, students generally are able to make a decision as to whether they want to pursue a pathway to teacher certification through the FIT4UTeach program. A significant number of FIT4UTeach students enjoy their teaching experiences in Step 2 to the extent that they decide to pursue teaching certification in the middle grades.

Course Description
Class meets once a week on campus for 1.5 hours. During this time students learn about the middle school environment, and work on inquiry-based lesson analysis, design, and assessment. Aspiring mathematics and science teachers meet in separate sections; computer science majors, who generally seek computer science-mathematics certification, usually join the mathematics group. FIT4UTeach students are assigned to either a mathematics or a science Mentor Teacher in a local middle school to observe once and then teach three quest inquiry-based lessons. They generally teach in a team with a partner, and field assignments are based on the schedules and transportation needs of the students.

The course emphasizes writing good 5E lesson plans, with a focus on the importance of using appropriate questioning and assessment strategies throughout the lesson. Students develop pre- and post-assessments for performance objectives. For their final product, students analyze and modify one of the lessons they taught, taking into account the results of the assessments, the reflection on how successful the lesson was, and feedback from observers (Mentor Teacher, Instructor, or Teaching Assistant).

Course Overview
This course will provide students with:
- an opportunity to explore teaching in science or mathematics,
- early field experiences in teaching
- an introduction to the theory and practice that is necessary to design and deliver excellent instruction

To obtain first-hand experience with planning and implementing inquiry-based curriculum, students will teach science/mathematics lessons in elementary classrooms in the Brevard County School District. Students will attend one hour of class on campus each week, where they will learn to design and deliver excellent science/mathematics lessons. Students, working in teams, will present three lessons in a third, fourth, or fifth grade classroom during the semester. Classrooms are selected both for the diversity of the student body and for the quality of the classroom teacher. Each pair of students will have a mentor teacher who will work with them to improve their teaching abilities as the
As the semester progresses. The mentor teacher will remain in the classroom at all times and provide immediate feedback on the quality of the instruction.

Course Objectives and Expectations

<table>
<thead>
<tr>
<th>Students will be able to…</th>
<th>Evidence of Student Learning:</th>
</tr>
</thead>
</table>
| utilize science or mathematics content knowledge to plan and teach three upper elementary grade lessons. | • content accuracy throughout each lesson plan  
• observations by the mentor teacher and the master teacher |
| implement exemplary sources of inquiry-based science and mathematics lessons. | • participation in model lesson demonstrations presented in class  
• clear alignment between NGSSS, lesson design, and implementation in the classroom |
| align performance objectives and assessments of those objectives with lesson. | • strong correlation between performance objectives, corresponding assessments and actual teaching of the lesson plan |
| complete and teach three inquiry-based lessons using the 5 E model. | • delivery of three inquiry-based lessons  
• written feedback by the mentor teacher for three inquiry-based lessons  
• written feedback by a master teacher for at least one inquiry-based lesson |
| use probing questions to elicit feedback to determine students’ acquisition of knowledge. | • participation in class discussions on questioning strategies  
• extensive examples of possible questions and expected responses listed in lesson plans  
• written feedback for every lesson from the mentor teacher |
| discuss strategies for achieving instructional equity. | • participation in class discussions |
| demonstrate proficiency in the use of technology for productivity purposes. | • electronic communication with instructor postings to Angel Courses Online  
• use technology in a lesson, when appropriate  
• use of PowerPoint and Microsoft Word |
| implement safe classroom practices. | • safety issues addressed in each lesson plan  
• observations by the mentor teacher and master teacher |
| assess commitment to pursue teaching as a career. | • participation in a class discussion on intentions to pursue teaching as a career |

Expectations

1. **Attendance**: 12% of your grade is based on active participation at all class sessions. The semester will begin with every student being assigned 12 points for attendance. **Three points will be deducted for each unexcused absence.**
In order for an absence to be considered “excused” you must have a note from a doctor’s office or have prior approval for absence from the instructors. **One point will be deducted for each class tardy. Credit for attendance is awarded for arriving on time and staying until class is over.**

When absent it is your responsibility to:
- Contact your teaching partner if necessary.
- Review Courses Online site for handouts and assignments.

Note: You will be working in groups to prepare and teach lessons. Missing class means you will miss the opportunity to work with your partner. Your students deserve your best effort.

2. **Technology Proficiency:** Teaching today requires computer literacy, so we will require you to demonstrate some basic productivity skills in this course. As you progress through the FIT 4U Teach program you will acquire more advanced skills and learn more about how to integrate technology into instruction.

3. **Late Assignments:** If an assignment is turned in late, a point will be deducted for each day late.

4. **Reflections:** Post a reflection concerning each classroom visit on Online course web site, **according to due dates specified on the calendar, after each lesson you teach or observe.**

5. **Lesson Plans:** Each student will team-teach three lessons in the elementary classroom. Each team is responsible for submitting required portions for each of the three lesson plans. The lesson plan format will be discussed thoroughly in class. Due dates are listed on the course calendar.

