SMED 510
Advanced Topics in Knowing & Learning in Mathematics and Science
Syllabus-Summer 2012
(created 5/24/12)

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Office Hours: M-F By appointment*
*I will be working most mornings in my TCCW office before and after our class, so feel free to stop by!

CLASS MEETING Times:  Monday – Friday, 12:00 p.m. – 3:00 p.m., Snell B104

Course Description: The primary aim of the Advanced Topics in Knowing and Learning Class is to provide GRIs with experiences that will help them understand how students learn mathematics and science, to be able to assess learning and to be able to recognize when learning has occurred, and to understand the role of the teacher in creating instructional opportunities that are engaging and support student motivation and learning. The primary purpose of education is to prepare children to survive in the real world. SMED 510 is designed to provide the GRIs with knowledge, skills, and attitudes which will enable them to explore learning experiences by their students and to achieve greater understanding of Kentucky’s New Teacher Standards for Preparation and Certification (NTS).

Co-requisites: SMED 501

Required Readings:
2. Articles that supplement and extend your learning. Provided in your GSKyTeach binder.

Suggested Readings:

Learning Objectives:
- By the end of this course, you will be able to:
  1. Demonstrate your ability to think critically about teaching and learning in mathematics and science
  2. Demonstrate your ability to apply course concepts (i.e., theory, research, principles) to teaching and learning situations related to mathematics and science
  3. Demonstrate your ability to reflect upon your own development as a mathematics or science teacher
  4. Demonstrate your ability to work collaboratively to produce high quality outcomes.
  5. Demonstrate your ability to effectively communicate your ideas in both written and verbal form using the language developed from the course
**Format of Course:** The format of this class will be varied, and will include brief lecture-based discussions, whole-class and small-group discussions, student-led presentations, case analyses, debates, blogs, and videos. Students’ readiness to participate in scholarly discussions is assumed, including coming to class having read and cognitively processed all assigned readings. Discussion will center on the readings, what you are learning in SMED 501, and educational implications and related issues. You are expected to conduct yourselves as professionals within a community of learners. You are not expected to be an expert in how people learn; however, you are expected to be active and thoughtful participants showcasing your thinking processes of the material covered.

**Course Topics:** Effective teaching, scientific research methodology, theories of Piaget, Vygotsky, learner diversity, behaviorism, social learning, information-processing, constructivism, motivation theories, standardized testing, and classroom assessment.

**Disability accommodations:** In compliance with University policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

**Emergency Policy:** In the event of major campus emergency, course requirements, deadlines, and grading percentages are subject to changes. This may be necessary due to a revised semester calendar or other circumstances. Here are ways to get information about changes in this course: Blackboard (major source) and/or email the instructor at lisa.duffin@wku.edu

**Academic Dishonesty:** Under no circumstances will acts of academic dishonesty be tolerated in this course. That means acts of plagiarism or any other form of cheating will not be allowed and anyone committing such acts will result in either a failing grade in that portion of the course or a failing grade in the course itself. Determination of the punishment will be handled on a case-by-case basis. Plagiarism detection software will be used in this course.

- **What is plagiarism?** According to the publication manual of the American Psychological Association (2009), plagiarism is “claim[ing] the words and ideas of another as [your] own” (p. 15) or presenting your own previously written work as new scholarship (self-plagiarism).

  **KNOW WHAT PLAGIARISM IS AND AVOID IT AT ALL COSTS!!**

**Professionalism Policy:** GRIs are expected to display exemplary levels of professionalism and dedication to becoming highly qualified, caring educators who will be working with high-needs populations in JCPS. Unprofessional or disrespectful attitudes, dispositions, and/or classroom behaviors of any kind (e.g., sleeping in class, cell phone texting, reading the newspaper, gossiping with a classmate, playing on one’s computer, tardiness, rudeness, etc.) will violate this policy and will endure the following consequences: The first offense will result in a verbal reminder to conduct yourself as a professional and of the course/Program policy. The second offense will result in forfeiture of daily professionalism points and possible removal from class. The third offense will result in removal from the class and an automatic letter grade deduction from your final SMED 510 course grade. Continued unprofessional behavior may lead to failing the course, having a formal complaint written for the student’s University record, and/or ejection from the GSKyTeach Program.
Course Requirements:
1. Professionalism – 50 points
2. Learning “Thought” Paper – 25 points
3. Clinical Interview Observation Record Outline – 25 points
4. Learner Diversity “Quick Teach” – 50 points
6. Clinical Interview Project – 200
7. “How To” Professional Development Seminar -- 250

Grading Scale & Evaluation Rubric

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<th>C</th>
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<td>676-739</td>
<td>612-675</td>
<td>556-611</td>
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Graduate Program Grade Requirements: Candidates for graduate degrees are required to maintain a combined average grade of B (3.0 grade point average) in all course work. Grades lower than that of C may not be used in meeting degree or non-degree requirements. Graduate students must maintain a 3.0 GPA for both degree program requirements (degree GPA) and in their overall graduate course work (overall graduate GPA). Students who fail to meet the 3.0 GPA requirements in both areas will not be awarded a degree.

