CIEE 4335 Science in the Elementary School

Spring 2017

CIEE 4335 is a required courses for the IDS Education Major and EC-6 Certification

College of Education, Department of Curriculum and Instruction

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Office **hours:**

Wednesday	8:00-12:00-may be at Huntsville Intermediate in Huntsville	By appointment

Note: *These times may vary due to scheduling of observations during Field Experience and supervising student teachers. It is best to make an appointment.*

Course Format:

Weekly meetings in this integrated curriculum course will consist of modeling the most effective and research-based practices in teaching mathematics, science, social studies and classroom management that foster and support candidates' active participation and reflections. Cooperative learning, group projects, use of literature/writing, integrated curriculum, and instructional technology will be emphasized. The candidate will participate in hands-on activities associated with planning, teaching, and assessing all content learning *for all learners* using the Texas state curriculum (TEKS). Teacher reflections will be required. The teacher candidate works collaboratively with practicing EC-6 teachers in field based settings.

Day and Time of Class Meets: Monday: 12:30-3:20 PM

Field Experience: Monday – Friday, April 3-28; 7:45 – 3:30

Location of Class: Huntsville Intermediate. SHSU Method's Classroom, room 304

Course Descriptions:

CIEE 4335: The Teacher Candidate will be immersed in the culture and context of the EC-6 classroom with the idea that both confidence and competence in science teaching is key. The role of the teacher candidate throughout this experience is that of a learner and a teacher. The teacher candidate works collaboratively with practicing EC-6 teachers in field based settings.

Textbooks: *No Text book required: A variety of materials and supplies will be required during the course of the semester.

Project Learning Tree (11th edition) America Forest Foundation. Available at a later date from PLT. $55.00

Course Objectives:

Course	CIEE 4335 Science
Course Objective of Content and Overview	The nature of science as a discipline and the scope and sequence of appropriate content for each grade level will be explored. Active involvement in class projects and assignments will enable teacher candidates to develop an understanding of curriculum, instructional methods and materials, and evaluation techniques for elementary science based upon educational research, contemporary practice, and state and national standards for science education. Teacher candidates will have opportunities to demonstrate your knowledge, attitudes, and skills both in class with your peers and with elementary students during your field placement. Personal reflection on class experiences and learning is an expected component of your participation in this course.

Course Matrix: The Matrix for each course will is included on the following pages:

IDEA Objectives: The instruction in this course will address the following major objectives (as assessed by the IDEA course evaluation system):

Essential: Learn to apply course material (to improve thinking, problem solving, and decisions.)

Developing specific skills, competencies, and point of view needed by professionals in the field most closely related to this course.

Important: Learning fundamental principles, generalizations or theories.

Acquiring skills in working with others as a member of a team.

Learning how to find and use resources for answering questions or solving problems.

Acquiring an interest in learning more by asking my own questions and seeking answer

Course/Instructor Requirements:

CIEE 4335-are teaching methodology courses designed to help teacher candidates gain competencies in planning, implementing, assessing, managing and modifying content instruction that meets the needs of diverse learners. Specific course info in the pages that follow.

Course Outline:

Course	CIEE 4335 Science
Course Content Overview	The nature of science as a discipline and the scope and sequence of appropriate content for each grade level will be explored. Active involvement in class projects and assignments will enable teacher candidates to develop an understanding of curriculum, instructional methods and materials, and evaluation techniques for elementary science based upon educational research, contemporary practice, and state and national standards for science education. Teacher candidates will have opportunities to demonstrate your knowledge, attitudes, and skills both in class with your peers and with elementary students during your field placement. Personal reflection on class experiences and learning is an expected component of your participation in this course.

Assignments:

CIEE 4335 Science in the Elementary Classroom

ACE-The teacher candidate works collaboratively with practicing EC-6 teachers in field based settings, and will reflect on those experiences.(ACE)

