COURSE SYLLABUS
Statistical and Geometrical Concepts for Elementary School Teachers
MATH 123 – 001
Fall 2014

Who's teaching this course?

Name	Dr. Brian Gleason
Email	brian.gleason@nsc.edu
Telephone	(702) 992–2627
Class Time/Place	Th 3:30 – 5:00 p.m. in BW1 102 Th 5:00 – 5:20 p.m. in BW2 102

When can we meet?

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
LAS 153	3:30 – 4:30		3:30 – 4:30		
BW2 221		2:30 – 3: 15		2:30 – 3:15	

What sweet textbook will we be using?

Title	**Author**	**Edition**	**ISBN**
Mathematics for Elementary Teachers (with Activities)	Sybilla Beckmann	4	0-321-82572-1

Textbooks can be purchased online (www.nsbookstore.org) through the Nevada State Bookstore. The text is also available electronically at www.coursesmart.com. Students are encouraged to check multiple online retailers for price and format options for the text.

What is the course about?

Mathematics needed by those teaching new-content mathematics courses at the elementary school level with emphasis on the concepts in statistics and geometry.

What will I learn?

1. Upon successful completion of this course, students will demonstrate a mastery of knowledge and skills relative to:
   a. Numerical expressions, representations of functions, and linear functions.
   b. The concept of planar angle and applications to fundamental planar polygons.
   c. Common measurement ideas, including dimensional analysis, measurement error, and measurement conversion.
   d. Computations for area involving foundational planar shapes.
   e. The logic underlying the computations for area.
   f. Computations for surface area and volume involving foundational polyhedral and other solid shapes.
   g. The logic underlying the computations for surface area and volume.
   h. Fundamental principles of symmetry, applications of symmetry, and classical constructions.
   i. Foundational statistics including issues related to data collection, display, and measure.

j. Foundational probability and counting principles for discrete objects.

2. Upon successful completion of this course, students will be introduced to the following knowledge and skills:
   a. Common student understandings, alternative algorithms, misconceptions, and questions concerning all of the topics listed in the section above.
   b. Possible pedagogical moves for addressing common student understandings, alternative algorithms, misconceptions, and questions concerning all of the topics listed in the section above.

How should I pace myself?

To be read *before*	Date
None	28-Aug
9.1 – 9.3	4-Sep
9.4 – 9.5	11-Sep
9.6 – 9.8	18-Sep
10.1 – 10.3	25-Sep
10.4 – 10.5	2-Oct
11.1 – 11.4	9-Oct
12.1 – 12.3	16-Oct
12.4 – 12.6	23-Oct
12.7 – 12.9	30-Oct
13.1 – 13.4	6-Nov
14.1 – 14.3	13-Nov
14.4 – 14.6	20-Nov
No class – Thanksgiving	27-Nov
15.1 – 15.4	4-Dec
16.1 – 16.4	11-Dec

What work will be used to compute my grade?

This is a hybrid course, and so assignments will take on several forms for both the face-to-face and online portions. The most familiar of these are the homework problems from the text that are assigned weekly and due each Thursday. The schedule for these is listed on the syllabus and also on Canvas. Each homework assignment consists of nine (9) problems covering a few sections of the text. *Summary: Problems from text; due on Thursdays.*

To complete the homework problems, you will likely need to carefully read the associated sections and take notes of new ideas. The assigned problems are not typical mathematics problems, but they are mathematics teacher problems and so require an extra dimension of understanding. To encourage prompt and careful completion of the reading, you will be required to provide comments on a weekly basis through Canvas. These assignments will follow the same schedule as the homework problems, due each Thursday, and are accessible through Canvas. *Summary: Comments on readings of text; due on Thursdays.*

Due Date	Section	Page	Problems
4-Sep	9.1	367	2, 5, 15
	9.2	376	3, 7, 15
	9.3	383	5, 7, 8
11-Sep	9.4	390	1, 2, 3, 4
	9.5	396	4, 5, 14, 19, 21
18-Sep	9.6	407	2, 6, 13
	9.7	419	1, 2, 10
	9.8	431	1, 2, 12
25-Sep	10.1	441	1, 2, 6
	10.2	452	4, 7, 10
	10.3	458	1, 4, 6
2-Oct	10.4	465	1, 2, 3, 4
	10.5	476	2, 3, 9, 12, 13
9-Oct	11.1	492	1, 2, 4
	11.2	498	4
	11.3	501	1, 3, 4
	11.4	509	17, 20
16-Oct	12.1	517	2, 3
	12.2	522	1, 3, 5
	12.3	530	2, 6, 8, 9
23-Oct	12.4	536	2, 3, 4
	12.5	542	3, 5
	12.6	548	1, 3, 5, 7
30-Oct	12.7	552	1, 2, 3
	12.8	557	3, 4, 9, 11
	12.9	563	1, 4
6-Nov	13.1	574	3, 7
	13.2	582	4, 9, 21
	13.3	591	2, 3, 12
	13.4	596	1
13-Nov	14.1	604	9, 10, 11
	14.2	613	1, 2, 3, 5, 6
	14.3	623	1
20-Nov	14.4	628	1, 3
	14.5	643	3, 4, 8, 13
	14.6	650	5, 6, 7
4-Dec	15.1	661	6, 8
	15.2	672	2, 3, 5
	15.3	681	9, 11
	15.4	696	1, 8
11-Dec	16.1	707	1, 2, 4
	16.2	713	1, 2
	16.3	719	1, 4
	16.4	726	2, 16

