**Evaluation of Program in Secondary Science**

**Fall 2020 Course Syllabus and Timeline**

AUBURN UNIVERSITY

SYLLABUS

1. **Course Number**: CTSE 7540

**Course Title:** Evaluation of Program in Secondary Science

**Credit Hours**: 3 semester hours

**Prerequisites**: None

**Corequisites**: None

1. **Date Syllabus Prepared**: August 2020

Term: Fall 2020

Day/Time: Thursdays 6:00pm – 9:00 pm

Instructor: Dr. Christine Schnittka

Office Address: 5072 Haley Center or Online. Zoom address is <https://auburn.zoom.us/j/2977898263>

Contact Information: [schnittka@auburn.edu](mailto:schnittka@auburn.edu) or (334) 844-8277

Office Hours: Online: <https://auburn.zoom.us/j/2977898263> Mondays 2pm-4pm,

Tuesdays 10am-1pm, and by appointment

**3. Texts or Major Resources**:

a) Reynolds, C.R., Livingston, R.B., & Willson, V. (2009). *Measurement and assessment in education (2nd ed.)*. Upper Saddle River, NJ: Pearson Education, Inc.

Paperback- 519 pages- ISBN-13: 978-0-205-57934-1

Additional articles and readings may also be disseminated and are considered required reading. Any additional assigned readings will be disseminated and/or posted on Canvas at least one week prior to the assigned due date for discussion.

**4. Course Description**: Theoretical and practical perspectives about evaluation and methods of evaluating learners, teachers, and curricula.

**5. Student Learning Outcomes:**

This course examines theoretical and practical perspectives of evaluation and methods of evaluating learners, teachers, and curricula. This course is a practical introduction to student assessment and evaluation. Students will define the basic terminology of assessment and evaluation. Students will study the importance of science education assessments and their meanings on the international, national, state, and district level. Students will also learn how to critically examine standardized testing. For secondary science instruction, students will learn how to create valid and reliable assessment instruments for a variety of learning objectives.

This course will also investigate science teaching effectiveness, with attention to the instruments and models of assessment currently in use for research in science education. We will discuss evaluation of cognition, attitudes, and skills for science students. We will constantly ask, “What do [your] students know?” “How can you help them demonstrate it?” “How confident can you be of the results of evaluation?” “What does a grade in your class mean?”

To provide opportunities so that students will have:

1. Knowledge of the purposes, strengths, and limitations of formative and summative assessment and of formal and informal assessment strategies. 290-3-3-.04(2)(c)5.(i)
2. Knowledge of measurement-related issues such as validity, reliability, norms, bias, scoring concerns, and ethical uses of tests and test results. 290-3-3-.04(2)(c)5.(iii)
3. Knowledge of assessment tools to monitor the acquisition of reading strategies, to improve reading instruction, and to identify students who require additional instruction. 290-3-3-.04(3)(c)2(ii)
4. Knowledge of the role that mathematics plays in everyday life. 290-3-3-.04(3)(c)3.(i)
5. Knowledge of the concepts and relationships in number systems 290-3-3-.04(3)(c)3.(ii)
6. Knowledge of the appropriate use of various types of reasoning, including inductive, deductive, spatial and proportional, and understanding of valid and invalid forms of reasoning. 290-3-3-.04(3)(c)3.(iii)
7. Knowledge of both metric and customary measurement and fundamental geometric concepts, including shapes and their properties and relationships. 290-3-3-.04(3)(c)3.(iv)
8. Ability to solve problems using different strategies, to verify and interpret results, and to draw conclusions. 290-3-3-.04(3)(c)3.(v)
9. Ability to communicate with other about mathematical concepts, processes, and symbols. 290-3-3-.04(3)(c)3.(vi)
10. Knowledge of Alabama’s state assessment requirements and processes. 290-3-3-.04(5)(c)c(ii)
11. Knowledge of research relating collective responsibility for student learning to increased achievement for all students. 290-3-3-.04((5)(c)4(i)

# Cultural Diversity

This course reflects the College of Education’s commitment to cultural diversity. The goal of the professional education program at Auburn University is to prepare outstanding educators who are competent, capable, and caring in complex, diverse educational arenas. Such individuals are

* Effective in their roles as culturally responsive teachers, designing and implementing sound meaningful and balanced instruction with the full range of learners.
* Effective as they assist learners in their comprehension of issues surrounding diversity; and
* Effective in their contributions of thoughtful and informed discourse to their own educational communities as they work to build equitable and supportive environments learners.

