**CTEE 4030**

**Curriculum: Natural Science**

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| Science clipart transparent - WikiClipArt | **Class Time:**  Spring 2023**Class Location:** Haley Center 2414**Credit Hours**: 4 semester hours **Prerequisites:** Admission to Teacher Education | Free Download Science Clipart Science Research Clip, HD Png Download ,  Transparent Png Image - PNGitem |

**Instructor:** Dr. Martina P. McGhee

**Office:** 5026 Haley Center

**Phone:** 334.844.6791

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**Office Hours:** Wednesday 4:00 pm -5:00 pm

**Required Texts**

Lever-Duffy, J., McDonald, J., Bass, J., Carin, A. & Contant, T. (2018). Teaching Science Through Inquiry-Based Instruction. Pearson Education. 13th edition. ISBN-13: 9780134515472 or ISBN-10: 0134515471.

**Materials:**

* Mask
* Composition Notebook (Educator’s Journal)
* Markers, Crayons and/or colored pencils

**Course Description**

This course is designed to acquaint teacher candidates with current methodologies of teaching science for understanding and providing practical experience, theoretical background, and pedagogical skills. The course approach will focus on integrating content and national standards in a variety of curricula that are developmentally appropriate, interesting, and relevant to student's lives, organized around inquiry, and connected with other school subjects. Teacher Candidates will create and teach lessons that reflect accurate knowledge of science content, the nature of science, science process skills, use of technology in science teaching, assessment, and science pedagogy. They will reflect upon teaching experiences noting areas of strength and weakness and develop plans to improve their practice. They will gain knowledge of how to choose from a variety of activity types in order to teach science in a way to address student needs including collaboration with peer colleagues. The teacher candidate will accomplish this through modeling and by learning to design inquiry-based lessons that provide strategies for dealing with the challenge of teaching science. The goal is to help the candidate think of ways to become an innovative teacher who wishes to facilitate all students in the pursuit of science knowledge. This course is designed to help develop a foundation of sound teaching strategies that engage students in the exploration and discovery of the world of science.

**Course Objectives**

* Demonstrate the ability to use a variety of resources and instructional strategies in planning and teaching inquiry based hands-on elementary science lessons consistent with the Alabama Course of Study.
* Demonstrate the ability to design and implement authentic assessment strategies for science knowledge and skills.
* Demonstrate the ability to use computer technology to access information for planning lessons, to communicate via e-mail, and to integrate into the elementary science curriculum.
* Demonstrate an understanding of environmental education and the ability to use community agency resources in planning and implementing an environmental lesson.
* Demonstrate an understanding of how temperament styles, teaching styles and learning styles are connected in teaching science.
* Demonstrate an effective way of helping students learn to construct their own understanding by connecting their many ideas into concepts, attitudes, and skills.

**CIEP Alignment**

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| **CIEP Standards** | **Course Assignment** |
| Standard 5.1 | Science Autobiography |
| Standard 2 | Educator’s Journal |
| Standard 3.2 | Field Notes |
| Standard 1 | Lesson Plan & Commentary |
| Standards 3.3  | Standards Analysis & Curriculum Mapping |
| Standards 3.4  | Standards Analysis & Curriculum Mapping |

**Assessments of Learning**

**Science Autobiography** 10%

*Due: January 20th*

A science autobiography is an essay in which you describe your personal experiences with science, in or out of school, and then use your own experiences to determine the kind of science teacher you hope to become.

Your essay should contain the following three components. (1) Relate your earliest memories of school science in your feelings about them. (2) Once you have described your experiences, reread your work for analysis. (3) Give your definition of science and describe the characteristics of a good science teacher. *See Assignment Guideline for additional information.*

**Educator’s Journal** 10%

*Due: April 28th*

Each teacher candidate will keep and educator’s journal. Journaling provides a detailed record of all the activities from both synchronous and asynchronous sessions completed throughout the course. The educator’s journal will have a table of contents that details the date and page number of various recorded activities. In addition, it will have a glossary at the back to catalog academic terms and their definitions learned from the readings. At the conclusion of the semester, each candidate will need to submit a digital record of their educator’s journal. This digital record should not include pages submitted for other assignments. *See Assignment Guideline for additional information.*

**Field Notes** 20%

*Due: Every Friday of Clinical Placements*

During your field placement throughout the week, you will conduct handwritten observations. These observations serve as evidence of various aspects of instruction connected to your Clinical Educator teaching science and the students learning science. These SMART Field Notes focus on 5 areas. Below each of the foci, you will see guiding questions. These questions are meant to help you make sense of what is happening in the classroom. *See Assignment Guideline for additional information.*

