JacksTeach PBI
JTCH 4301 Section 001 (MW)

Fall 2021

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Office Hours: Anytime my door is open, by appointment or
Monday: 9:00am-10:00am
Tuesday: 10:00am-11:00am
Wednesday: 2:30pm-3:30pm
Thursday: 12:30pm-1:30pm
Friday: 12:00pm-1:00pm

Name: Mindy Wurtz, MS Natural Science, Secondary Certifications in Chemistry, Physics, and Life Sciences
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Phone: 936-468-1328
Office: Bush Mathematics Bldg. 103J
Office Hours: Anytime my door is open, by appointment or
Tuesday: 3:00pm-4:00pm
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Thursday: 10:00am – 12:00pm (noon)

Credit Hours: 3

Class meeting time and place:
Monday, Wednesday, 1:00pm -2:15pm, Bush Math Bldg. Room 123

Prerequisites: JTCH 3311 and EPP enrollment; or permission of JacksTeach co-director

Course Description

The Project-Based Instruction (PBI) course is based on the premise that project-based instruction engages learners in exploring authentic, important, and meaningful questions of real concern to secondary students. Project-based instruction promotes equitable and diverse participation and engages high school students in learning. They learn fundamental science and mathematical concepts and principles that they can apply to their daily lives.

Whereas in Classroom Interactions, students gain experience designing a sequence of several lessons that they teach to a high school class, in PBI, students design full units of connected lessons—a skill that is required in Apprentice Teaching. Students synthesize a number of the major principles and themes of the JacksTeach program as they develop an intellectually challenging project-based instructional unit. PBI also provides JacksTeach students with the experience of managing lessons and high school students outside a classroom in a field setting.

Despite its name, PBI incorporates a variety of instructional approaches, focusing on differentiating between project-based instruction and other inquiry-based methods.

SFASU Policy 5.4: The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:
1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students who wish to be successful should plan to spend at least two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes.
from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

**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. Discuss and critique the merits of project-based instruction in terms of students’ cognitive development, content-specific participatory practices, equity, and motivation. (PLO 1, 2, 3, 4, 5)

2. Reflect on applications of educational theory as it relates to classroom practice in the area of project-based instruction. (PLO 1, 2, 3, 4, 5)

3. Compare, contrast, and evaluate project-based and other instructional approaches, both in general and for particular instructional goals. (PLO 1, 2, 3, 4, 5)

4. Evaluate the usefulness of technology in achieving learning objectives and select appropriate resources for student use based on the relationship of salient features of the technology to learning objectives. (PLO 1, 2, 3, 4, 5)

5. Use inquiry methods with high school STEM students in a problem-based setting. (PLO 1, 2, 3, 4)

6. Be familiar with the history of project-based instruction, as well as with commonly perceived strength and critiques; describe examples of project-based instruction in math or science and analyze those examples in terms of several well-studied, field-tested models for PBI. (PLO 1, 2, 3, 4, 5)

7. Demonstrate skill in setting up and managing wet lab and field project-based environments. (PLO 1, 2, 3, 4, 5)

8. Use PBL (Project Based Learning) design principles to develop an interdisciplinary, two- to four-week project-based unit for secondary STEM courses that explicitly links to district, state, and/or national content and inquiry standards. (PLO 1, 2, 3, 4, 5)

9. Create and evaluate alternative assessments appropriate for project-based instruction. (PLO 1, 2, 3, 4)

10. Discuss lab safety and liability issues related to project-based instruction and wet-lab or field environments (Occupational Safety and Health Administration (OSHA) regulations, how to read materials safety data sheets, safe disposal of chemicals, etc.). (PLO 1, 2, 3, 4, 5)

11. Use relevant technology to develop projects, and integrate technology into curricular units. (PLO 1, 2, 3, 4, 5)
12. Become sensitive to and learn to proactively handle equity and diversity issues in classroom teaching, ensuring that all students have an opportunity to learn through instruction that promotes equitable and diverse participation, and become aware of students’ funds of knowledge as a resource. (PLO 1, 2, 3, 4, 5)

*A complete listing of all the educator preparation standards this course meets and a list of the key assessments used for program accreditation purposes can be found at: https://sfasu.edu/docs/jacksteach/jacksteach-standards-alignment-chart.xlsx

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

Course Requirements
Twenty-five percent of your grade is based on attendance, active participation, and professionalism in all class sessions and field experiences.