# Expectations

In this course you are expected to:

* Reflect critically on all experiences and readings.
* Be prompt and in attendance at all course sessions.
* Demonstrate critical reflection through discussion, writing and course assignments.
* Complete assignments to the best of your ability.
* Communicate expectations and ideas.
* Recognize and validate the values of other class members.

This class is intended to be both interactive and collaborative. Students are expected to complete all assignments in their entirety and participate in all discussions. Participation starts with preparation. It is expected that each student will read the assigned materials and completed other work requested and required. In the event that a student does not complete all assignments by the specified deadline, as evidenced by non-participation class discussions, the professor reserves the right to deduct 5 points from the final grade.

**6. Course Content and Schedule:**

\***Please note that additional readings and material may be disseminated and covered on the dates listed below even though they may not be included here. Articles will be placed on Canvas no less than one week prior to the week that they will be discussed.**

**Tentative schedule: Please keep in mind that we may have to adjust the pace of the course periodically.**

Important dates:

First day of class: August 20, 2020

Midterm exam: October 8, 2020

Final Exam: TBD

Please note that the class meets every Thursday from 6:00pm-8:50pm CST. Students should arrive to class promptly in the Zoom classroom.

**August 20**

Week 1: Introduction to Educational Assessment and The Basic Mathematics of Measurement

**August 27**

Week 2: Introduction to Educational Assessment and The Basic Mathematics of Measurement

Reading Reflection #1 Due

**September 3**

Week 3: The Meaning of Test Scores

Reading Reflection #2 Due

**September 10**

Week 4: Reliability

Reading Reflection #3 Due

**September 17**

Week 5: Validity

Reading Reflection #4 Due

**September 24**

Week 6: Item Analysis

Reading Reflection #5 Due

Project #1 Due

**October 1**

Week 7: Review

**October 8**

Week 8: **MIDTERM EXAM**

**October 15**

Week 9: Developing Classroom Tests

Reading Reflection #5.5 Due

**October 22**

Week 10: Selected-Response and Constructed-Response Items

Reading Reflection #6 Due

Rough Draft of Project #2 due

**October 29**

Week 11: Performance Assessments and Portfolios

Reading Reflection #7 Due

**November 5**

Week 12: Teacher Evaluation

Project #2 Due

**November 12**

Week 13: Grading

Reading Reflection #8 Due

**November 19**

Week 12: A Variety of Assessments

Project #3 Due

Final Exam: TBD

# 7. Assignments/Projects: Course Evaluation:

The final course grade will be based on the following assignments:

Points

A. Project #1 30

B. Project #2 30

C. Project #3 30

C. Quizzes (4 at 5 points each) 20

D. Reading Reflections (8 at 5 points each) 40

D. Midterm Examination 25

E. Final Examination 25

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**200**

# General grading rubric for assignments

100%: beyond the call of duty; strikingly impressive; excellent in every way

90%: both complete and showing evidence of original, active, critical thought

80%: all specified aspects of assignments minimally completed

<80% one or more aspects of assignments missing or unacceptable

Grading Scale:

A 90%-100%

B 80%-89%

C 70%-79%

D 60%-69%

F <60%

1. **Project #1** (30 points)

**Item Analysis** – You will analyze in detail the results of an assessment and make some decisions about test questions and how to grade students. The data will be provided to you.

1. **Project #2** (30 points)

**Assessment Development** – You will develop a valid and reliable paper and pencil assessment of science content knowledge. You must obtain your instructor’s approval before administering or evaluating any assessments in a classroom setting. The assessment could be used in the context of one of the field experiences that you may participate in. Alternatively, it could be designed for informal settings and validated with an adult population.