Written Work: It is expected that students’ writing skills will reflect exemplary scholarship. Assignments are graded for clarity of ideas, depth of understanding/reflection, and writing quality (e.g., grammar, punctuation, capitalization, and usage) in addition to content. Proofread everything prior to submitting! In this class, you want to write for a person who knows nothing about what you are “teaching” them. Educate your audience with clear explanations and enough detail for them to understand the situation, the concepts, etc. that you are describing. All written work should follow APA formatting, be double-spaced using 12-point font with 1” margins. Please follow formatting guidelines outlined in the assignment documents.

Written contributions must reflect your own work. Please note that any time you use information or ideas that were generated by someone else, you must provide “credit” to that person and note from where the information originated. See APA publication manual (6th edition) for how to cite properly. Information is best conveyed in your own words (paraphrase the authors), so work to achieve proficiency in your writing.

Professional Etiquette & Email Expectations: When you send me email, please include “SMED 510” in the subject line, make sure you have an appropriate (and respectful) greeting (i.e., “Dr. Duffin,” “Dr. D.”), provide a well-thought and clearly articulated message, use your manners (i.e., “Please” and “Thank you”), and provide an appropriate closing.

Emails using texting or instant messaging language (e.g., “idk”) will not be reviewed or receive a return correspondence. You are working to be professionals; therefore, your written correspondence to ANY professional on WKU’s campus or JCPS including your professors and instructors should represent your best professional efforts.
Course Requirements and Assignments:

Requirements: Students must have daily access to a computer capable of browsing the web, sending e-mail, and creating word documents. Students are also expected to provide their own transportation to area schools for required field experiences.

DEADLINES: No late work will be evaluated for course credit, but you may always turn in individual papers early!

Blackboard (Bb): Main forum for communication including announcements, course information, and the affiliated blog for the summer course. You will also upload written assignments and check your grades on this site.
https://blackboard.wku.edu

Technology Malfunction Plan
• You should have a back-up plan in place for Internet access should your primary computer fail. The SKyTeach workroom has terminals for student use. There are also computer labs available on the WKU main campus. WKU tends to do maintenance tasks on the weekends so we may experience periodic outages. Please check your email for IT announcements. If you encounter technology problems, you should call the WKU Information Technology (IT) Help Desk (745-7000) for assistance. Because this course uses Blackboard to turn in the majority of the assignments, you should plan to upload your assignments at least 20 minutes prior to the deadline. The assignment links on Blackboard will disappear at 12:00 a.m., so please plan ahead!

Professionalism (50 points): Active involvement in class is an important part of the learning process. It is assumed that all students will be actively involved in their learning and exploration of issues in this class. You will earn a maximum of 10 points per day. Expected participation includes: on-time attendance, appropriate questioning and responses, effortful completion of in-class activities, and full attention on the learning tasks. (Any individual behaviors or attitudes that detract from the learning process will result in possible point loss, ejection from the class, and/or failing the course.)

Your participation grade will be figured based on the % of participation points that you have earned over the course. To assist you, I have included a column in the Grade Book called “DP Total” which is a running total of participation points that you have earned. Daily participation grades will be entered into the Grade Book in columns labeled, “DP date.” Individual participation points will not count towards your TOTAL points earned in the course. There is a “Professionalism” column in the grade book that will eventually house your professionalism grade. To figure your professionalism grade, convert the % of points you have earned for daily professionalism to points by multiplying the % by 100 and dividing by 2. For example, if you have earned 80% of the professionalism points, then you will receive 40 points for professionalism which will be entered into the “Professionalism” column and figured into your Total Points for the course. Take note, your professionalism grade could separate you from one grade to another, so come to class prepared every day and participate fully to earn the “most accessible” points for the course!

