JacksTeach Step 2
BIOL 2191.003
Fall 2020

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Office: Bush Mathematical Sciences Bldg. 103
Office Hours: Anytime I’m in my office, by appointment, or 3:00 – 4:30 MW, 10:30 – 11:30 TR

Class meeting time and place: M or W or F at 10:00 am, Bush Mathematical Sciences Bldg. 103

Prerequisite: JTCH 1101 or permission of JacksTeach co-director

Course Description

In Step 2, 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 lessons to middle school students. Step 2 students, generally team-teaching with a partner, are assigned to either a mathematics or science Mentor Teacher in a local middle school to observe once and then teach three inquiry-based lessons.

Step 2 students build upon and practice inquiry-based lesson design and questioning skills that were developed in Step 1, but shifts the focus to middle school (rather than elementary school) curricula. Step 2 students will experience teaching with technology through a number of demo lessons, and it is a requirement that at least one lesson they teach incorporate technology in a way that allows the students to collect and/or analyze data or explore content.

For their final project, Step 2 students analyze and modify one of the lessons they taught, taking into account the results of the assessments, their reflection on how successful the lesson was, and feedback from observers (Mentor Teacher, Instructor, and/or TA).

Program Learning Outcomes

The successful JacksTeach candidate will:

1. Demonstrate a deep understanding of and ability to apply STEM content and foundational pedagogical content knowledge through effective teaching in K-12 classrooms;
   (Texas Teacher Standards 1, 2, 3, 4; Texas PPR Standards I, IV; Texas Science Standards I-IV, VI, XI)

2. Develop an effective classroom management plan that creates a STEM classroom environment conducive to active learning and inquiry techniques, and supportive of individual and collaborative learning;
   (Texas Teacher Standards 1, 2, 4; Texas PPR Standards II, III; Texas Science Standards I-V, VII)

3. Use a variety of instructional strategies to meet the needs of all students and inspire STEM learners to develop curiosity about local and global issues and the connections to STEM, through the application of critical thinking, creativity, problem solving, and technology;
   (Texas Teacher Standards 1,2, 4; Texas PPR Standards II, III; Texas Science Standards I-IV, VI-VII, XI)

4. Implement a variety of assessment techniques to monitor learner progress and guide adaptation of instructional plans; and
   (Texas Teacher Standards 3, 5; Texas PPR Standards I, III, IV; Texas Science Standards IV-V)
5. Exhibit a disposition toward continued learning and professional growth through the utilization of self-evaluation and research-based practices.
   (Texas Teacher Standards 5, 6; Texas PPR Standards I, IV; Texas Science Standards I-IV)

**Student Learning Outcomes**

After completing the required readings and participating in class activities, the prospective mathematics or science educator will be able to do the following:

1. Demonstrate science or mathematics content knowledge in the design and teaching of middle school lessons aligned with district curriculum. (PLO 1).
2. Utilize exemplary sources of inquiry-based science and mathematics lessons (PLO 1, 2, 3).
3. Identify the unique attributes of adolescent students and implement teaching strategies that are effective in the middle school environment (PLO 1, 2, 3).
4. Design and implement inquiry-based lessons using the 5E Instructional Model (PLO 1, 2, 3, 4).
5. Plan for and implement safe instructional practices (PLO 1, 2, 3).
6. Demonstrate awareness of diversity within classrooms, discuss the implications for teaching and learning, and explore strategies for achieving instructional equity (PLO 5).
7. Design and teach lessons that incorporate the use of technology (PLO 1, 2, 3).
8. Use probing questions to elicit feedback on students’ acquisition of knowledge (PLO 1, 2, 3, 4).
9. Use pre- and post-assessments aligned to performance objectives to evaluate student learning, to provide instructive feedback to middle school students, and as a basis for revising lesson plans. (PLO 1, 2, 3, 4)
10. Provide instructive feedback to peers. (PLO 1, 2, 3, 4, 5)
11. Reflect on teaching experiences to revise lesson plans. (PLO 1, 2, 3, 4, 5)
12. Assess commitment to pursue teaching as a career path. (PLO 5).

**Text and Materials**

There is no text assigned for this course. Consequently, readings will be posted electronically, with instructions on access explained in class.

