Knowing and Learning in Science and Mathematics Course Syllabus
NATS 3341.001& NATS 3341.002, Spring 2017

Course Information
001 - M/W – SLC 1.214 1:00 - 2:15 PM

Professor Contact Information

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Office Hours: Monday 12:00-12:45pm and 2:30-3:30 (you will usually find me in the classroom)
Wednesday 12:00-12:45pm (you will usually find me in the classroom)
Other times by appointment.

Course pre-requisites, co-requisites, and/or other restrictions: students should 1) have an interest in exploring teaching as a career and 2) Completion of Step 1 and completion of or concurrent enrollment in Step 2

Course Description:
A goal of this course is for participants to develop a powerful tool kit of theory-driven approaches to knowing and learning in mathematics and science. The focus is primarily on issues of what it means to learn and know science and mathematics in a way that is intended to broaden our sense of what is possible in our educational practices. Some of the questions that will be addressed in the course include: What are the standards for knowing we can use? How is knowing and learning structured, and how does what we know change and develop? For science and mathematics educators, what are the tensions between general, cross-disciplinary characterizations of knowing (e.g., intelligence or the conditioning of behavior) and the specifics of coming to understand powerful ideas in mathematics and science? What are the links between knowing and developing in learning theory, and the content and evolution of scientific ideas? What are the connections between kinds of assessments and theories of knowing? How are various uses of technology associated with specific approaches to learning? A broader and, hopefully, richer sense of what is possible is to support the kind of "power in action" that helps us become ever more effective and creative science and mathematics educators.

Learning Outcomes:
*Students will construct models of knowing and learning to guide classroom practice.
* Students will articulate various standards for knowing mathematics and science and articulate the implications of these standards for assessment, especially standardized assessment.
*Students will articulate what it means to know, learn and understand relative to cognitive structures and describe how what people know changes and develops.
* Students will describe various paradigms for evaluating science and mathematics understanding.
*Students will use the clinical interview method to make sense of someone's reasoning about a topic in mathematics or science. Students will be able to evaluate science and mathematics content and apply it to the correct learning environment.

*Students will describe the links between knowing and developing in learning theory and the content and evolution of scientific ideas.
*Students will complete a Philosophy of Teaching as the first step in development of their portfolio

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Required Materials: *Internet Access, email communication, eLearning*
Provided readings:
How People Learn (HPL)
http://www.nap.edu/openbook.php?record_id=6160

How Students Learn Mathematics/Science (HSL)
http://www.nap.edu/openbook.php?record_id=10126

Schools For Thought (SFT)
http://cognet.mit.edu/library/books/view?isbn=0262521962

Month	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Jan 2017	**9** Knowing and Understanding Reading Assignment: Class handout	**10**	**11** Accountable Talk + Reading Strategy (Marking the Text) Reading Assignment: Reflection questions	**12**	**13**	**14**	**15** Week 1 Reflection due at Noon
	16 **MLK Day**	**17**	**18** Learning Environments Assign First Clinical Interview	**19**	**20**	**21**	**22** Week 2 Reflection due at Noon
	23 Thinking and Understanding Reading Assignment: Reflection questions	**24**	**25** Making Thinking Visible Reading Assignment: Reflection questions	**26**	**27**	**28**	**29** Week 3 Reflection due at Noon
	30 Foundations of Assessment	**31**	**1** Questioning Strategies Assignment: Reflection questions	**2**	**3**	**4**	**5** Week 4 Reflection due at Noon
Feb 2017	**6** Child/ Cognitive Development: How it influences learning	**7**	**8** Nature vs Nurture Reading Assignment: Reflection questions Due: First Clinical Interview	**9**	**10**	**11**	**12** Week 5 Reflection due at Noon
	13 Dyslexia- Understanding Student Differences:	**14**	**15** Novice and Expert Reading Assignment: Reflection questions Assign: Second Clinical Interview	**16**	**17**	**18**	**19** Week 6 Reflection due at Noon
	20 Brain Based Learning and Memory	**21**	**22** Learning and Transfer Reading Assignment: Reflection questions Assign Mid-Term	**23**	**24**	**25**	**26**
	27 Learning Theory I - Behaviorism	**28**	**1** Learning Theory II – Constructivism Reading Assignment Due: Mid-Term	**2**	**3**	**4**	**5** Week 8 Reflection due at Noon