Learning “Thought” Paper (25 points): You will complete 1 “thought” paper at the beginning of the course which is structured to promote critical thinking about the main theme of SMED 510. Details of the paper can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.
GSKyTeach Blog (200 points): As part of your summer GSKyTeach experience, we want you to learn how to use technology to collaborate with others and share your ideas. We also want to challenge your thinking by encouraging you to integrate and apply what you are learning in the program to your future classroom and students. Therefore, you will be expected to collaborate with an assigned partner (refer to schedule) to write and post either a blog entry or response to another team’s blog entry each day. You will also be expected to evaluate at least one blog/response set (i.e., IS or 5E) and give constructive feedback to the authors. A schedule has been created for you to follow. Blogs will be posted on our SMED 510 Blackboard course site and will be made available to all members of the GSKyTeach team (e.g., GRLs, instructors, Master Teachers, administrators, etc.). All blogs, responses, and evaluations must be posted to Blackboard (Tools, Campus Pack Blog Tool) no later than 11:59 p.m. on the day it is due. In Bb, your blog grades (1-10) are listed with the headers B1 through B10. Details of the blog assignment can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.

Learner Diversity “Quick Teach” (50 points): Every GRI will conduct one semi-formal Learner Diversity “Quick Teach” (e.g., seminar, presentation) in SMED 510 based on the topics provided and outlined in the schedule. Each person will be expected to create an engaging seminar/presentation that educates (your choice of how you do this) the audience of future math and science educators on the general research patterns and on effective strategies that could/should be used to help meet the needs of the learners selected and described. Details of the project can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.

Clinical Interview Observation Outline (25 points): For your Clinical Interview assignment, you will need to target a specific learner from the given learning context as determined by the GSKyTeach Summer Program. To aid in your success of the larger project, I would like you to do a focused observation of your targeted learner on the date outlined by your Master Teacher and collect specific information outlined in the assignment document. Details of the project can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.

Clinical Interview Project (200 points): For this assignment, you will target a specific learner, design a meaningful task for that learner within his/her zone of proximal development (ZPD), engage in a one-on-one “teach” with that learner using the scaffolding and pedagogical skills you’ve learned to date, while paying close attention to how the student learns and what you did as the teacher to advance his/her understanding of a particular math/science topic. You will reflect upon the experience. You will describe the process and event with enough detail that a person who knows nothing would be able to clearly understand what took place and why. Details of the project can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.

GRI-Led “How To” Professional Development Seminar (250 points): Every GRI will conduct one formal “How To” professional development seminar in SMED 510 based on the topics provided and outlined in the schedule. Each person will be expected to create an engaging professional development seminar that informs and teaches math and science educators skills that they can take back to their classrooms. For this project, you must have justification (using research and theory) for your instructional choices. Sign-ups for the topics and presentations will be done within the first few days of class. Details of the project can be found in your GSKyTeach binder and within our Blackboard course website in the CONTENT → ASSIGNMENT INFORMATION folder.
Critical Performance The Clinical Interview Project is the Critical Performance artifact for SMED 510 and will assess GRIs on the Kentucky Teaching Standards (KTS) 1, 4, 5, and 7. GRIs will need to upload your critical performance assignment to your electronic portfolio which can be found at: http://edtech2.wku.edu/portfolio/ no later than the deadline provided in the course schedule. Failure to upload critical performances to your electronic portfolio by the deadline provided will result in repercussions from the School of Teacher Education and the GSKy Teach Program. Each Critical Performance will then be evaluated on a 4-point scale based on your original efforts (i.e., grades earned on the project) using the following rubric:

Critical Performance Rubric:

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<thead>
<tr>
<th>Score</th>
<th>Beginning (1)</th>
<th>Developing (2)</th>
<th>Proficient (3)</th>
<th>Distinguished (4)</th>
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<tbody>
<tr>
<td>Points Earned</td>
<td>0-152</td>
<td>153-168</td>
<td>169-184</td>
<td>185-200</td>
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Note: This critical performance will be evaluated in your Teaching Portfolio based off of the scores you earn on the assignment itself. Please refer to the SMED 510 assignment grading keys and rubric for more detailed evaluation information.

Critical Performance – The Clinical Interview Project meets the following Teacher Standards:

STANDARD 1: THE TEACHER DEMONSTRATES APPLIED CONTENT KNOWLEDGE
- The teacher demonstrates a current and sufficient academic knowledge of certified content areas to develop student knowledge and performance in those areas.

STANDARD 4: THE TEACHER IMPLEMENTS AND MANAGES INSTRUCTION
- The teacher introduces/implements/manages instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

STANDARD 5: THE TEACHER ASSESSES AND COMMUNICATES LEARNING RESULTS
- The teacher assesses learning and communicates results to students and others with respect to student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

STANDARD 7: REFLECTS ON AND EVALUATES TEACHING AND LEARNING
- The teacher reflects on and evaluates specific teaching/learning situations and/or programs.