COURSE OBJECTIVES AND STANDARDS MATRIX for CIEE 4335 Science

Topics/Objectives	Activities /Assignments (field-based activity)	Measurement (including performance based)	Standards Alignment ✓ State Board for Educator Certification (SBEC)- *Pedagogy and Professional Responsibilities (PPR)* ✓ National Science Teachers Association Association for Childhood Education International (ACEI) - ✓ **SHSU Conceptual Framework** ✓ **National Council for Accreditation of Teacher Education** (NCATE)
The EC-6 science teacher explores the history and nature of science and identifies the role of science in contemporary classrooms.	Science Survey and Discussion Create History of Personal Science history Resource Challenge	See Journal Peer Review Rubric Reflection Rubric	**PPR:** Standard 1 1.7k, 1.19k 1.16s-1.18s 1.19s-1.23s 1.6s -1.11s **NSTA/NSES**: IV **ACEI** 2.2 **CF: 1** NCATE: 1
The EC-6 science teacher manages classroom, field, and laboratory activities to ensure the safety of all students.	*Teach a hands-on Science Lesson Class Science Demo Lapboard Kid Kit Gameboards	See Lesson Plan Rubric Instructor and Classmate Reflection and Feedback	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: I **ACEI** 3.4 **CF: 5** NCATE: 1, 2, 3
The EC-6 science teacher uses the correct tools, materials, equipment, and technologies.	*Teach a Science Lesson EC-6 Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies Participate in a Metric Olympics	See Lesson Plan Rubric See Reflection Rubric Class Science Demo Resource Challenge	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: III **ACEI** 3.3 **CF: 2** NCATE: 1
The EC-6 science teacher describes the processes of scientific inquiry and explains the role of inquiry in science instruction.	Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies Teaching Model-Inquiry Snapshot Lesson Plans See: http://www.exploratorium.com	See reflection rubrics Class Science Demo Teaching Models	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: III **ACEI** 3.3 **CF: 4** NCATE: 1
The EC-6 science teacher has	Class Science Demo Lapboard	Class Science Demo	**PPR: PPR:** Standards I, III 1.12k - 1.18k 1.20k

theoretical and practical knowledge about teaching science and about how students learn science.	Kid Kit Gameboards With integrated technologies Active Learning Tools Resource Challenges SnapShot Lesson Plans	Resource Challenge Active Learning Tools	1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: IV **ACEI** 3.2 **CF: 1**
The EC-6 science teacher develops varied and appropriate assessments to monitor science learning.	Snapshot Lesson Plans Active learning Tools LapBoards Teaching Performance Lesson	See unit rubric Active Learning Tools	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: V **ACEI** 3.4 **CF: 4** NCATE: 2
The EC-6 science teacher understands how science affects the daily lives of students and how science interacts with and influences personal and societal decisions.	Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies SnapShots Resource Challenge Active Learning tools Students conduct a long-term observation of Moon Phases and write a grade-level appropriate lesson plan for moon phases. Project Learning Tree Professional Development Science Family Nights/Demonstrations	SnapShot Lessons See Moon Phases Rubric Reflection rubric Active Learning Tools Resource Challenge Class Science Demo	**PPR:** Standard IV 3.1s – 3.3s 4.5s-4.15s 4.9k-4.12k PPR Domain 04 – Fulfilling professional roles and responsibilities. **NSTA/NSES**: VII **ACEI** 5.2 **CF: 5** **ACE**
The EC-6 science teacher knows and understands the science content appropriate to teach the statewide curriculum (TEKS) in physical science.	Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies SnapShots Student map the states of matter TEKS strand K-8 and then reflect on *how elementary science programs are like and ice-cream cone.*	SnapShots Lessons Reflection rubric Class Science Demo Active Learning Tools	**PPR:** Standard I, II 1.8k-1.11k 1.10s-1.11s 1.23k, 1.23s 3.8s – 3.14s **NSTA/NSES**: VIII **ACEI** 5.1 **CF: 1** NCATE: 1
The EC-6 science teacher identifies the science content appropriate to teach the statewide curriculum (TEKS) in life science.	Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies Sapshot Lesson Plans	See unit rubric	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: IX **ACEI** 5.1 **CF: 1** NCATE: 1
The EC-6 science teacher knows and	Class Science Demo Lapboard	See unit rubric	**PPR:** Standards I, III 1.12k - 1.18k 1.20k

understands the science content appropriate to teach the statewide curriculum (TEKS) in Earth science.	Kid Kit Gameboards With integrated technologies Sapshot Lesson Plans		1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: 023 **ACEI** 5.1 **CF: 1** NCATE: 1
The EC-6 science teacher can identify unifying concepts and processes that are common to all sciences.	Class Science Demo Lapboard Kid Kit Gameboards With integrated technologies Sapshot Lesson Plans	See unit rubric	**PPR:** Standards I, III 1.12k - 1.18k 1.20k 1.11s – 1.22s 3.4s -3.6s PPR Domain 03 - Implementing effective, responsive instruction and assessment **NSTA/NSES**: VII **ACEI** 3.1 **CF: 1** NCATE: 1

Grades:

	Math	Science	Classroom Management
Assignments/Activities Including written reflection /ACE	450	450	450
Disposition/Professionalism from Professor	300	300	300
Disposition/Professionalism from Mentor(s)	150	150	150
Shared Grades for Methods: exit interview, website, legacy project, reflection	100	100	100
Total	**1000**	**1000**	**1000**

The professor reserves the right to alter course requirements to better meet the learning needs of the teacher candidates.

Letter Grades Grades shared between Science and Classroom Management

A's in both courses = 920+ pts
B in one course and A in the 2nd course 880 - 919 pts
B in both courses 820- 879- pts
B in one course and C in the 2nd course 780-819 pts
C in both courses = 700 - 779 pts
D in both courses = 600 - 699 pts
F's in both courses = below 600 pts

*A grade in any methods course of "D" or lower will result in the candidate repeating all method courses before they are eligible for student teaching.