Month	Mon	Tue	Wed	Thu	Fri	Sat	Sun
March 2017	**6** Learning Theory III - Cognitivism	**7**	**8** How Students Learn – Mathematics Instruction I Due: Second Clinical Interview	**9**	**10**	**11**	**12**
	13	**14**	**15** **Spring Break**	**16**	**17**	**18**	**19**
	20 How Students Learn: Mathematics Instruction II	**21**	**22** How Students Learn: Science Instruction I Reading Assignment: Reflection questions Intro to Philosophy of Teaching Assign: Teaching Philosophy Statement	**23**	**24**	**25**	**26** Week 10 Reflection due at Noon
	27 How Students Learn: Science Instruction II	**28**	**29** Claims, Evidence and Reasoning Reading Assignment: Reflection questions	**30**	**31**	**1**	**2** Week 11 Reflection due at Noon
April 2017	**3** Problem Solving: Model Eliciting Activities' Due: First Draft of Teaching Philosophy – bring to class	**4**	**5** Problem Solving: Anchored Instruction Reading Assignment: Reflection questions	**6**	**7**	**8**	**9** Week 12 Reflection due at Noon
	10 How Students Learn- Literacy Instruction in Mathematics Reading Assignment	**11**	**12** How Students Learn- Literacy Instruction in Science Reading Assignment: Reflection questions Due: Teaching Philosophy Statement	**13**	**14**	**15**	**16**Week 13 Reflection due at Noon
	17 Technology Basics I Peer Review Teaching Philosophy	**18**	**19** Technology Basics II Reading Assignment: Reflection questions	**20**	**21**	**22**	**23** Week 14 Reflection due at Noon
	24 The Laughing Classroom	**25**	**26** Final Exam Review Final Concept Map Due: Final Teaching Philosophy Statement Assign: Final Exam	**27**	**28**	**29**	**30**
May 2017	**1**	**2**	**3**Final Exam Due at Midnight	**4**	**5**	**6**	**7**
	8	**9**	**10**	**11**	**12**	**13**	**14**

Class	Course Outline	Assignments/Notes	Educator Standards /CR
Beliefs About Knowing, Learning & Understanding **January 9***	• What is Knowing and Understanding? • Course Introduction and Overview • Syllabus Overview	• Discussion of Knowing, Learning and Understanding • Class Activity: Just What do We Know and Understand • *Reading Assignment:* What is Accountable Talk, Institute for Learning, Pam Goldman. • Everything submitted must be in the following format: yourlastname_S17_description of document (e.g. superstudent_S17_first clinical interview) • All assignments are due at or before time noted on the calendar	Discussion and Class Activity • §228.30(a) 1.10k, 1.1k, 1.14k, 1.20k, 1.8s, 3.8k • §228.30(d)(4)(b) • §228.30(d)(4)(c) Reading: Goldman • §228.30(a)) 1.20k, 2.1k, 2.2k. 2.3k, 2.4k, 2.5k, 2.16k, 2.17k, 2.2s, 3.1k, 3.4k • §228.30 (d) (2)
Responsible Learning/ Responsible Teaching ***January 11****	• *What is Accountable Talk?* • *Reading Strategy- Marking the Text* • *Intro to Learning Environments*	• *Discussion of Accountable Talk* • *Class Activity: The Planets in the Solar System* • *Reading Assignment: How Students Learn: Science in the Classroom Chapter 1 Pages 1-26* • *Reading Assignment: Benny's Conception of Rules and Answers in IPI Mathematics, S. H. Erlwanger* • *Reflection Questions: eLearning Weekly Materials- Week One.*	*Discussion and Class Activity* • *§228.30(d) (2)* • *§228.30(a) 1.20k, 2.1k, 2.2k. 2.3k, 2.4k, 2.5k, 2.16k, 2.17k, 2.2s, 3.1k, 3.4k* • *§228.30(b)* *Reading: HPL* • *§228.30 (a) 1.8k, 1.9k, 1.20k, 1.24k, 1.25k, 1.29k, 1.9s, 2.1k* • *§228.30 (d)(4)* • *§228.30(b)* *Reflection Questions* • *§228.30(a) 1.8s, 2.2s*
Learning Environments & Three Principles of Learning **January 18**	• What are the Three Principles of Learning? • What are Learning Environments? • First Clinical Interview	• Discussion of the Three Principles of Learning. • Class Activity: Bonita's Problem • Discussion of Learning Environments • Discussion of Erlwanger's Benny • *Assignment:* View Private Universe Video http://www.learner.org/resources/series28.html • **Assign First Clinical Interview**	Discussion and Class Activity • §228.30 (a) 1.8k, 1.9k, 1.20k, 1.24k, 1.25k, 1.29k, 1.9s, 2.1k, 2.2k, 2.3k, 2.21k, 2.2s, 2.20s, 3.10s • §228.30(b) • §228.30 (d)(4) Reading §228.30(a) 1.8k, 1.9k, 1.20k, 1.24k, 1.25k, 1.29k, 1.9s, 2.1k • §228.30 (d)(4) First Clinical Interview 1.20k, 3.4s
Thinking and Understanding Using Models in the Classroom **January 23***	• Why Use Models in the Classroom? • How does the use of models help with Thinking and Understanding? • What Learning Environments are present?	• Class Activity: Lesson on Moon Phases • Class Discussion: What Learning Environments were observed during the Lesson? • *Reading Assignment:* Making Thinking Visible, Ron Ritchhart, Chapter 1 Pages 3-22 • *Reflection Questions*: eLearning Weekly Materials- Week Two.	Discussion and Class Activity • §228.30(a) 1.20k, 2.1k, 3.5k, 3.6k, 3.7k, 3.8k, 3.9k, 3.10k, 3.11k Reading • §228.30(a) 1.20k, 2.1k, 3.5k, 3.6k, 3.7k, 3.8k, 3.9k, 3.10k, 3.11k Reflection Questions • §228.30 (a) 1.20k, 2.1k, 3.5k, 3.6k, 3.7k, 3.8k, 3.9k, 3.10k, 3.11k, 1.23s