6. **Technology-Based Assignments:** Each student will complete two technology-based assignments. These technology-based assignments will be discussed thoroughly in class. Due dates are listed on the semester overview and the calendar.

7. **Scholastic Dishonesty:** Students who violate university rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the university. Since such dishonesty harms the individual, all students, and the integrity of the university, policies on scholastic dishonesty will be strictly enforced.

8. Thank you in advance for turning off or silencing cell phones and other devices **BEFORE** class begins. Texting during class is not appropriate and will result in deduction of participation points.
Field Experience

1. You and a teaching partner will teach three hands-on science/mathematics lessons in a local elementary school. The lessons are based on nationally acclaimed modules from Full Option Science Systems (FOSS), Activities Integrating Math and Science (AIMS), or other instructor-approved sources and are aligned with Florida’s Next Generation Sunshine State Mathematics and Science Standards and the Brevard County pacing guide for that course. You and your partner will complete portions of each of these lessons.

2. Written lesson plans will be posted to Courses Online on assigned due dates. You will also e-mail a final version of each lesson plan to the graduate assistant and your Mentor Teacher two days before the scheduled teaching day. The FIT-4U-Teach instructor must give final approval for each lesson no less than one day before you teach it. Otherwise, the lesson must be rescheduled for a later date and points will be deducted (see grading policy).

3. You will observe your mentor teacher’s class twice during the semester. With your mentor teacher’s approval, you are welcome to observe additional times.

4. For security reasons, all schools require that you sign in at the front office of the school each day that you visit and bring identification (student ID).

5. Your mentor teacher will give you written feedback at the end of each lesson taught. Your mentor teacher will also write a final evaluation of your progress that will be mailed to your instructors.

6. If you need to re-schedule a lesson, you must email or call your FIT-4U-Teach instructors, graduate assistant, and Mentor Teacher as soon as possible.

7. Post a reflection discussing each classroom visit on Courses Online, according to due dates specified on the calendar, after each lesson you teach or observe.

8. If an emergency arises and you have to miss your scheduled teaching day, notify your partner, your mentor teacher and your FIT-4U-Teach instructors as soon as you know. Your partner should teach the lesson alone if necessary. Do not miss your teaching assignment due to a transportation problem.

9. Dress appropriately and professionally when going to the schools. When you teach you are expected to wear an appropriate top. Dress pants or khakis are appropriate, NO JEANS or flip flops.

10. Report immediately to the instructor and/or appropriate team members any problems you have, including the need for additional supplies.

Assignments/Point Values

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
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1. Active **participation** at all class sessions is required and will greatly enhance your ability to be successful (-3 pts for each absence, -1 pt. for each tardy, other deductions at instructors’ discretion).  
   12

2. Complete **Technology Proficiency** Assignment –  
   8

3. Final written **5-E Lesson Plans** for three lessons – posted on Angel Courses Online and emailed to your mentor teacher. (drafts are due one week earlier)  
   - Lesson Plan 1 -Due  
   - Lesson Plan 2 -Due  
   - Lesson Plan 3 -Due  
   6  
   9  
   9

4. Complete **Practice Teaching session** for each lesson. Each team must **schedule** and complete a practice session with their professor, teaching assistant, or peer mentors prior to their teaching date. Lesson may not be taught until this is completed (5 points/lesson).  
   15

5. Completion of all **field experiences** as evidenced by posting of the reflection on Angel Courses Online of **Lesson Reflections** after your observation visit and after each lesson you teach. Refer to due dates specified on the calendar. (5 points/reflection)  
   25

6. Complete **Web-based Instructional Resources** assignment – Posted on Angel Courses Online by March 18, 2012.  
   10

7. **Clean-up** and return of all materials to supply closet **immediately** after each lesson.  
   6

**TOTAL** 100

**Grading Scale**

- A = 90 and above
- B = 80-89
- C = 70-79
- D = 60-69
- F = 59 or below

**Note:** *If an assignment is turned in late, points will be reduced by 1 point for each day late up to a reduction of 5 points. After 5 days, work turned in can only receive a maximum of half credit.*

**Accommodating Florida Teach students with Disabilities:** Please contact the Academic Support Center for accommodations
**STEP 2 Course Description**

Class meets once a week on campus for 1 hour. During this time students learn about the middle school environment, and work on inquiry-based lesson analysis, design, and assessment. Aspiring mathematics and science teachers meet in separate sections; computer science majors, who generally seek computer science-mathematics certification, usually join the mathematics group. FIT4U Teach students are assigned to either a mathematics or a science Mentor Teacher in a local middle school to observe once and then teach three *quest* inquiry-based lessons. They generally teach in a team with a partner, and field assignments are based on the schedules and transportation needs of the students.

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