An important part of being a teacher is analyzing the work of a student and trying to understand their mathematical thinking. This is a difficult and career-long process that requires many opportunities for trial and error. To provide you with a few opportunities, you will complete a detailed review of one of your classmate's homework submissions each week through Canvas. Likewise, your homework submission will be reviewed by classmate each week. These reviews are due by the Tuesday following the Thursday submission of the assignment. A rubric has been provided to guide these peer reviews on Canvas and the score you give on this rubric will be your peer's score for that homework assignment. I will randomly inspect homework submissions to ensure fidelity to the rubric and fairness in the grading. Additionally, you may request that I inspect a homework submission and its review if you believe there to be an irregularity. *Summary: Review a classmate's homework; due on Tuesdays.*

The feedback cycle begun by the peer review system would not be complete without an opportunity for the reviewed to address the reviewer. Each is a prospective teacher and so each is engaging in a potentially unfamiliar and complex process. Therefore, after you have received a review from your peer you will post feedback on the review through a Canvas discussion board. Of course, feedback about the review you provided will also be posted by someone and you should read and reflect on this feedback. These will be due the Thursday after the homework was submitted (i.e., two (2) days after the peer review is due). *Summary: Post feedback of the peer review you received; due on Thursdays.*

Each week will include an online module through Canvas. These modules will consist of readings, viewings, discussion postings, reflections, and quizzes or surveys. These can be completed at any time before their due date (each Thursday) and will be designed to take approximately one hour each. *Summary: Complete online modules; due each Thursday*

There will be no exams in the course. Rather, as a final project, you will conduct a recorded interview of an elementary student designed to discover that student's understanding of some subtopic of mathematics covered by this course. You will transcribe and analyze the interview, and you will submit a final report of your analysis by the final day of class. An example of this project will be given early in the course and a midpoint "check-your-progress" assignment exists so you will be guided in your preparation. (I have a limited number of recording devices that may be checked out if requested sufficiently in advance via email.) *Summary: Interview student; progress check at midpoint and entirety due at end of semester.*

Finally, class time will be filled with engaging and informative discussions and activities. Your attendance and participation will have an enormous impact on both your enjoyment of the class and what you learn from the class. If you must miss class, you will need to collect notes or learn of announcements from a fellow student. *Summary: Come to class; participate!*

Course standards outline that for every hour of instruction at Nevada State College, that students typically have 2-3 hours of work outside of class. (Statement updated 9/28/10)

How will grades be calculated?

Course Component	Portion of Final Grade
HW Problem Submissions	25%
Reading Summaries/Comments	10%
Peer Reviews	10%
Feedback on Peer Reviews	10%
Online Modules	15%

Final Project	20%
Participation	10%
Total	**100%**

Grade	% Range
A	[94, 100]
A -	[90, 94)
B +	[87, 90)
B	[83, 87)
B -	[80, 83)
C +	[77, 80)
C	[73, 77)
C -	[70, 73)
D +	[67, 70)
D	[63, 67)
D -	[60, 63)
F	[0, 60)

How will I learn important life skills as well as content and pedagogy?

NSC's Outcomes	Level	Course Objectives	Key Performances
Develop communication abilities	3	2a	Final Project
Develop critical thinking abilities	2	1a – 1j, 2a – 2b	Homework, Reading, Final Project
Develop effective citizenship	1	2b	Homework, Reading

Students with Disabilities

Resource Center for Students with Disabilities (RCSD), 5/28/09

The Americans with Disabilities Act (ADA) mandates accessibility in all facets of the learning environment. The Resource Center for Students with Disabilities (RCSD) on the Nevada State College campus coordinates support services and reasonable accommodations for students qualifying as disabled under the ADA guidelines. These services are free of charge.

Any student who believes s/he may need an accommodation, based on the impact of a documented disability, should contact the RCSD to speak privately with a representative about specific needs. To make an appointment, please contact the RCSD office at 702-992-2180 voice, 702-992-2098 TDD or by email at rcsd@nsc.nevada.edu.

Student Academic Center (SAC) Tutoring Services

The Student Academic Center (SAC) provides tutoring and academic assistance for all Nevada State College students taking NSC courses. Students are encouraged to stop by the SAC to learn more about subjects in which tutoring is offered, time schedules of tutors, workshop topics and schedules, and other academic resources. The Student Academic Center is located in LAS building-room 125 and the Dawson building- room 133. Students, who have questions regarding tutoring,

small group tutoring, and workshops, may contact (702) 992-2990 or by visiting the SAC website at: http://www.nsc.nevada.edu/604.asp.