Attendance
Students may lose up to 5 points for every unexcused absence. You have been provided the email and phone numbers for both the instructors and can contact either before the class you miss.

Class Attendance
Because the course meets only twice per week and there are no texts, most topics and activities are covered in only one class session. Missing class means you will miss essential information and experiences.

Most students will be working with a partner or team on everything we do. The workload for each activity or lesson should be shared equally. If you are not in class, you inconvenience others by forcing them to work with you outside of class. If you miss a class, it is your responsibility to communicate with your group or partner about how to coordinate the next lesson. Don’t leave your team guessing about why you are not in class, or how and when you will get together!

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.

For grading purposes, non-participation may also account as an absence.

Field Attendance
A missed teach/observation in the high school is taken very seriously. The teachers you work with have generously donated their classrooms for your learning. As such, missed appointments will not be treated lightly. At the minimum, the teach/observation must be rescheduled. However, there may be more serious ramifications, and these will be dealt with on a case-by-case basis.

Both partners must be at every teach when delivering instruction on your final project.

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. Failure to complete all field requirements will result in failure of the course regardless of accumulated points.

Do not miss your teaching assignment due to a transportation problem. Call your instructor or the JacksTeach Center (468-3960).
**Participation**

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

In class you will: 1) lead and/or participate in whole-class and small-group discussions and activities, 2) collaborate with your team on major assignments, 3) plan, collaborate, and work on your final project with your partner 4) receive feedback from the instructors and other members of the class, and 5) observe and learn from demonstration lessons.

**Technology**

You must be able to use technology for timely and appropriate communication with your instructors, mentor teacher, partner, and classmates:

- Check email daily.
- Access the course website to post assignments and discussion board topics.
- Use online collaborative tools and/or use technology in educational settings.

If you need assistance to meet these requirements, please see the instructor. Help is available!

**Safety Training**

All students planning to teach in science classrooms (or math classrooms where chemicals might be used) must complete the posted safety training before teaching a lesson plan involving chemicals of any kind. Failure to complete required safety training will have serious ramifications on your grade in this class as it will prevent you from completing your field requirements.

**Professionalism**

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

As representatives of JacksTeach and visiting teachers in local Independent School Districts, 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. For a complete description of this policy, please see your school district’s online policy regarding dress code.
- Practice every aspect of your lesson before you teach it.
- Decide exactly how you and your partner will share the teaching responsibilities.
- 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

Daily Assignments include:

- Attendance/Participation
- Discussion Boards
- Discussion Leader
- Class Activities

You will access most course readings through the university library website (this process will be demonstrated in class); other readings will be posted on the course website. You should be prepared to discuss these readings in class. This means you should have access to both the reading and your notes on the reading while in class. In most instances, you will be asked to reply to focus questions posted on the course website, and occasionally to respond to other students’ postings. Responses to the focus questions are due by 7 p.m. the evening before class.

Several major assignments are done in groups. Collaborate with your team by participating thoughtfully and respectfully, by being willing to learn from your peers and help them learn, and by responsibly meeting your commitments to your group.

Field Experiences include:

- Observations/Analysis
- Lesson Development and Implantation
- Analysis of Field Experience

In addition to the smaller in-class and online assignments, a major portion of this course is the field experience. You will be assigned in pairs to a high school classroom based on your choices and Mentor Teacher availability. Over the course of the semester, your team will visit this classroom to conduct three interview/observations and deliver a series of five connected project-based lessons that form a small PBI unit. Before you launch your project-based unit, your team will design and develop an anchor activity, all rubrics, instructional materials, and pre- and post-assessments for each lesson. Your team will evaluate student work throughout the implementation of this field experience. There will be class readings or other materials, as well as discussions, to support each of these components.

