JTCH 3311
Classroom Interactions
Course Syllabus
Spring 2024

Course Time & Location: 1:00 PM - 3:30 PM, F, Bush Math Building 123

Instructors:

Dr. Brian Church
PhD Mathematics Education
Office: Bush Mathematics 322
Office Hours: Mon. & Wed. 9:00-11:00
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Or by appt.
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Email: Brian.Church@sfasu.edu

Mrs. Mindy Wurtz
MSNS, Secondary Certifications in Chemistry, Physics, and Life Sciences. she/her/hers
Office: Bush Mathematics 103J
Office Hours: Tues. 2:00-3:30
Wed. 9:00-11:30
Thurs. 3:00-4:00
Office Phone: 936-468-1328
Email: Melinda.Wurtz@sfasu.edu

Prerequisites: JTCH 3301 and admission to the EPP; or permission of JacksTeach co-director

Course Description:

Classroom Interactions continues the process of preparing you to teach mathematics, science, and engineering by providing opportunities to apply theories of learning developed in Knowing and Learning in instructional settings. You will design and implement instructional activities informed by your own understanding of what it means to know and learn mathematics and science, and then evaluate the outcomes of those activities based on student artifacts (i.e., what students say, do, or create).

An important focus of the course is on building your awareness and understanding of equity issues and their effects on student learning. Providing accommodations to meet the needs of all students is the heart of good teaching.

Classroom Interactions is centered on a close examination of the interplay between teachers, students, content, and the world beyond schools, and how such interactions enable students to develop deep conceptual understanding. You will learn how content and pedagogy combine to make effective teaching.

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.

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**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)

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 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. Observe, analyze, and discuss how students’ knowledge and skills can be built using a variety of instructional strategies (including direct instruction, inquiry teaching, and use of small groups), focusing on what each model requires of teachers. (PLO 1, 2, 3, 4, 5)
2. Solve problems in science and mathematics and justify solutions, reflecting on their own learning and the learning of others, relating results to learning science, and demonstrating awareness of alternative conceptions and their possible origins. (PLO 1, 2, 3, 4, 5)
3. Participate in and analyze a design challenge, identifying characteristics of engineering design as contrasted with scientific inquiry and characterizing challenge-based lessons as contrasted with 5E-model inquiry lessons. (PLO 1, 2, 3, 4)
4. Create and evaluate tasks to build students’ content knowledge and assess students’ STEM content knowledge based on evidence, including video and written artifacts. (PLO 1, 2, 3, 4)
5. Plan and teach, with a small group of peers, multi-day high school mathematics or science lessons on an assigned topic. (PLO 1, 2, 3, 4)
6. Observe and analyze STEM classroom instruction and data on student participation and performance with regard to equitable and diverse instructional approaches that afford all students an opportunity to learn. (PLO 1, 2, 3, 4, 5)
7. Analyze how technology can affect STEM classroom interactions. (PLO 1, 2, 3, 4, 5)
8. Read and analyze research results and theoretical literature in science education and cite these results in analyses of their own teaching and reports to their peers. (PLO 1, 2, 3, 4, 5)
9. Create a significant portion of their preliminary teaching portfolios and demonstrate beginning competency as measured by applicable teacher certification standards. (PLO 1, 2, 3, 4, 5)

*A complete listing of all educator preparation standards this course meets and a list of the key assessments used for program accreditation purposes can be found at: [www.sfajacksteach.org](http://www.sfajacksteach.org)*

**Text and Materials:**

**Reading Materials**

You will read articles from various journals and chapters from various books during this course.
Expectations:

Attendance and participation

Because a majority of the learning in this course hinges on group work done during the class time, regular attendance, and active participation at all class sessions and in online assignments is required and will greatly enhance your ability to be successful.

Regular attendance is expected. You must provide, when possible, advance notice of absences as well as relevant documentation regarding absences to the instructor(s) as soon as possible following the illness or event that led to an absence. Regardless of whether an absence is excused or unexcused, you are responsible for making up all work that is missed.