Class	Course Outline	Assignments/Notes	Educator Standards /CR
Making Thinking Visible **January 25***	What is Meant by Making Thinking Visible?	• Class Discussion: Making Thinking Visible • Class Activity: Concept Maps • *Reading Assignment:* - Vygotsky's Sociocultural Perspective, Woolfolk - Piaget, http://webspace.ship.edu/cgboer/piaget.html - Kolb - Learning Styles, Saul McLeod - Erik Erikson's Stages of Psychosocial Development, Kendra Cherry • *Reflection Questions*: eLearning Weekly Materials	Discussion and Class Activity • §228.30(a) 1.20k, 1.29k • §228.30(b) • §228.30(d)(4)(b) Reading • §228.30(b) • §228.30(a) 1.20k, 1.29k Reflection Questions • §228.30(a) 3.4s, 3.5s, 1.20k, 1.29k • §228.30(b) • §228.30(d)(4)(b)
Foundations of Assessment **January 30**	Foundations of Assessment	• Class Discussion: Formative Assessments • Class Activity: Make a Little Book • *Reading Assignment:* ○ Educational Leadership, The Best Value in Formative Assessment ○ Inside the Black Box, Black and Wiliam, 2001	Discussion and Class Activity • §228.30(a) 1.4k, 1.8k. 1.9k. 1.10k, 1.11k, 1.16k, 1.17k, 1.24k, 1.25k, 1.26k, 1.27k 1.28k, 1.29k, 1.30k, 2.6k, 3.4k, 3.12k. 3.13k, 3.14k, 3.15k, 3.16k Reading • §228.30(a) 1.4k, 1.8k. 1.9k. 1.10k, 1.11k, 1.16k, 1.17k, 1.24k, 1.25k, 1.26k, 1.27k 1.28k, 1.29k, 1.30k, 2.6k, 3.4k, 3.12k. 3.13k, 3.14k, 3.15k, 3.16k
Questioning Strategies **February 1***	Questioning Strategies	• Class Discussion: Questioning • Class Activity: Interactive Notebook • *Reading Assignment:* How Can Quality Questioning Transform Classrooms? Chapter 1, Pages 1-21 • *Reflection Questions*: eLearning Weekly Materials	Discussion and Class Activity • §228.30(a) 1.4k, 1.8k. 1.9k. 1.10k, 1.11k, 1.16k, 1.17k, 1.24k, 1.25k, 1.26k, 1.27k 1.28k, 1.29k, 1.30k, 2.6k, 3.4k, 3.12k. 3.13k, 3.14k, 3.15k, 3.16k, 3.6s Reading • §228.30(a) 1.4k, 1.8k. 1.9k. 1.10k, 1.11k, 1.16k, 1.17k, 1.24k, 1.25k, 1.26k, 1.27k 1.28k, 1.29k, 1.30k, 2.6k, 3.4k, 3.12k. 3.13k, 3.14k, 3.15k, 3.16k, 3.6s Reflection Questions • 228.30(a) 1.4k, 1.8k. 1.9k. 1.10k, 1.11k, 1.16k, 1.17k, 1.24k, 1.25k, 1.26k, 1.27k 1.28k, 1.29k, 1.30k, 2.6k, 3.4k, 3.12k. 3.13k, 3.14k, 3.15k, 3.16k, 3.6s
Child/Cognitive Development **February 6**	Child/Cognitive Development: How it influences learning Piaget, Vygotsky, Kolb, Erikson and Gardner	• Class Discussion: Cognitive Development according to Piaget, Vygotsky, Kolb, and Erikson • Class Activity: Venn Diagram comparing the theorists	Discussion and Class Activity • §228.30 (a) 1.1k, 1.2k, 1.3k, 1.4k, 1.5k, 1.12k • §228.30 (b) • §228.30 (d)(4)(b)