Dates and topics for your field experience will be shared with you early in the semester. Please put these dates in your calendar. Dates for field events may be changed ONLY by the instructor or Mentor Teacher.

We will make every effort to schedule you to teach at times that do not conflict with your other courses or obligations, but it may not be possible to do this in rare cases. Since this is official university business, it will count as an excused absence, but you will be required to make up any work that you miss. We will supply your instructors or supervisors with a letter explaining the excused absence. Please notify the course staff of any conflicts as soon as possible so that we can try to work out an arrangement.

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. For ten bonus points in the attendance/participation category, please email a picture of the Tridge to Dr. Church by Friday, August 27 at 8am.

Your Mentor Teacher will also write a final evaluation of your field experience, which will be emailed to and filed in the JacksTeach office. Discussing the Tridge in class the first week will result in a loss of your advantage. You may request a copy of the final evaluation from the JacksTeach office upon completion of the semester.

Final Project

For the final project, you will develop a 2- to 4-week PBL unit for a secondary science or mathematics class. This project will consist of a new unit that you could implement (in part or whole) during Apprentice Teaching. Parameters and requirements for this project will be described in a separate handout.
Electronic Submissions

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

Please sign all emails with your first and last name along with course unique number. Emails without this information will be returned.

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 we will develop on D2L)
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 instructors, 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

