



Course ID:	Course Title:	Winter 2017
CDPD 400	Strategizing for Numeracy in the Elementary Classroom	Prerequisite:
		Credits: 3

Class Information		Instructor Information		Important Dates	
Days:		Instructor:	Master in Education (minimum) PhD/EdD (preferred)	First day of classes:	Wed., Jan 4, 2017
Time:		Email:		Last day to add/drop, or change to audit:	Sun, Jan. 15, 2017
Room:		Phone:		Last day to request revised exam:	Mon, Mar. 6, 2017
Lab/ Tutorial:		Office:		Last day to withdraw from course:	Fri, Mar. 17, 2017
		Office Hours:		Last day to apply for coursework extension:	Mon, Mar. 29, 2017
Final Exam:				Last day of classes:	Tue, April 11, 2017

Course Description

For practicing educators, an examination of numeracy pedagogy connecting research to present day instructional practices. Students will build personal and common understandings of how children in schools engage with quantitative or spatial information to create meaning in the K-6 classroom. Instruction will build on a model of co-construction which will culminate with the development of a numeracy plan for use in their classrooms. Topics include visible numeracy practices that promote number conservation, problem-solving skills, mathematical relationships, geometrical thinking, and differentiation and assessment.

Expected Learning Outcomes

Students will:

- Design mathematical tasks that comprehensively align the Alberta Program of Studies Curriculum in a meaningful, measurable, differentiated and constructive manner.
- Develop and sequence spatial reasoning and visible numeracy practices that promote number conservation to problem-solving skills.
- Construct meaningful assessment practices that support student learning within their classroom contexts.
- Create a comprehensive numeracy plan

Textbooks

Boaler, Jo. (2016) *Mathematical Mindsets: Unleashing Students' Potential through Creative Math,*

Course Schedule

Mathematical processes of communication, connections, mental math, estimation, problem-solving, reasoning technology and visualization will be integrated with the key concepts of Number, Patterns and Relations, Shape and Space and Statistics and Probability into each week's topic, as appropriate.

Week One:

The Brain and Math Learning
Implications for planning for instruction and differentiation

Week Two:

The Power of Struggle and Mathematics instruction
Creating opportunities for "failure" and learning
Assessment for a growth mindset in mathematics

Week Three:

Creativity in Mathematics
Problem Solving
The Importance of Flexibility with numbers

Week Four:

Developing rich math tasks for growth mindset: Number

Week Five:

Developing rich math tasks for growth mindset: Patterns and Relations

Week Six:

Developing rich math tasks for growth mindset: Shape and Space

Week Seven:

Developing rich math tasks for growth mindset: Statistics and Probability

Weeks Eight-Nine:

Identifying problems of practice for numeracy plans
Understanding current research and implications

Week Ten:

Presentations of Numeracy Plans

Requirements:

1. Students will be expected to keep a bi-weekly, reflective journal documenting their thinking and understanding of topics in class. These will be submitted electronically in Weeks 3 and 7. Weighing: 20% each for a total of 40%
2. Numeracy Plan: Students will develop a comprehensive numeracy plan in their chosen grade that focuses on the development of rich tasks, differentiation and assessment for one of the key content areas of Number, Patterns and Relations, Shape and Space or Statistics and Probability. This will also include a oral presentation of the plan. Weighing: 50%
3. Participation: Students will be expected to actively participate in class discussion and activities as is fitting a learning community. Weighing: 10%

Attendance:

Because of the interactive nature of this course, students are expected to regularly attend classes. If the student is absent, they need to ensure the topic of the class missed is addressed in their bi-weekly, reflective journal.

Grade Summary:

The available letters for course grades are as follows:

<u>Letter Grade</u>	<u>Description</u>
A+	
A	Excellent
A-	
B+	
B	Good
B-	
C+	
C	Satisfactory
C-	
D+	
D	Minimal Pass
F	Failure

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

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Ambrose University Academic Policies:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student

to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.