Student Academic Center (SAC) Writing Assistance Services

One-on-one assistance for writing is available through the Student Academic Center. NSC students may receive assistance from an NSC peer writing specialist at no additional cost. SAC's writing specialists assist students with essay writing, project writing, creative writing, research writing, and business writing. The writing specialists work with students at any stage of the writing process, assisting with brainstorming, outlining, drafting, and sound boarding.

Although walk-in appointments are available, NSC students are encouraged to make an appointment in advance. Students with appointments will receive priority assistance. Appointments can be made in person or by calling (702)992-2990. Students are encouraged to bring a copy of writing assignment, and a copy of the writing to be reviewed to all one-on-one sessions. Additional information can be found at: http://www.nsc.nevada.edu/629.asp.

Video- or Audio-recording of Lectures

Covert Surveillance of Faculty Lectures, 1/10/12

Students must seek expressed permission from the faculty or any guest lecturer before recording any lecture using either video or audio recording devices. Students under RCSD accommodation are covered by the nature of their accommodation letters. This notice aligns with Board of Regents policy (Title 4, Chapter 1, Section 21) states: *The use of covert video surveillance for anything other than a criminal investigation on campuses of the Nevada System of Higher Education is prohibited. If, in a criminal investigation, such video surveillance is used, it must be approved by the President or the President's designee. This policy shall not interfere with the legitimate use of videotaping for academic purposes.*

Plagiarism and Cheating

Plagiarism involves directly quoting, summarizing, or paraphrasing the work of others without specific indication of sources, or handing in work that is not the student's own. Cheating is the unauthorized giving or receiving of information in examinations or other exercises.

All assignments, quizzes, and exams, for both in-person and online classes, are to be completed by each student individually, unless otherwise documented by the instructor. The use of books, notes, mobile devices, or other reference materials and/or collaboration with other students is strictly prohibited on all quizzes and exams unless specific permissions have been given by the professor. Deviation from this rule is considered cheating.

The grade of "0" or "F" will be given for any assignment, quiz, or exam in which plagiarism or cheating is discovered. This grade will seriously affect the final grade in the course. Evidence of such dishonesty will be kept on file, and will not be returned to the student. Instructors have the responsibility to report such incidents to the Dean. Serious penalties may be imposed, depending on the nature of the incident.

For comprehensive instructions, students may refer to the following printed references: The APA Publication Manual – http://bit.ly/1GYyY or The Little, Brown Compact Handbook – http://bit.ly/13fTfJR. Both of these printed references are available in the Nevada State Bookstore located in the Dawson Building.

Tolerance and Civility Commitment

Each member of the Nevada State College community is responsible for fostering an atmosphere imbued with dignity, respect, tolerance, appreciation of diversity and positive regard for all members of our collegiate community. A fundamental tenet of the college's mission is to nurture a

community atmosphere free from racism, religious intolerance, sexism, ageism, homophobia, harassment, discrimination against those with disabling conditions, or discrimination based upon an individual's political views or beliefs. Within this context, all members of the college community are accountable for their own behavior and actions. The college will not tolerate behavior that violates or infringes upon the civil and statutory rights of any individual or group. As members of our Nevada State College community, each of us can feel free to express ourselves in ways that promote openness within a diverse society.

Online Etiquette

In accordance with the Tolerance and Civility Commitment policy, all students should also follow proper etiquette when communicating in an online environment. Often referred to as "netiquette," an outline of these universal practices can be found at: http://bit.ly/1cHu8ql.

E-Alert

Centralized Academic Advising Center, 1/1/12

Nevada State College (NSC) is committed to the early identification and support of students who are at risk of not passing or completing a course/degree requirement at Nevada State College. E-Alert is one of NSC's retention tools designed to provide students with resources to aid them in the successful completion of their academic endeavors.

The College's approach to identifying and supporting students at academic risk will be respectful of privacy and in line with FERPA regulations. Identification will be based on course performance. Faculty may report students to the system at any time for issues in any of the following areas: not keeping pace with the progression of the course; not completing mandated units of study, field/clinical work or practicum; failure to pass units of study or assessments; not attending lecture, clinical work, or assessment components; not participating in online course studies, discussions, or assessments.

The Centralized Academic Advising Center (CAAC) will manage the campus E-Alert system and advisors will confidentially contact students submitted to the E-Alert system within 1 business day of an alert in order to provide academic support, strategies, and resources.

Important Dates and Course Withdrawal

NSC does NOT assign an automatic "W" or "Withdrawal" grade if you stop coming to class or handing in assignments. You will receive an "F" to connote you failed the course. It is your responsibility to officially drop or withdraw from the course by the posted deadlines. A copy of the campus academic calendar can be found at: http://www.nsc.nevada.edu/4906.asp.

For more information regarding drops and withdrawals, please see the Nevada State College academic catalog at: http://nsc.edu/1160.asp.

Student Signature Page

MATH 123 – 001

Fall 2014

Dr. Brian Gleason

I have read, I understand, and I agree to all the terms of this syllabus.

Student Name: _____ (print)

Student Signature: _____ Date: _____