Schedule:

Zip-Lock Quilt		I Haves
Snapshots		Science Demo
Snapshot		Game Boards
Snapshot		Written Reflection

Technology Integration: All 7 Tech pieces • Voki • Prezi • Powtoon • Glogster • GoAnimate • Emaze • Canva		SHSU Lesson Plans #1 #2 #3
Teaching Model--Inquiry		Website Design Complete
Scavenger Hunt - Science		All submissions Posted Timely and Correctly including Assignment Manager, Blackboard, TK 20
Kid Kits & Tech		QR Code Assignment
Lapbook & *Tech		Teaching Model - PBL
Teaching Model -Lesson Cycle		Teaching Model - 5 E Model

Student Guidelines

SHSU Academic Policy Manual--Students

- Procedures in Cases of Academic Dishonesty #810213
- Disabled Student Policy #811006
- Student Absences on Religious Holy Days #861001
- Academic Grievance Procedures for Students # 900823

SHSU Academic Policy Manual – Curriculum and Instruction

- Use of Telephones and Text Messagers in Academic Classrooms and Facilities #100728
  - Technology during instruction: no personal tech devices, only for classroom activities
  - Technology during exams: No personal tech devices
  - Technology in emergencies: Inform instructor of any personal issues

Visitors in the classroom - Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruptions to the class by their attendance.

NCATE Standards

CAEP Standards

The COE Conceptual Framework
ACEI: http://www.acei.org
Conceptual Framework: http://www.shsu.edu/~ncate/concept.html
TX PPR Standards: http://www.tea.state.tx.us
NCATE: http://www.ncate.org
ISTE: http://www.iste.org
State Standards: http://www.tea.state.tx.us/index2.aspx?id=5938

ACE

--All content methods block courses are Academic Community Engagement courses in which you will not only learn knowledge and skills, but also actively use those skills to make a difference in our community to improve the quality of life. These experiences will help you see yourself as a positive force in this world and deepen your understanding of your role as a citizen.
--Through the ACE experience you will complete approximately 120 hours of field experience where you will focus on the educational growth of EC-6 students that include planning and teaching lessons, involvement in community efforts like math family night, family informational fairs, reading fairs, mentoring programs, etc.
--At the end of each field experience placement you will have the opportunity to reflect on your experiences and that reflection is inclusive of your grades for all senior content methods block courses which is approximately 50% of your total points for your final grade.

Attendance

Regular and punctual attendance is required and will be documented every class period.

As per University policy, candidates will not be penalized for three (3) hours of absence during the semester. This class period absence should be used carefully for emergencies and illnesses. It is important that candidates notify the professor via email or phone call prior to, or on the day of, the absence regardless of the reason for the absence.

Upon the second absence, after the three (3) hours of absence allowed by the University, the Department of Curriculum and Instruction will be notified and a notation will be made in the candidate's file. After the third absence, the candidate will attend a conference with the course professor as well as the Chairperson of Curriculum and Instruction to discuss and evaluate reasons for the absences, and to determine if the candidate needs to continue in the program. Excessive absences can constitute reasons for lowering of semester grades, and possibly, removal from the course or block of courses. Each absence beyond the first absence may result in a five-point reduction of your final grade in all classes for each class missed. Excessive absences can constitute reasons for lowering of semester grades, and possibly, removal from the methods semester.

It is the student's responsibility to obtain prior approval from the instructor for making up class assignments. Documentation from the student may be required for approval. It is also the student's responsibility to retrieve handouts and materials from the missed class from classmates. Any missed group work may not be made up.

- **Tardies**

  If a student is fifteen minutes or more late to class or leaves class fifteen minutes or more before class is over, an absence will be recorded. A student who shows a pattern of being a few minutes late (but less than 15) will be notified that continuation of that pattern will result in an absence.

Course Expectations:

Methods Block Professionalism and Expectations:

- Check Blackboard regularly for assignments, announcements, grades, changes.
- Communicate with your course instructor for any concerns that could affect your learning, attendance, and participation in class.
- Observe regular attendance and prepare to actively participate in class and in the field.
- Engage in team collaboration and active listening
- Engage in thoughtful reflections on teaching practices and learning opportunities
- Relate or make cognitive connections between and among readings, discussions, activities, assignments and the PPR competencies.
- Consistently demonstrate good disposition.

Professional Participation

It is expected that teacher candidates be active, enthusiastic, and collegial participants in face-to-face and online activities during the semester. In addition, it is expected that course work is completed in a timely and professional manner on the schedule posted. Points are lost if these expectations are not fulfilled.