Participation in class includes, but is not limited to, coming to class prepared with the required assignments completed and engaging in thoughtful and reflective class discussion and activities.

Work outside of class

You are expected to devote several hours per week outside of class to complete the following:

1. Reading and analyzing books and articles and preparing written analyses of your teaching and other issues.
2. Preparing to teach in local schools, including observing in the classrooms where you will teach.

Field experience

A major portion of this course is the field experience. You will interview and observe classroom teachers and teach twice in high school classrooms. During the course of the semester you will need to complete 20 fieldwork hours, which will include your observations, teaches, and videos.

Important:

- Failure to complete the field experience in a professional manner in accordance with the Code of Ethics and Standard Practices for Texas Educators will result in loss of credit for the model teaching component of the course, and a possible failing grade in the course overall.
- Your lesson plan must be approved before you can teach.
- If you do not arrive at the classroom at least 15 minutes before the start of your scheduled teaching time, you may not be permitted to teach.
- If you check out items from the JacksTeach inventory, you must return them in good condition and in a timely fashion. Failure to do so may result in financial bars.

Grading/Evaluation:

Course grades will be determined based on your performance in four categories. Late assignments may be accepted with a point reduction.

1. Preparation and implementation of model teaching
   (observations, lesson plans, implementation, reflection): 40%
2. Analyses, reflections, and discussions:
   (Annotated bibliography assignment, discussion board posts, in class assignments, etc.): 40%
3. Equity Poster Presentation: 20%
### *Tentative* Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Class Date</th>
<th>Topic</th>
<th>Fieldwork Info</th>
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<tbody>
<tr>
<td>1</td>
<td>1/19</td>
<td>Syllabus</td>
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<td>Learning Disabilities Investigation</td>
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<td>2</td>
<td>1/26</td>
<td>Engineering cycle vs scientific research design</td>
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<tr>
<td>3</td>
<td>2/2</td>
<td>Equity/Social Justice</td>
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<td>4</td>
<td>2/9</td>
<td>Lesson Planning Information</td>
<td>Formal Observation 1</td>
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<tr>
<td>5</td>
<td>2/16</td>
<td>Lesson Planning Information</td>
<td>Teach 1 Lesson Planning Day</td>
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<tr>
<td>6</td>
<td>2/23</td>
<td>Practice Teach 1</td>
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<td>7</td>
<td>3/1</td>
<td>Professional Ethics</td>
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<td>8</td>
<td>3/8</td>
<td>Teaching in field</td>
<td>Teach 1</td>
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<td>9</td>
<td>3/15</td>
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<td>10</td>
<td>3/22</td>
<td>Teach 1 Debrief</td>
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<td>3/29</td>
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<td>12</td>
<td>4/5</td>
<td>Teach 2 Lesson Planning Day</td>
<td>Formal Observation 3</td>
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<td>13</td>
<td>4/12</td>
<td>Practice Teach 2</td>
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<td>14</td>
<td>4/19</td>
<td>Teaching in Field</td>
<td>Teach 2</td>
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<tr>
<td>15</td>
<td>4/26</td>
<td>Teach 2 Debrief</td>
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<td>Final Project Workday</td>
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<td>16</td>
<td>5/3</td>
<td>Equity Poster Presentations</td>
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<tr>
<td>17</td>
<td>5/10</td>
<td>Exam Week</td>
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Academic Integrity (4.1)

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to:

(1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

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 coursework 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 to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.

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 promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Wellness and Well-Being

SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing any concerns, seeking help, 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:

The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents; 936.468.7249; dos@sfasu.edu

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

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.
To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services, Counseling Services, Student Outreach and Support,
- Food Pantry, Wellness Coaching, Alcohol and Other Drug Education

www.sfasu.edu/thewhub; 936.468.4008; thehub@sfasu.edu

Crisis Resources:

- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- Crisis Text Line: Text HELLO to 741-741