Grading Policy

** Late work will not be accepted unless you have contacted one of the instructors and negotiated a change in the due date. Points will be deducted for accepted 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>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance and Participation in both in-class and online activities</td>
<td>25%</td>
</tr>
<tr>
<td>Field Experience lesson development and implementation</td>
<td>25%</td>
</tr>
<tr>
<td>Analysis of field experience</td>
<td>10%</td>
</tr>
<tr>
<td>Observation and analysis of PBI in schools</td>
<td>10%</td>
</tr>
<tr>
<td>Final Project development</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project presentation</td>
<td>10%</td>
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<tr>
<td></td>
<td>100.00%</td>
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</tbody>
</table>
## Tentative Course Calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 23-Aug</td>
<td>Course Introduction</td>
<td>Science students: Complete the online safety training class. Schedule forms (done in class)</td>
</tr>
<tr>
<td></td>
<td>Discussion and Discourse</td>
<td>Post responses to the Forum 1 discussion. Find a partner and sign up to be a Discussion Leader.</td>
</tr>
<tr>
<td>2 30-Aug</td>
<td>Project-Based Learning</td>
<td>Post responses to the Forum 2 discussion.</td>
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<tr>
<td></td>
<td>Learning-Goals-Driven Design / Unpacking</td>
<td>Post responses to the Forum 3 discussion.</td>
</tr>
<tr>
<td>3 6-Sep</td>
<td>Unpacking</td>
<td>Post responses to the Forum 4 discussion.</td>
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<tr>
<td></td>
<td>Unpacking Standards and Student Ideas</td>
<td>Unpack standards for teach topics (draft) (group submission) Post responses to the Forum 5 discussion.</td>
</tr>
<tr>
<td>4 13-Sep</td>
<td>Learning Performances</td>
<td>Find an article about misconceptions on standards to add to Unpacking assignment. Final due today. Start building a concept map of the standards</td>
</tr>
<tr>
<td></td>
<td>Driving Questions</td>
<td>Complete and sign Group Contracts. Draft concept map (1 per group). Develop 2–3 possible driving questions for your project and bring to next class session. Submit observation analysis/report. Submit final unpacking standards documentation. Optional: Portfolio 2a and 2c write-up.</td>
</tr>
<tr>
<td>5 20-Sep</td>
<td>Anchored Instruction</td>
<td>Post responses to the Forum 6 discussion. Final driving question and concept maps due. Draft learning performances due before class. Work on observation analysis report.</td>
</tr>
<tr>
<td></td>
<td>Assessment Strategies</td>
<td>Read assigned section of Angelo &amp; Cross. No discussion board; bring NOTES (graded). Observation analysis report due.</td>
</tr>
<tr>
<td>6 27-Sep</td>
<td>Assessment, Anchor, and Lesson Planning</td>
<td>Learning performances due Draft assessment plan due Draft anchor due Draft calendar of activities due</td>
</tr>
<tr>
<td></td>
<td>Draft Anchor and Peer Feedback</td>
<td>Draft lesson plans due Second observation completed (optional) Materials list draft due at end of class</td>
</tr>
<tr>
<td>7 4-Oct</td>
<td>Peer Critique and Feedback on Lesson Plans Field Experience</td>
<td>Final components for field experience due: direct questions, unpacking, concept map, learning performances, assessment plan, lesson plans, anchor, calendar</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Assignments</td>
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<tr>
<td>8</td>
<td>Criteria for Effective Curriculum Materials</td>
<td>Read your assigned criterion from Project 2061.</td>
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<tr>
<td>8</td>
<td>Work on Portfolio.</td>
<td>Work on your reflective analysis.</td>
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<tr>
<td>11-Oct</td>
<td>Critiques of PBL</td>
<td>Post responses to the Forum 7 discussion.</td>
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<tr>
<td>11-Oct</td>
<td>PBL and High Stakes Accountability</td>
<td>Reflective analysis due.</td>
</tr>
<tr>
<td>9</td>
<td>Legacy cycles</td>
<td>Post responses to the Forum 9 discussion.</td>
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<tr>
<td>18-Oct</td>
<td>Inductive Teaching and Learning; Website Construction</td>
<td>Post responses to the Forum 10 discussion.</td>
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<tr>
<td>10&amp;11</td>
<td>Field Experiences</td>
<td>Forms due.</td>
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<tr>
<td>25-Oct</td>
<td>Reflection on Field Experience</td>
<td>Forms due.</td>
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<tr>
<td>11-Nov</td>
<td>PBL—Lessons Learned</td>
<td>Post responses to the Forum 11 discussion.</td>
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<tr>
<td>11-Nov</td>
<td>Work on Portfolio.</td>
<td>Work on your reflective analysis.</td>
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<tr>
<td>12</td>
<td>Final project workdays</td>
<td>Work on final project.</td>
</tr>
<tr>
<td>8-Nov</td>
<td>Reflection on Field Experience</td>
<td>Work on the Portfolio</td>
</tr>
<tr>
<td>13</td>
<td>Final Project presentations</td>
<td>Work on final project.</td>
</tr>
<tr>
<td>15</td>
<td>None</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>14</td>
<td>Student work days</td>
<td>Complete final project-based units.</td>
</tr>
<tr>
<td>22-Nov</td>
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<td>Upload to your website.</td>
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<tr>
<td>15</td>
<td></td>
<td>Prepare for presentation during the final exam period scheduled for your class.</td>
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<tr>
<td>29-Nov</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Final Project presentations</td>
<td></td>
</tr>
</tbody>
</table>

Class Syllabus / Policy
Academic Integrity (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/student-academic-dishonesty-4.1.pdf

Withheld Grades Semester 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 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.

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, and 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/.

Mental Health and Wellness
SFA values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support students' mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
SFA Counseling Services
www.sfasu.edu/counselingservices
Rusk Building, 3rd Floor
936.468.2401

SFA Human Services Counseling Clinic
www.sfasu.edu/humanservices/139.asp
Human Services, Room 202
936.468.1041

Crisis Resources:
Burke 24-hour crisis line: 1.800.392.8343
Suicide Prevention Lifeline: 1.800.273.TALK (8255)
Crisis Text Line: Text HELLO to 741-741

Class Syllabus / Policy 9