

	<b>Course</b>	<b>Teaching and Learning in Science and Math Education SMED 5302</b>
	<b>Professor</b>	Barbara Curry, MAT
	<b>Term</b>	Summer -8 week session, 2016
	<b>Meetings</b>	M 9:30am – 12:15 pm, FN 3.220

### Professor's Contact Information

<b>Office Phone</b>	972-883-4008
<b>Other Phone</b>	-
<b>Office Location</b>	Founders North 3.218B
<b>Email Address</b>	barbc@utdallas.edu
<b>Office Hours</b>	By appointment.

### General Course Information

<b>Pre-requisites, Co-requisites, &amp; other restrictions</b>	Graduate Student in good standing in Science and Mathematics Education
<b>Course Description</b>	History of science and mathematics education, cognition and application of educational theories on learning in the classroom and research behind science and mathematics methods currently being used in the classroom.
<b>Learning Outcomes</b>	<p>*Students will be able to identify and utilize tools for teaching and learning science and mathematics as demonstrated through feedback reflections and on-line discussion.</p> <p>*Students will demonstrate understanding and use of research in teaching strategies through presentations on classroom applications</p> <p>*Students will be able to synthesize course content through the use of graphic organizers.</p>
<b>Materials</b>	<i>Internet Access, email communication, eLearning</i>
<b>Suggested Texts, Readings, &amp; Materials</b>	<p><b><u>Suggested Textbook-Not Required</u></b>            Making Thinking Visible (MTV)            Ritchart, Church, and Morrison            ISBN 978-0-470-91551-6            (Also available as an eBook)</p> <p><b><u>Provided readings:</u></b>            How People Learn (HPL)  <a href="http://www.nap.edu/openbook.php?record_id=6160">http://www.nap.edu/openbook.php?record_id=6160</a>            Schools For Thought (SFT)  <a href="http://cognet.mit.edu/library/books/view?isbn=0262521962">http://cognet.mit.edu/library/books/view?isbn=0262521962</a>            Preparing Teachers for a Changing World (PTCW) – See eLearning</p> <p>Other resources as needed – See eLearning</p>

## Assignments & Academic Calendar

*[Topics, Assignments, Due Dates, Exam Dates]*

Date	Course Outline
<b>June 6</b>	Course Introduction and Overview Problem Solving Teaching Philosophy Responsible Learning/Responsible Teaching Knowing vs. Understanding Intro to Learning Environments Reading Assignment: See eLearning Complete: eLearning questions
<b>June 8</b>	Learning Environments, cont'd Historical Perspectives John Dewey's Influence Reading Assignment: See eLearning Complete: eLearning questions
<b>June 13</b>	Child/Cognitive Development: How it influences learning Learning Theories Reading Assignment: See eLearning Complete: eLearning questions
<b>June 15</b>	Nature vs Nurture and the Development of Expertise Novice and Expert: What are the real differences Reading Assignment: See eLearning Complete: eLearning questions
<b>June 20</b>	Memory Metacognition and Thinking Reading Assignment: See eLearning Complete: eLearning questions
<b>June 22</b>	Questioning Strategies Claims, Evidence and Reasoning (CER) Reading Assignment: See eLearning Complete: eLearning questions
<b>June 27</b>	Learning and Transfer Classroom Management Strategies Reading Assignment: See eLearning Complete: eLearning questions
<b>June 29</b>	Assessment Reading Assignment: See eLearning Complete: eLearning questions
<b>July 4</b>	National Holiday – No Class
<b>July 6</b>	Micromessaging Reading Assignment: See eLearning Complete: eLearning questions
<b>July 11</b>	How Students Learn – Mathematics Instruction Reading Assignment: See eLearning Complete: eLearning questions
<b>July 13</b>	How Students Learn: Science Instruction Reading Assignment: See eLearning Complete: eLearning questions
<b>July 18</b>	Technology Basics for Teaching and Learning Reading Assignment: See eLearning Complete: eLearning questions

<b>July 20</b>	Models and Model eliciting activities Semester Wrap-up Reading Assignment: See eLearning Complete: eLearning questions
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### Requirements

	All of the following requirements must be completed in order to pass this class. Designated assignments will be turned in through eLearning.	
	Class Attendance and Participation	Each Class Meeting*
	Reading response questions	As Assigned Weekly
	*Required as noted below	

### Course Policies

<b>Grading (credit) Criteria</b>	<b>•Readings</b> To be completed as noted in the schedule above. They will be completed through the Assessments link on eLearning. Questions will need to be completed and submitted by 8:00am on the following class day.	<b>60%</b>								
	<b>•Presentations of researched articles</b>	<b>20%</b>								
	<b>•Final Project</b> Demonstration and discussion of connections between all topics discussed and how they relate to classroom practice.	<b>20%</b>								
	The semester grade will be determined by total number of points accrued in each category. An overall percentage will be calculated with the following grades applied:									
	<table><tr><td>97-100% A+</td><td>87-89% B+</td><td>77-79% C+</td></tr><tr><td>94-96% A</td><td>84-86% B</td><td>74-76% C</td></tr><tr><td>90-93% A-</td><td>80-83% B-</td><td>70-73% C-</td></tr></table> Any Grades calculated below 80% will be considered failing.		97-100% A+	87-89% B+	77-79% C+	94-96% A	84-86% B	74-76% C	90-93% A-	80-83% B-
97-100% A+	87-89% B+	77-79% C+								
94-96% A	84-86% B	74-76% C								
90-93% A-	80-83% B-	70-73% C-								
<b>Make-up Exams</b>	Make-up exams will only be allowed under extreme circumstances. Students must contact the instructor prior to the exam to qualify.									
<b>Late Work</b>	Late work will be accepted with a 10% deduction in the grade for each day an assignment is late. This begins at the time the class ends on the assignment due date.									
<b>Class Attendance</b>	Required. An absence rate of greater than 10% will result in a letter grade reduction.									
<b>Classroom Citizenship</b>	Students are expected to present themselves as professionals and work in a cooperative learning environment. Cell phones will not be utilized during class time (to include calls, texting and web surfing)									
<b>UT Dallas Syllabus Policies and Procedures</b>	The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.  Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.									

*These descriptions and timelines are subject to change at the discretion of the Professor.*