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities in Class</th>
<th>Field Experiences and Assignments</th>
</tr>
</thead>
</table>
| 1    | Instructor and student introductions  
Demonstration Lesson: Mystery Box  
Review course syllabus  
Discuss appropriate state and national standards for inquiry in mathematics and science |                                |
| 2    | Class activity: Write It, Do It  
Read expectations for writing and uploading reflection assignments after field experiences  
Discuss strategies for providing clear directions  
Review philosophy and structure of 5E lesson plans |                                |
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| 3    | Demonstration lesson: Walking with Technology  
Discuss teaching with technology  
PhET Interactive Simulations | Classroom Observation  
Reflection due. |
| 4    | Preview Mentor Teacher feedback forms  
Review writing lesson objectives and linking them to probing questions  
Write Lesson Plan 1 rough draft | |
| 5    | Listen to *This American Life*: “Middle School”  
Discuss approaches to teaching adolescents  
Revise Lesson Plan 1 and complete Lesson Plan 1 final draft | |
| 6    | Demonstration lesson: World’s Strongest Snail  
Discuss teaching with technology  
Highlight pre- and post-assessments | Teach Lesson 1  
Reflection due. |
| 7    | Reflect on Lesson 1 teaching experiences  
Reiterate the need for pre- and post-assessments for Lessons 2 and 3  
Plan Lesson 2 | |
| 8 3/17 | Socratic questioning strategies  
Practice Lesson 2 and provide feedback to peers  
Revise Lesson 2 | |
| 9    | Demonstration Lesson: Who Is the Best Age Guesser?  
Discuss strategies for facilitating an effective Explanation portion of the 5E lesson | Teach Lesson 2  
Reflection due. |
| 10   | Lesson 3 planning and preparation | |
| 11   | Practice teach Lesson 3  
Revise Lesson 3 | |
<p>| 12   | Demonstration lesson: BristleBots | Teach Lesson 3 |</p>
<table>
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<th>Field Experiences and Assignments</th>
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</table>
| 13   | Discuss the Final Project  
Critique a 5E lesson plan using the final project lesson plan rubric | Reflection due. |
| 14   | Evaluate three lessons along a continuum of inquiry teaching practices  
Discuss challenges of teaching inquiry-based lessons  
Discuss process for analyzing pre- and post-assessment data | |
| 15   | Introduction to the UTeach Portfolio  
Create classroom management solutions  
Q&A about UTeach and teaching in general | Final project due. |

**Expectations**

Twenty-five percent of your grade is based on attendance, active participation, and professionalism in all class sessions and field experiences. Students will begin the semester with 25 points.

**Attendance**

Students may lose up to 5 points for every unexcused absence. Kindly contact the instructor before the class you miss. Repeated absences will result in deductions from your grade and may result in you not receiving credit for the course. Credit for attendance requires arriving to each class session on time, participating in all class activities, and staying until the session ends. If you arrive late or leave early, you will lose 3 points of your attendance grade. Remember, your teaching partner is depending on you to be there! Late arrival or early departure of 30 minutes or more constitutes an absence rather than a tardy. Field activities are considered class activities.

**Participation**

This includes participation during class activities, on discussion boards, and full, active, participation during all field experiences.

In class you will: 1) plan and practice your lessons with your team, 2) receive feedback from the instructors and other members of the class regarding your lessons, and 3) observe and learn from demonstration lessons.

**Professionalism**

Professionalism includes being on time, appropriately dressed, and well prepared for all field experiences.

As representatives of JacksTeach you are expected to be professional when participating in your field experiences for this class.

- You are expected to observe all school district rules, policies, and procedures.
- Sign in at the front office of the school each day that you visit. All schools will provide you with a sticker or badge that identifies you as a visitor. Wear it.
• Dress professionally. The school district has a dress code for teachers, student teachers, and others in field placements. As guest teachers, you are expected to follow all parts of the school district dress code. Of particular note is the restriction against wearing jeans, flip flops, jewelry in visible pierced areas other than the ear, t-shirts, shorts, warm-ups, or exercise clothing.

• Practice every aspect of your lesson before you teach it.

• Decide exactly how you and your partner will share the teaching responsibilities.

• Make a plan for how you will transition from each part of the lesson to the next.

• Arrive to your classroom, not the school, at least 15 minutes before your scheduled teaching time. Set-up time is a function of the lesson. You are responsible for starting on time. Signing in at the front office requires additional time.

• Be prepared for the lesson and bring all required materials. Use nametags or name tents so you can call students by their names throughout your lesson. This is an easy and effective classroom management technique!

Assignments

Field Experiences

In Step 2, pairs of students will be assigned to a 6th-, 7th-, or 8th-grade science or mathematics class at a middle school in a local school district. Over the course of the semester, pairs will visit this classroom to conduct one observation and to teach three inquiry-based lessons.

The writing and teaching of three lessons is a requirement of Step 2. Regardless of your final average, failure to write and teach all three required lessons will result in a failing grade for the course.