1. **Project #3** (30 points)

**Analysis of Teaching** – You will use a variety of teaching evaluation tools to examine and analyze a lesson you observe someone else teach. You must obtain your instructor’s approval before beginning this project.

1. **Unannouced Quizzes:** 4 quizzes at 5 points each. 20 points total

Students will take 4 quizzes that may be short answer, fill in the blank, or essay. Quizzes will include material from class lectures, readings, and activities that have occurred during the course.

1. **Reading Reflections: 8** reflections at 5 points each. 40 points total

Directions for these reflections will be posted on Canvas at least 1 week prior to the due date.

1. **Midterm Examination**: (25 points) The midterm exam will include a variety of types of questions (i.e. multiple choice, short answer, fill-in-the-blank, and essay). The exam may include material from class lectures, reading, and activities that occur during the **first half of** the course.
2. **Final Examination:** (25 points)

The final exam will include a variety of types of questions (i.e. multiple choice, short answer, fill-in-the-blank, and essay). This exam may include material from class lectures, reading, and activities that occur during the **second half of** the course.

**8. 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

**9. Class Policy Statements**:

**Attendance**: Students are strongly encouraged to attend/participate in all class meetings unless the absence is in accordance to the AU absence policy as stated in the AU online guidelines. Please notify the professor if you are going to be absent. Students will be held responsible for any content covered in the event of an absence.

**Assignments:** All assignments are expected to be typewritten, grammatically accurate, and free of spelling and typographical errors. Assignments are to be of a quality that would be expected of a professional. **All assignments are to be typed, double-spaced, and in APA style (6th ed.).** If you have any questions about APA style, see <https://owl.english.purdue.edu/>

**Late assignments** will not be accepted unless accompanied by a university approved excuse.

If a student misses turning in an assignment and has a university approved excuse, he or she will have one week from the time he or she returns to class to turn in the assignment.

**Make-up Policy:** Arrangements to make up a missed major examination (e.g. mid-term exam, quizzes) due to properly authorized excused absences must be initiated by the student within one week of the end of the period of the excused absence (s). Except in unusual circumstances, such as the continued absence of the student or university holidays, a make-up exam will take place within two weeks of the date 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.

**Disability Accommodations:** 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).

**Classroom Behavior and Honesty:** Students are expected to read and adhere to all classroom policies in the Auburn University official guidelines available online regarding classroom behavior and honesty.

**Classroom Behavior:** “Behavior in the classroom that impedes teaching and learning and creates obstacles to this goal (learning) is considered disruptive and therefore subject to sanctions…Students have the responsibility of complying with behavioral standards…Examples of improper behavior in the classroom (including the virtual classroom of e-mail, chat rooms, telephony, and web activities associated with the courses) may include, but are not limited to the following: arriving after a class has begun; use of tobacco products; monopolizing discussion; persistent speaking out of turn; distractive talking including cell phone usage; audio or video recording of classroom activities or the use of electronic devices (including cell phones) without the permission of the instructor; refusal to comply with reasonable instructor directions; employing insulting language or gestures; verbal, psychological, or physical threats, harassment, and physical violence. “ (See *AU guidelines available online)*

Cell phones may **not** be used during this class except in an emergency. If you need to place or accept a very important phone call, please step out into the hall. **Placing or receiving calls, text messages, instant messages, or emails during class may result in immediate dismissal from the class meeting. Laptops or tablets can only be used during note-taking time designated for class. Please refrain from having a computer open and out unless class notes are being discussed or given by the instructor for the course.** This is simply proper etiquette. It annoys and distracts your peers and your instructor, and it distracts you as well.

**Academic Honesty Policy:** All portions of the Auburn University student academic honesty code (Title XII) found in the *AU guidelines* will apply to university courses. All academic honest violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee. If you don’t know what plagiarism is, see <http://plagiarism.org/> because it will not be tolerated. Do your own work. Cite ideas that are not your own.

**Course Contingency:** If normal class activities are disrupted due to 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 your syllabus and/or course assignments will replace the original materials.

**10. Justification for Graduate Credit (for Graduate Credit Only)**

This course provides doctoral students, current teachers, and pre-service teachers who desire an “A” Certificate opportunities to develop an in-depth understanding of assessment research and to develop assessment instruments for the classroom.

