

COURSE SYLLABUS
TUSCULUM COLLEGE GRADUATE AND PROFESSIONAL STUDIES
EDUC549: Differentiating Instruction and STEM for All Students

Instructor: Dr. Raymond Hatfield

Phone: (c) 423-863-0999

(w) 423-636-7337

E-mail: rhatfield@tusculum.edu

Course Dates: August 15 – October 3, 2016

Class Meeting Time: Monday - 08:15 PM - 10:00 PM

Location: Morristown Center, Room to be announced

Group Number: MEM10 (6502)

Office Hours: The instructor will be available to meet with candidates, if requested, one hour before class, and can meet with candidates at other times by request. Please call or email to arrange a time/date for meeting.

Note: Calls are acceptable at any time. The instructor's goal is to return e-mails and phone messages within 24 hours, except after 5:00 p.m. on Saturdays or all day on Sundays. In case of an emergency, please call 423-863-0999.

Course Description: This course discusses the various methods of differentiating of instruction and STEM for all learners. Course content will focus on differentiation across grades K-12 in all academic areas including science, technology, engineering and math. Topics such as Universal Design for Learning, Common Core State Standards, First to the Top, PARCC assessments, TVAAS, teaching Students with Disabilities (SWD), and teaching English Learners (EL) will be covered. (3 credit hours)

Course Resources:

Required Textbooks:

For this class, all of the course content information may be found at [EDUC549 MEM10 Fall16](#) and for this reason, **purchasing a textbook is optional.**

Eggen, P. and Kauchak, D.(2011) *Strategies and Models for Teachers: Teaching Content and Thinking Skills*,(6th ed.). Pearson
ISBN-10: 0132179334

Other Required Resources:

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, D.C.: Author.

Other Required Reading: Six research articles, which apply to this course, will be chosen and reviewed by the candidates in this class. These readings may be instructor selected, candidate selected, or a combination of both.

Course Advanced Competencies, Goals, and Objectives

Advanced Competencies:

- Critical Thinking—candidates will be expected to demonstrate critical thinking in class discussions and writing assignments.
- Synthesis of Information— candidates will demonstrate synthesis of information from research and current literature in the development of a research paper.
- Problem Solving—candidates will use problem solving skills when creating an instructional plan in one of the STEM areas that meets the needs of all learners.
- Ethical Decision Making—candidates will exhibit ethical decision making when creating an instructional plan which includes universal design for learning.
- Statistical Analysis and Interpretation—statistical analysis and interpretation will be used in the discussion of research articles.
- Computer Proficiency—use of the Internet is encouraged in researching information for the research paper.

Course Goals:

- Learners will understand and appreciate diverse educational practices and policies. (NBPTS #2)
- Learners will grasp the importance of using developmentally appropriate practice in a variety of learning environments. (NBPTS #2)
- Learners will acquire new knowledge synthesizing it with existing information to create new constructs. (NBPTS #4)

Course Objectives:

The candidate will-

- Synthesize information from a variety of sources that includes information on Common Core Standards, Universal Design for Learning, and best practice in teaching students with disabilities and/ or English Language Learners.
- Use appropriately information from the First to the Top legislation, PARCC assessments and TVAAS data.
- Create an instructional plan in one of the STEM areas that meets the needs of all learners.
- Create an instructional plan that includes universal design for learning.

Course Policies and Procedures

Attendance Policy: Class attendance is mandatory and is recorded by each faculty member, who submits attendance to the administrative office. A grade of “F” is automatically assigned to any student who misses more than one- third of the total class meeting time. Total missed class time includes absence from scheduled class time, arriving late or leaving before the class is dismissed. This is an institutional policy and is not left to the discretion of the faculty member. The academic departments may adopt significantly stringent grading practices relating to attendance as detailed in syllabi and may require completion of any missed work. Students should realize that failure to attend class will result in grade reduction and may also impact financial aid. Failure to attend class results in a grade *reduction* of one (1) point from a candidate’s final average for each hour of class missed.

[Attendance Policy](http://web.tusculum.edu/adult/academics/academic-policies-information/) - <http://web.tusculum.edu/adult/academics/academic-policies-information/>

Active Website Syllabus Information

[Dr-Hatfield's Website](http://www.dr-hatfield.com/stem.html) – <http://www.dr-hatfield.com/stem.html>

Candidates with Disabilities: Tusculum provides individuals with disabilities reasonable accommodations to participate in educational programs, activities, and services. Candidates with disabilities requiring accommodations to participate in class activities or meet course requirements should access the following website for current information:

[Candidates with Disabilities](http://www.tusculum.edu/learning/disability.html) - <http://www.tusculum.edu/learning/disability.html>

Tusculum College Learning Centers: Information for current academic assistance may be found at: [Tusculum Learning Centers](http://web.tusculum.edu/adult/academics/academic-policies-information/) - <http://web.tusculum.edu/adult/academics/academic-policies-information/>

Research Assignments and Library Resources: To ensure that GPS candidates become fluent and competent users of information, faculty develop assignments that incorporate research that requires using the information resources available in the TC Library or from the TC Library website: <http://library.tusculum.edu>. Librarians are available to candidates in their research. Several of the online resources may also be accessed from home with a username and password provided by library staff.