Early in the semester, pairs will meet their Mentor Teacher. Throughout the semester, you will be responsible for communicating with your Mentor Teacher.

If you have a serious emergency and you must miss your scheduled teaching day, notify your partner, Mentor Teacher, and instructor as soon as possible. Your partner will teach the lesson alone. You will be responsible for completing the missed lesson.

See the course calendar for semester observation and teaching dates.

Lesson Plans and Reflections

You will write reflections on both class observations.

You and your partner will be responsible for writing and revising a lesson plan for each lesson you teach.

Both students will turn in reflections on the experience.

For your final project, you will revise one of your lesson plans and present your revision to the class.

Mentor Teacher Feedback

Your Mentor Teacher will complete a feedback form on every lesson. Mentor Teachers may choose to give you a hard copy of the feedback form or email an electronic copy at the end of each lesson your team teaches. You are responsible for getting that feedback form from your Mentor Teacher before you leave and submitting it (it is part of your grade). There is a scanner available in the student workroom.

Your Mentor Teacher will also write a final evaluation of your field experience, which will be emailed to and filed in the JacksTeach office. You may request a copy of the final evaluation from the JacksTeach office upon completion of the semester.
Electronic Submissions

It is important that you adhere to the following guidelines for the electronic submission of assignments:

All ASSIGNMENTS must be submitted via the course website.

Please use the following file naming conventions for all attached files:

Last name(s) + Assignment Abbreviation (found in the Grading table below)
Example: Einstein_Curie_LP1.doc
(Einstein and Curie are submitting their Lesson Plan for Teach 1)

You will receive written feedback from your Mentor Teacher after each lesson you teach. You may also receive feedback from your instructor or other observer. Scan all observation feedback and submit it through the course website. When submitting feedback forms, please follow these file naming conventions:

Your last name(s) + "_FB_" + Lesson number. Einstein_Curie_FB_T2.jpg
Add a descriptor if you have more than one image to upload.
Einstein_Curie_FB_T2_Page1.jpg

Technological Proficiency

Step 2 students must be able to:

• Use the course website to download documents and upload assignments.
• Create Google Documents.
• Check email daily. (Note: If you choose not to use an official university sanctioned email account, broadcast emails sent through the course website may be blocked by your email program’s junk email filter. You are responsible for adjusting the settings to ensure that you receive emails from your instructor and Mentor Teacher.)

If you need assistance to meet these requirements, please see an Instructor. Help is available.

Grading

** Points will be deducted for late and/or incomplete work. **

10% minimum deduction; up to half off for lesson plans submitted late/incomplete). Late/incomplete lesson plans may result in delayed/canceled field experiences that may affect your grade negatively.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance, Participation, and Professionalism</td>
<td>25</td>
</tr>
<tr>
<td>(∆5 per absence; ∆3 per tardy)</td>
<td></td>
</tr>
<tr>
<td>Lesson Plans</td>
<td>24</td>
</tr>
<tr>
<td>Three complete Lesson Plans (8 points each). Up to four points will be awarded for the rough draft, up to 4 points will be awarded for the revised draft.</td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>9</td>
</tr>
</tbody>
</table>
Academic Integrity – Student Academic Dishonesty Policy (4.1) Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. Definition of Academic Dishonesty Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at http://www.sfasu.edu/policies/4.1-student-academic-dishonesty.pdf.

Withheld Grades - Course Grades Policy (5.5) Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work 08/21/2020 5 because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. For additional information, go to http://www.sfasu.edu/policies/course-grades-5.5.pdf

<table>
<thead>
<tr>
<th>Teaching the lessons, as evidenced by the Mentor Teach Feedback Form (3 points each).</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflections</td>
<td>16</td>
</tr>
<tr>
<td>Four Reflections (4 points each). These include the Observation Reflection, Lesson 1 Reflection, Lesson 2 Reflection, and Lesson 3 Reflection. Reflection prompts will be posted on the course website.</td>
<td></td>
</tr>
<tr>
<td>Analysis of Student Work</td>
<td>3</td>
</tr>
<tr>
<td>After teaching your second or third lesson, you will analyze student work that you collect. Requirements will be outlined in class.</td>
<td></td>
</tr>
<tr>
<td>Final Project</td>
<td>18</td>
</tr>
<tr>
<td>The final project will include a revised version of one lesson plan taught this semester and an essay analyzing your rationale for revising the lesson as you did. Requirements will be outlined in class.</td>
<td></td>
</tr>
<tr>
<td>Return of all inventory materials</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>
Students with Disabilities To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.