**11.** Due to the Coronavirus pandemic, public health measures have been implemented across Auburn’s campus. Students should stay current with these practices and expectations through the campus reentry plan, A Healthier U. The sections below provide expectations and conduct related to COVID-19 issues. The following statements are items that faculty can consider including in your syllabi.

Health and Participation in Class

You are expected to complete your Healthcheck screener daily. Your health and safety, and the health and safety of your peers, are my top priorities. If you are experiencing any symptoms of COVID-19, or if you discover that you have been in close contact with others who have symptoms or who have tested positive, you must follow the instructions on the Healthcheck app. My hope is that if you are feeling ill or if you have been exposed to someone with the virus, you will stay home to protect others. Please do the following in the event of an illness or COVID-related absence:

● Notify me in advance of your absence, if possible

● Provide me with medical documentation, if possible

● Keep up with coursework as much as possible

● Participate in class activities and submit assignments remotely as much as possible

● Notify me if you require a modification to the deadline of an assignment or exam

● Finally, if remaining in a class and fulfilling the necessary requirements becomes impossible due to illness or other COVID-related issues, please let me know as soon as possible so we can discuss your options.

Students with questions about COVID-related illnesses should reach out to the COVID Resource Center at (334) 844-6000 or at [covidresourcecenter@auburn.edu](mailto:covidresourcecenter@auburn.edu).

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 ([covidresourcecenter@auburn.edu](mailto:covidresourcecenter@auburn.edu))

● 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/>)

A Healthier U Campus Community Expectations

We are all responsible for protecting ourselves and our community. Please read about student expectations for fall semester, including completing the daily GuideSafe™ Healthcheck (https://ahealthieru.auburn.edu/). You are expected to (1) take your temperature daily and (2) complete your Healthcheck screener to receive your A Healthier U pass. You may be asked at any time during class to show your pass.

Course Expectations Related to COVID-19:

● Face Coverings: As a member of the Auburn University academic community you are required to follow all university guidelines for personal safety with face coverings, physical distancing, and sanitation. Face coverings are required in this class and in all campus buildings. Note that face coverings must meet safety specifications, be worn correctly, and be socially appropriate. You are required to wear your face coverings at all times. If you remove your face covering or are non-compliant with the university’s policy on face coverings, you will be instructed to leave the classroom and will be held to the protocols outlined in the Auburn University Policy on Classroom Behavior. Any student who willfully refuses to wear a face covering and does not have a noted accommodation may be subject to disciplinary action.

● Physical Distancing: Students should observe appropriate physical distancing and follow all classroom signage/avoid congregating around doorways before or after class. If the instructional space has designated entrance and exit doors, you should use them. Students should exit the instructional space immediately after the end of instruction to help ensure social distancing and allow for the persons attending the next scheduled class session to enter.

● Course Attendance: If you are quarantined or otherwise need to miss class because you have been advised that you may have been exposed to COVID-19, you will be expected to develop a plan to keep up with your coursework during any such absences.

● Course Meeting Schedule: This course might not have a traditional meeting schedule in Fall 2020. Be sure to pay attention to any updates to the course schedule as the information in this syllabus may have changed. Please discuss any questions you have with me.

● Technology Requirements: This course may require particular technologies to complete coursework. If you need access to additional technological support, please contact the AU Bookstore at [aubookstore@auburn.edu](mailto:aubookstore@auburn.edu).

Disruptive or concerning classroom behavior involving the failure to wear a face covering, as directed by Auburn University, represents a potential Code of Student Conduct violation and may be reported as a non-academic violation. Please consult the Classroom Behavior Policy.

Course Delivery Changes Related to COVID-19

Please be aware that the situation regarding COVID-19 is frequently changing, and the delivery mode of this course may adjust accordingly. In the event that the delivery method is altered, please be assured that the learning goals and outcomes of the course will not change; however, some aspects of the course will change in terms of the mode of delivery, participation, and testing methods. Those details will be shared via Canvas as soon as possible. Please be prepared for this contingency by ensuring that you have access to a computer and reliable Internet.