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Nature vs Nurture **February 8***	Is Learning due to Nature or Nurture? (Watson and Bandura) The Development of Expertise	• Class Discussion: Nature vs Nurture • *Reading Assignment:* - Nature vs Nurture in Intelligence http://wilderdom.com/personality/L4-1IntelligenceNature VsNurture.html - Dyslexia. Sally E. Shaywitz, Scientific American • *Reflection Questions*: eLearning Weekly Materials • **Due: First Clinical Interview**	Discussion • §228.30(a) 1.1k, 1.2k, 1.3k, 1.5k, 1.12k Reading • §228.30(c) (2) §228.30(a) 1.3k, 1.4k, 1.14k Reflection Questions • §228.30(a) 1.1s, 1.1k, 1.2k, 1.3k, 1.5k, 1.12k
Dyslexia Instruction **February 13**	Dyslexia Instruction Understanding Individual learning needs and differentiated instruction	• Class Discussion: Dyslexia Instruction and Accommodations • *Reading Assignment:* How People Learn, Chapter 2, How Experts Differ from Novices, Pages 31-50	Discussion • §228.30 (c) (2) §228.30(a) 1.3k, 1.4k, 1.14k, 1.2s, 1.3s Reading • §228.30 (d) (4)(c)
Novice and Expert **February 15***	Novice and Expert: What are the real differences?	• Class Discussion: Experts vs Novices • *Reading Assignment:* Human Memory Atkinson-Shiffrin Model, http://users.ipfw.edu/abbott/120/AtkinsonShifrin.html • *Reflection Questions*: eLearning Weekly Materials • **Assign: Second Clinical Interview**	Discussion and Class Activity • §228.30(d)(4)(c) • §228.30(a)1.2k, 1.3k, 1.4k, 1.17k Reading • §228.30(d)(4)(c) Reflection Questions • §228.30(d)(4)(c) • §228.30(a)1.2k, 1.3k, 1.4k, 1.17k
Brain Based Learning and Memory **February 20**	What do we know about Memory? What is Brain Based Learning?	• Class Discussion: Memory and Brain-Based Learning • Class Activity: Memory • *Reading Assignment:* How the Brain Learns, David Sousa,	Discussion and Class Activity • §228.30(a) 1.4k, 1.20k, 1.22k Reading • §228.30(d)(4)(c)
Learning and Transfer **February 22***	Learning and Transfer	• Class Discussion: Learning and Transfer • Class Activity: Circumference of the Earth • *Reading Assignment:* How People Learn, Chapter 3, Learning and Transfer, Pages 51-78 • *Reflection Questions*: eLearning Weekly Materials. • **Assign Mid-Term**	Discussion and Class Activity • §228.30(a) 1.4k, 1.9k, 1.20k, 1.22k, 3.7k, Reading • §228.30(a) 1.4k, 1.9k, 1.20k, 1.22k, 3.7k, Reflection Questions • §228.30(a) 1.4k, 1.9k, 1.20k, 1.22k, 3.7k,
Learning Theory I – Behaviorism **February 27**	Learning Theory I – Behaviorism Pavlov, Skinner	• Class Discussion: Behaviorism • Class Activity: Skeletal System Activity • *Reading Assignment:* Surely You're Joking Mr. Feynman, Pages 211-219	Discussion and Class Activity • §228.30 (a) 1.4k, 1.20k, 2.13k, 2.18k, 3.10k • §228.30 (d)(b) Reading • §228.30 (a) 1.4k, 1.20k, 2.13k, 2.18k, 3.10k • §228.30 (d)(b)
Learning Theory II – Constructivism **March 1***	Learning Theory II – Constructivism Bruner	• Class Discussion: Constructivism • Class Activity: Tilling the Pool Activity • **Due: Mid-Term Exam**	Discussion and Class Activity • §228.30(a) 1.4k, 1.20k, 3.10k Reading • §228.30(a) 1.4k, 1.20k, 3.10k