Field Experience:

Field experience is a mandatory component of the method courses. It takes place in established public schools with strong mentors. During field experience days (at least 120 hours), candidates will have a variety of assignments that are directly related to this course and allow candidates to see connections among pedagogy, practice, and mathematics.

Field experience provides a unique opportunity for teacher candidates to:

- begin the transition from a college student to a teacher,
- familiarize themselves with the culture of the mathematics classroom in elementary schools,
- observe and put into practice the concepts and skills learned in the course,
- better understand the learners, the processes involved in developing conceptual understanding in students, and multiple approaches to facilitate learning, and,
- observe and understand the complexity of teacher roles and responsibilities on a daily basis.

EVALUATION PROCEDURES AND GRADING POLICIES

The evaluation system outlined below is an attempt to provide candidates with a significant role in determining their final course grade all CIEE Courses. This system is based on my belief that the most important variable involved in determining the candidate's final grade should be the quantity of high-quality work completed, and all assignments submitted must demonstrate the quality of work expected of teacher candidates; Work is expected to be professionally written with correct grammar, tense, and spelling. It is important to realize that as a student, and future teacher, it is your responsibility to provide the highest possible quality work in a timely manner. **Extra credit is not offered in this course.**

Writing policy statement for Content Methods Block:

Any written assignment that has five language usage, spelling, grammatical, or punctuation errors will not be evaluated. The candidate can resubmit the assignment for evaluation after all language usage, spelling, grammatical, or punctuation errors are corrected. The candidate could be required to sign-up and attend the SHSU Writing Center to receive writing assistance before being allowed to resubmit the assignment for evaluation. The professor will decide on the length of time allowed for completing the assignment.

Academic Assistance: If you need help with your writing assignments, please call or visit the Sam Writing Center -- Farrington Building, (Phone) 936-294-3681

Late Submissions

Late assignments will receive a 10-40 point deduction in points for each day late. Recognizing that "extenuating circumstances" may occur, documentation of reason for late work may be submitted to instructor for consideration of reinstating original possible points. All assignments must be completed in order to pass this course. See course grading rubric

Expectations:

Time Requirement

For each hour in class, you will be expected to commit at least three hours outside of class. It is expected that if you enroll in this course, you can meet the time requirements.

Professionalism

Professionalism is expected, both in the classroom and in the public schools. If individual assignments possess a striking similarity to another student's work, penalty may be, minimally, the drop of one letter grade. During field experience, proper dress is expected. The teacher candidates should practice appropriate dress and behavior simultaneously as they practice the application of instructional strategies they are learning in the classroom.
A Disposition Checklist will be complete by both the professor and mentors.

Program Requirements:

All required program uploads must be completed by no later than the week before grades are to be posted for the end of the semester. In order to receive your final grade for this course, you must complete all program requirements by the assigned due dates, and not later than a week before grades are to be posted for the end of the semester.
. The program requirements for this course are:

- Emerging Dispositions in Tk20
- Lesson Plans in Tk20
- Field Experience Documentation Log to Sam Web

Final Grades

To receive your final grade for this course, you must complete all program requirements by the assigned due dates. The program requirements for this course are:

- Emerging Dispositions in TK20
- Lesson Plans in TK20
- Field Experience Log in Sam Web

- Portfolio

Student Interaction Policy- Observe strictly the student Interaction Policy below, as this is for your protection.

- DO NOT Communicate with any public school student inside or outside school is prohibited unless it concerns academics or classroom learning.
- Do NOT text, e-mail, or access student My Space or Facebook pages.
- Do NOT call students on their cell phones or home phones.
- Do NOT give students rides or socialize with them or their families.
- Contact with students outside of school is prohibited.
    - **Cell Phone Policy Sam Houston State University Academic** Policy Statement 100728 Cell Phone Policy Sam Houston State University **Academic Policy Statement 100728**

Additional Information:

Student Syllabus Guidelines:

Please visit the following website (**http://www.shsu.edu/syllabus/**) for additional Sam Houston State University syllabus information regarding:

- Academic Dishonesty
- Student Absences on Religious Holy Days Policy
- Students with Disabilities Policy
- Visitors in the Classroom

Bibliography:

Bransford, J.D., Brown, A.L. , & Cocking, R.R. (1999). *How People Learn: Brain, Mind, Experience and School*. Washington, DC: National Academy Press

Carroll, J.A. and Witherspoon, T.L. (2002). *Linking Technology and Curriculum*. Upper Saddle River, New Jersey: Prentice-Hall.

Jonassen, D. H. (1996). *Computers in the Classroom: Mindtools for Critical Thinking*. Englewood Cliffs, NJ: Merrill/ Prentice- Hall.

Newby, T.J., Stepich, D.A., Lehman, J.D., and Russell, J.D. (2006). *Educational Technology for Teaching and Learning*. Upper Saddle River, New Jersey: Prentice-Hall.