**Lesson Plan & Commentary** 30%

*Due: Part 1: March 17th*

*Part 2: April 14th*

In your field placement, you have the opportunity to see the day-to-day happenings of an elementary classroom. In addition, you will have the opportunity to teach science to elementary students. This “practice” teaching allows you to experience teaching with the support of a cooperating teacher present in the classroom. During field placement, you will have the opportunity to assist the clinical educator in the classroom. At minimum, you will develop and teach one science lesson between the weeks of March 1st-12th. *See Assignment Guideline for additional information.*

**Standards Analysis & Curriculum Mapping** 30%

*Due: February 10th: #1 & #2*

*February 23rd:* #3, #4, & #5

As Elementary teachers, we are expected to teach a wide range in topics and concepts. It is imperative that we begin building our bank of knowledge and skills to continue acquiring that knowledge. There is an on-going research process that teacher engage in to learn their content and identity quality resources. This assignment focuses on analyzing science standards and developing a set of resources to help teach the aligned standards. This practice with analysis and mapping will aide in your ability to implement these skills in your own future classroom. In pairs, you will be assigned a total of 5 NGSS standards. With your partner, you will design a slideshow using the template provided for each of the 5 standards. This slideshow will include a standards analysis, key information, vocabulary, teacher resources, student resources, a concept map, literacy connections, current events, and an activity. *See Assignment Guideline for additional information.*

**Grading**

A: 90-100% of total points

B: 80-89% of total points

C: 70-79% of total points

D: 60-69% of total points

F: 0-59% of total points

If students have a concern with a specific grade received, Dr. McGhee is willing to meet with them in order to discuss their learning, understanding, and effort.

**Course Policies, Format & Structure**

**Communication**

Email is my preferred method of communication. When emailing be conscious of the time of day. You will receive a response to your email within two working days. If your email is received after 5 pm, those two days begin at 8 am the next day.

**Expectations**

As you prepare to be professional educators, I am expecting thoughtfulness and thoroughness. Being an educator is a great responsibility that we must take seriously. Our impact on our students follows them the rest of their lives. I have prepared this class carefully and with a lot of consideration. I expect the same from you.

**Submitting Assignments**

All assignments should be uploaded to Canvas. Assignments emailed to Dr. McGhee will not be graded. When submitting assignments, you will need to have a file name that includes lastname\_firstname\_assignment or groupnumber\_assginment.

*Examples:*

* McGhee\_Martina\_ReadingResponse1
* Group1\_Step3

**Canvas**:

Canvas is Auburn University’s Learning Management System (LMS). It is where course information, resources, and materials are hosted along with where you will post assignments, and grades are posted. Students are expected to access the platform regularly for course updates and information. A student troubleshooting support page for Canvas is available here: http://wp.auburn.edu/biggio/canvas/student-help/ Technical support for students is available through the Help Desk.

**Lectures/Discussions**

Class lectures will cover material listed on the class schedule and will consist of material that may not be covered in the class text(s) and will also involve activities and discussions that will help aid your understanding of the topic(s) covered; participation is required.

**Assigned Readings**

Each week you are expected to read the assigned reading(s). This will be the first activity that you should complete. You should make sure to complete the first assigned reading(s) before the first-class meeting listed so you are prepared to discuss the text content in class. Not all course readings will be covered in class but students are responsible for the information in all assigned readings.

**In-person Classroom Protocols**

Face Covering Policy

In response to COVID-19, and in alignment with Auburn University's Presidential directives, and local, state, and national health official guidelines face coverings are required at all times while on campus, except when alone in a private office. This includes the classroom, laboratory, or any type of in-person instructional activity, and public spaces. "A “face covering” is defined as a “covering that fully covers a person’s nose and mouth, including without limitation, cloth face mask, surgical mask, towels, scarves, and bandanas.

If a student has a medical exception to the face covering requirement, please contact the Office of Accessibility to obtain appropriate documentation.

Eating

With face coverings being required during class time, there will be no eating permitted in the instructional space. You may have a beverage with a lid. Your face covering must be replaced immediately after consuming your beverage.

**Attendance**

Attendance is required at each class meeting. Excused absences are defined in the *Student Policy E- handbook*, and include the following: illness, death of an immediate family member, trips for a university-sponsored organization, intercollegiate athletic events, subpoena for court, or religious holiday. In addition, students are excused for testing positive for COVID or required quarantine due to direct COVID exposure (see specific guidelines below).

Class Attendance Policy

**Students must provide appropriate documentation to the instructor the day the student returns to class**. Two unexcused absences will result in the lowering of a letter grade on the final grade. At a third unexcused absence, the student will have a conference with the elementary education faculty. Three tardies equal one unexcused absence.

In the event of any absence, excused or unexcused, you must notify Dr. McGhee in advance to meet the necessary session assignments and expectations.