Class	Course Outline	Assignments/Notes	Educator Standards /CR
Learning Theory III – Cognitivism **March 6**	Learning Theory III – Cognitivism Ausubel	• Class Discussion: Cognitivism • Class Activity: Imagine You're a Seventh Grade Math Teacher Activity • *Reading Assignment:* Promoting Learning in Middle-Grades Mathematics, Sowder and Philipp, Pages 89-107	Discussion and Class Activity • §228.30(a) 1.4k, 1.20k, 3.10k Reading • §228.30(a) 1.4k, 1.20k, 3.10k
Mathematics Instruction I **March 8***	How Students Learn – Mathematics Instruction I	• Class Discussion: Middle School Vignettes • *Reading Assignment:* Adding It Up: Helping Children Learn Mathematics, Chapter 4, Pages 115-155 • *Reflection Questions*: eLearning Weekly Materials • **Due: Second Clinical Interview**	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c) Reading • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c) Reflection Questions • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c)
Mathematics Instruction II **March 20**	How Students Learn: Mathematics Instruction II	• Class Discussion: Math Proficiencies • Class Activity: Average Daily Attendance Activity • *Reading Assignment:* Taking Science to School: Learning and Teaching Science in Grades K-8, Chapter 2, Pages 26-49	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c) Reading • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c)
Science Instruction I **March 22***	How Students Learn: Science Instruction I	• Class Discussion: Science Proficiencies • Class Activity: Email Lab • Class Activity: Science Process Lab • *Reading Assignment:* Teaching Science Though Inquiry, The Science Teacher, Sept 2015, Pages 62-67 • *Reflection Questions*: eLearning Weekly Materials • **Assign: Teaching Philosophy Statement**	Discussion and Class Activity • §228.30 (a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k, 3.6k, 3.7k, 3.8k, 3.10k • §228.30(d)(4)(c) Reading • §228.30 (a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c) Reflection Questions • §228.30 (a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c)
Science Instruction II **March 27**	How Students Learn: Science Instruction II	• Class Discussion: Inquiry Lessons • Class Activity: Inquiry Lab • *Reading Assignment:* Getting Past "Just Because" Teaching Writing in Science Class	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k, 3.6k, 3.7k, 3.8k, 3.10k • §228.30(d)(4)(c) Reading • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k • §228.30(d)(4)(c)
Argument Driven Inquiry **March 29***	Claims, Evidence and Reasoning Argument Driven Inquiry Intro to Philosophy of	• Class Discussion: Argument Driven Inquiry • *Reflection Questions*: eLearning Weekly Materials • *Reading Assignment:* How To Solve It, Polya 1957	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k, 1.11s • §228.30(d)(4)(c) Reading

