

Education 470
Science Methods and Materials-Secondary
3 credit class

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Fall 2014 Wednesdays 4:00-5:50

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Prerequisites: Admission into Teacher Education

Required textbooks: Science Instruction in the Middle and Secondary school, Chiappetta, E. L., Koballa

Catalog Description: This course is designed to explore various pedagogical methods of science instruction using inquiry into the nature of science, and philosophy of Native Ways of Knowing. Students have several opportunities to integrate real-world experiences into these models.

Methods of Instruction: Students will be participation in lecture, class projects, lesson plans, field experiences and independent research review.

Class Participation: The best way to fully participate in this class is to attend every week. Since we only meet once a week, when you miss class, you miss out on all your participation points for the week.

Rationale: This course is required for Secondary Science Teacher Education curriculum.

Course Goals: This course addresses the basic content areas of life science and physical science for the purpose of developing science lessons that invoke student participation in a culturally relevant learning environment.

Academic Integrity: Plagiarism and or enabling cheating on exams will result in zero grades, and for addition action, please refer to TMCC policy on these and related matters.

Disclaimer Statement: The instructor reserves the right to modify the syllabus in the event of any extraneous events.

Grading: Your grade in this course will entail a weighted scale incorporating your work in lecture collaboratively working with your peers, your work in the laboratory, and your scores on quizzes and the final exam and laboratory practical.

Assignments: Each week we will have an assignment on topics involved in teaching secondary science such as inquiry, assessment, technology in the classroom, content standards, common core, lesson planning, unit plans, and testing.

Testing: There will be two tests, a midterm and a final, the rest of your grade will be based on weekly work and projects.

Special assignments: Since this class involves teaching secondary science, you will be expected to teach two lessons in a science classroom. You will also be expected to observe one other science teacher besides my room and one other non-science teacher.