**Make-Up Policy**

Arrangement to make up missed major examination (e.g. hour exams, mid-term exams) due to properly authorized excused absences must be initiated by the student within one week from the end of the period of the excused absences. Except in unusual circumstances, such as continued absence of the student or the advent of University holidays, a make-up exam will take place within two weeks from the time that the student initiates arrangements for it. Except in extraordinary circumstances, no make-up exams will be arranged during the last three days before the final exam period begins. The format of the make-up exam will be (as specified by instructor).

**Late Assignments**

Graded course assignments are to be submitted by the listed due date and must be completed in a thorough manner. Major assignments that are incomplete or submitted after the listed due date will be reduced by 10% for each day they are submitted late for up to three calendar days. All assignments must be completed, whether credit is given, in order to pass this course. Late weekly assignments will not receive credit. Unexcused late assignments are unacceptable. It is the student’s responsibility to contact the instructor if assignment deadlines are not met and are responsible for initiating arrangements for missed work. Students must satisfy all course objectives to pass the course.

**Technology in the Classroom**

Students are expected to keep all cell phones, tablets, laptops and other electronic devices off during class time unless permission have been granted. **No use of electronic devices for text messaging will be permitted during class time unless otherwise stated!** If you have children or someone in your care, please communicate with me about keeping your phone on silent. While students may use an iPad, laptop or similar device for viewing the readings and completing in-class assignments, students should not use the devices for social media or Internet surfing during class. If this becomes an issue, a student may be asked to leave the class session.

**Guidelines Related to COVID and other illness**

Your health and safety, and the health and safety of your peers, are my top priorities as we continue to live through a global pandemic. If you are experiencing any symptoms of COVID-19, Flu, Strep, or any other illness, you need to take all necessary precautions to ensure you quick recovery. **If you test positive for COVID, you must self-report the positive test result** [**here**](http://auburn.edu/covid-resource-center/reporting/).

Assignments & Schedule subject to change due to pandemic

The course schedule and assignments are designed with the most up-to-date information and policies in mind. If the situation changes I will make every effort to keep the schedule as consistent as possible; however, please note that the due dates for assignments may be changed during the semester in response to the changing health and safety requirements or policies of the University. When changes are made, they will be communicated via Canvas Announcement, Canvas message, and all assignment due dates will be updated.

**Health and Well-Being Resources**

These are difficult times, and academic and personal stress is a natural result. Everyone is encouraged to take care of themselves and their peers. If you need additional support, there are several resources on campus to assist you:

* [COVID Resource Center](http://auburn.edu/covid-resource-center/)
* [Student Counseling and Psychological Services](http://wp.auburn.edu/scs/)
* [AU Medical Clinic](https://cws.auburn.edu/aumc/)
* If you or someone you know are experiencing food, housing or financial insecurity, please visit the [Auburn Cares Office](http://aucares.auburn.edu/)

**Academic Integrity**

The University Student Academic Honesty Code on the University Policies site ([Academic Honesty Code](https://sites.auburn.edu/admin/universitypolicies/default.aspx)) pertaining to academic honesty will apply to this class. Make sure to give credit for any words and ideas that are not originally your own!

**Accommodations**

*The Office of Accessibility provides academic services and accommodations for students with diagnosed disabilities. The Americans with Disabilities Act (ADA) defines a disability as a physical or mental impairment that substantially limits one or more major life activities. In order to receive academic accommodations, the student must submit comprehensive documentation describing the current functional limitations that impact the student in an academic setting. Documentation serves as the basis for decision-making about a student's needs for accommodations in a challenging and competitive academic environment. AU policy for students with disabilities or special needs will be followed.  "Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT)."*

**Title IX Statement**

Auburn University is committed to providing an environment that is free from discrimination and harassment based upon protected class. If you believe you have been the victim of harassment or discrimination based on race, color, religion, national origin, disability, age, or sex (including sexual orientation, gender identity, and gender expression), we encourage you to report it. If you report sexual assault or sexual misconduct to a faculty member, the faculty member is obligated to notify the University’s Title IX Coordinator about the basic facts of the incident. For more information about your Title IX reporting and resource options at Auburn University, please go to: [Title IX](http://www.auburn.edu/titleix)

**Professionalism**

As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College’s conceptual framework.

These professional commitments or dispositions are listed below:

* Engage in responsible and ethical professional practices
* Contribute to collaborative learning communities
* Demonstrate a commitment to diversity
* Model and nurture intellectual vitality
* Diversity of learners

**Course Contingency**

If class meetings are disrupted due to faculty illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to this syllabus and/or course assignments will replace the original materials.

**\*\*Course Calendar is attached.**