Class	Course Outline	Assignments/Notes	Educator Standards /CR
	Teaching		• §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k, 1.11s • §228.30(d)(4)(c) Reflection Questions • §228.30(a) 1.4s, 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k, 1.11s • §228.30(d)(4)(c) Teaching Philosophy • §228.30(a) 1.7s, 1.11s, 1.15s, 3.6k, 3.7k, 3.8k, 3.10k
Problem Solving I: **April 3**	Problem Solving: Model Eliciting Activities	• Class Discussion: Model Eliciting Activities • Class Activity: Model Eliciting Activity- Soccer Games • *Reading Assignment:* Investigating the Relationship Between the Problem and the Solver, Carmona and Greenstein • **Due: First Draft of Teaching Philosophy – bring to class**	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k Reading • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k
Problem Solving II: **April 5***	Problem Solving: Anchored Instruction	• Class Discussion: Anchored Instruction • Class Activity: Anchored Instruction- Jasper Project • *Reading Assignment:* Anchored Instruction, Brian Bottge • *Reflection Questions*: eLearning Weekly Materials	Discussion and Class Activity • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k Reading • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k Reflection Questions • §228.30(a) 1.4k, 1.7k, 1.8k, 1.19k, 1.20k, 1.22k

How Students Learn- Literacy Instruction in Mathematics
 	
April 10
	How Students Learn- Literacy Instruction in Mathematics	• Class Discussion: Math Literacy
		• Class Activity: One Grain of Rice
		• *Reading Assignment*: Literacy Strategies for Improving Mathematics Instruction:
		  ○ Chapter 1 - Mathematics as Language, Joan M. Kenney
		  ○ Chapter 2 - Reading in the Mathematics Classroom, Diana Metsisto
			Discussion and Class Activity
			• §228.30(a) 1.4k, 1.8k
			• §228.30(d)(2) 2.2k, 2.3s, 2.4k, 2.7k,2.8k
			Reading
			• 228.30(a) 1.4k, 1.8k
			• §228.30(d)(2) 2.2k, 2.3s, 2.4k, 2.7k, 2.8k

How Students Learn: Literacy Instruction in Science
 	
April 12*
	How Students Learn: Literacy Instruction in Science
	Vocabulary Strategies and Word analysis
		• Class Discussion: Science Literacy
		• Class Activity: Reading Strategies
		• *Reading Assignment:*
		  ○ Educational Leadership: What Students Need to Learn: Teaching Science Literacy
		  ○ Strategies for the Phases of Cognitive Processing
		• *Reflection Questions*: eLearning Weekly Materials
		• **Due: Teaching Philosophy Statement**
			Discussion and Class Activity
			• §228.30(a) 1.4k, 1.8k, 1.11k
			• §228.30(d)(2) 2.2k, 2.3s, 2.4s, 2.5s, 2.4k, 2.7s, 2.7k,2.8k
			Reading
			• §228.30(a) 1.4k, 1.8k, 1.11k
			• §228.30(d)(2) 2.2k, 2.3s, 2.4s, 2.5s, 2.4k, 2.7s, 2.7k,2.8k
			Reflection Questions
			• §228.30(a) 1.4k, 1.8k, 1.11k
			• §228.30(d)(2) 2.2k, 2.3s, 2.4s, 2.5s, 2.4k, 2.7s, 2.7k,2.8k

Technology Basics I **April 17**	Technology Basics I Peer Review Teaching Philosophy	• Class Discussion: Technology in the Classroom • Class Activity: Website Evaluations • *Reading Assignment:* Brain-Based Teaching in a Digital Age, Chapter 1, Pages 3-15, Sprenger	Discussion and Class Activity • §228.30 (a) 1.4k, 1.8k, 1.10k, 1.11k, 1.17k, 1.28k, 1.17s, • Tech Apps III, IV Reading • §228.30 (a) 1.4k, 1.8k, 1.10k,

Class	Course Outline	Assignments/Notes	Educator Standards /CR
			1.11k, 1.17k, 1.28k • Tech Apps III, IV
Technology Basics II **April 19***	Technology Basics II	• Class Discussion: The Flipped Classroom • Class Activity: Continue with Website Evaluations • *Reading Assignment* Flipping Tools for the Science Classroom, NSTA, March 2015 • *Reflection Questions*: eLearning Weekly Materials	Discussion and Class Activity • §228.30(a) 1.4k, 1.8k, 1.10k. 1.11k, 1.17k, 1.28k, 1.17s • Tech Apps III, IV Reading • 228.30(a) 1.4k, 1.8k, 1.10k. 1.11k, 1.17k, 1.28k, 1.17s • Tech Apps III, IV Reflection Questions • 228.30(a) 1.4k, 1.8k, 1.10k. 1.11k, 1.17k, 1.28k, 1.17s • Tech Apps III, IV
The Laughing Classroom **April 24**	The Laughing Classroom	• Class Discussion: Laughter in the Classroom	Discussion and Class Activity • §228.30(d) (2) • §228.30(a) 1.20k, 2.1k, 2.2k. 2.3k, 2.4k, 2.5k, 2.16k, 2.17k, 2.2s, 3.1k, 3.4k • §228.30(b)
Final Exam Review **April 26**	Final Exam Review Final Concept Map	• Class Discussion: Important Concepts Presented this Semester • Class Activity: Develop Concept Map • **Due: Final Teaching Philosophy Statement**	Discussion and Class Activity • §228.30(a) • §228.30(b) • §228.30(d) (2) –(4)
May 3	**Final Exam Due at Midnight**		