For current Library Resource information access the following website:

[Research Assignment & Library Resources](http://web.tusculum.edu/adult/academics/academic-policies-information/) - <http://web.tusculum.edu/adult/academics/academic-policies-information/>

Academic Dishonesty: Plagiarism is a violation of the Ethics of Social Responsibilities competency. As stated in the *Graduate and Professional Studies Research Handbook* and the *Tusculum College Catalog* ([Academic Dishonesty](http://www.tusculum.edu/academics/policies.html)- <http://www.tusculum.edu/academics/policies.html>), plagiarism is a form of academic dishonesty. It consists of knowingly presenting in writing or in speech the intellectual or creative work of others as if it were one's own. This includes, but is not limited to the following:

1. Failing to identify direct or word-for-word quotations by use of appropriate symbols and reference to the source
2. Restating in your own words the work (ideas, conclusions, words) of another without reference to the source
3. Presenting as your own the creative work (for instance, music or photographs) of another without proper acknowledgment.

See the *Graduate and Professional Studies Research Handbook* and the *Tusculum College Catalog* for other forms of academic dishonesty and the sanctions for dishonest performance.

[Academic Dishonesty](http://www.tusculum.edu/academics/policies.html) -<http://www.tusculum.edu/academics/policies.html>

Other Policies: Candidates in EDUC549 are required to read, analyze, and review at least six professional journal articles. As EDUC549 is a graduate level course, Master's level quality work is expected of all candidates. Professional writing is required for ALL materials submitted in this course. Points will be deducted from work for grammatical and/or spelling errors.

ALL ASSIGNMENTS MUST BE TYPED in MS Word, Times New Roman, Type 12 font (exceptions for titles and headings only) using APA style. Any assignments that are due through e-

mail should be sent through your Tusculum account. All work must be submitted on or before the due date. No late work will be accepted.

On-line resources for APA style (6th) edition:

<http://www.stylewizard.com/apa6index.html>

<http://owl.english.purdue.edu/owl/resource/560/01/>

<http://www.tusculum.edu/adult/downloads/pdf/GPS%20Research%20Handbook%202010.pdf>

Cell Phones: Please set your cell phone to vibrate and if you receive a call during instructional time, please step outside of the room to answer the call.

Laptops: This course will require online research during class time. You are encouraged to bring a laptop to class. However, please refrain from using the laptop during class discussion.

Course Requirements and Grading

The Tusculum College grading Scale

<i>A = 95-100</i>	<i>C+= 77-79</i>
<i>A-= 90-94</i>	<i>C = 73-76</i>
<i>B+= 87-89</i>	<i>C-= 70-72</i>
<i>B = 83-86</i>	<i>F = 0-69</i>
<i>B-= 80-82</i>	

Assignments (100): Note: A departmental policy is that the maximum value of total grade for learning team assignments is 20%.

Assignment	Percent
Participation	20%
Individual Assignment(s)	40%
Final exam	15%
Learning Team Assignment	25%

EDUC-549: Differentiating Instruction and STEM for All Students

Detailed information may be found on the Moodle site [EDUC549 MEM10 Fall16](#).

Individual Assignments Prior to Our First Meeting

- **Access Moodle** - If you have difficulty, please contact Tusculum College Technology Help Desk – call 423-636-7300 and ask to speak with the Technology Help Desk. You will use Moodle throughout this course and will need to be able to access the site prior to our first class meeting.
- **Read Dweck 2007** and complete this **Article Reflection Document** prior to coming to class. The document may be found at <http://dr-hatfield.com/educ341/Article%20Reflective%20Review.pdf>
- **Dweck Hyperlink**- <http://dr-hatfield.com/educ538/docs/Dweck+2007.pdf>

Discussion Topics (Detailed information for each of the assignments may be found on the Moodle Site - [EDUC549 MEM10 Fall16](#))

1. Introduction to Course Content and Assignments
2. Assignment 1 – The Language of Science (Moodle – Individual Assignment)
3. Assignment 2 – Project Based Learning (Moodle – Learning Team Activity)
4. Assignment 3 – Paper Tower Challenge (Moodle – Class Activity)
5. Assignment 4 – Air Express (Moodle – Class Activity)
6. Assignment 5 – Ice Experiment (Moodle – Class Activity)
7. Assignment 6 – Forum Discussions (Moodle)

Learning Team Assignments

Learning team assignments will be discussed during the first class meeting.

Common Core Curriculum Hyperlinks

Underlined text indicates an active hyperlink. Please hold down the "control" button and click on the hyperlink to open.

[Science Standards Kindergarten](#)

[Science Standards 3rd Grade](#)

[Science Standards 6th Grade](#)

[Science Standards 1st Grade](#)

[Science Standards 4th Grade](#)

[Science Standards 7th Grade](#)

[Science Standards 2nd Grade](#)

[Science Standards 5th Grade](#)

[Science Standards 8th Grade](#)

This syllabus may be subject to change.

Name _____ Class _____ Date _____

Article Reflective Review

Name of Article _____

Briefly describe the theme of this article.

List the POSITIVE(s) of this Article.

List the NEGATIVE(s) of this Article.

What have you learned from reading this article?