UT Dallas Practicing Teacher Compliance Policies

As a student in this course, you are expected to comply with Texas Administrative Code (TAC), Title 19, Part 7, Chapter 247, Rule §247.2 – Code of Ethics and Standard Practices for Texas Educators and the UT Dallas Fitness to Teach Policy.

Website:
http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=247&rl=2

Course Policies

Grading (credit) Criteria

•**Readings** **30%**
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 by the following Sunday at 11:59am

•**Class Participation** **5%**

•**Teaching Philosophy Statement** **10%**

•**Clinical Interview 1** **10%**
To be completed utilizing the guidelines provided.

•**Clinical Interview 2** **15%**
Interview in greater depth to be completed using guidelines provided.

•**Mid-Term exam** **15%**
Analysis and application of concepts presented up to this point.

•**Final Exam** **15%**
Analysis and application of concepts presented during the entire semester.

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:

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- Any Grades calculated below 70% will be considered failing.
Make-up Exams	Make-up exams will only be allowed under extreme circumstances. Students must contact the instructor prior to the exam to qualify.
Late Work	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.
Class Attendance	Required. An absence rate of greater than 10% will result in a letter grade reduction.
Classroom Citizenship	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)
UT Dallas Syllabus Policies and Procedures	The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to http://provost.utdallas.edu/syllabus-policies/ for these policies.
UTeach Dallas Complaints Procedure	You have the right to raise a concern or lodge a complaint and to seek redress in areas where you feel that the program did not fulfill requirements for certification or for actions that you feel are wrong. To raise a concern or file a complaint: 1. Contact UTeach Dallas Associate Director, Katie Donaldson, with your complaint at kate.donaldson@utdallas.eduor 972-883-6427. 2. If your concern is not resolved to your satisfaction and you want to speak with someone else, contact UTeach Dallas Co-Director, Dr. Mary Urquhart, at urquhart@utdallas.edu or 972-883-6485 to schedule an appointment. **All conferences are confidential.** The University of Texas at Dallas Student Complaint Resources page is also a resource and may be found at http://catalog.utdallas.edu/2013/undergraduate/resources/student-complaints You also have the right to file a complaint about UTeach Dallas directly to the Texas Education Agency (TEA) at www.tea.texas.gov.
Campus Carry	The University's concealed handgun policy is posted on the campus carry website: http://www.utdallas.edu/campuscarry/

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

Rubric for Evaluating Class Participation

Spring 2017

	Strong Work [1]	**Needs Development**	**Unsatisfactory**
Listening	Actively and respectfully listens to peers and instructor	Sometimes displays lack of interest in comments of others	Projects lack of interest or disrespect for others
Preparation	Arrives fully prepared with all assignments completed, and notes on reading, observations, questions	Sometimes arrives unprepared or with only superficial preparation	Exhibits little evidence of having read or thought about assigned material
Quality of contributions	Comments are relevant and reflect understanding of: assigned text(s); previous remarks of other students; and insights about assigned material	Comments sometimes irrelevant, betray lack of preparation, or indicate lack of attention to previous remarks of other students	Comments reflect little understanding of either the assignment or previous remarks in seminar
Impact on seminar	Comments frequently help move seminar conversation forward	Comments sometimes advance the conversation, but sometimes do little to move it forward	Comments do not advance the conversation or are actively harmful to it
Frequency of participation	Actively participates at appropriate times	Sometimes participates but at other times is "tuned out"	Seldom participates and is generally not engaged

[1] Class participation is worth 50 points or 5% of the entire semester grade. The mid-term grade will include class participation up to that point in the semester.

http://www1.villanova.edu/villanova/artsci/acsp/resources/rubric.html