Spring 2-1-2019

M 133.02: Geometry and Measurement for Elementary School Teachers

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GEOMETRY AND MEASUREMENT FOR ELEMENTARY SCHOOL TEACHERS

MATHEMATICS 133 SECTION 2

CRN 33342

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WEBPAGE `http://umonline.umt.edu/`

GOALS Upon completion of this course, a student will be able to:
1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships;
2. Apply transformations and use symmetry to analyze mathematical situations;
3. Use visualization, spatial reasoning, and geometric modeling to solve problems;
4. Describe and apply measurable attributes of objects and the units, systems, and processes of measurement;
5. Apply appropriate techniques, tools and formulas to determine measurements for length, area, and volume;
6. Develop a deep understanding of the mathematical concepts needed for effective teaching by developing the ability to examine and explain underlying mathematical structure in using multiple geometric representations and tools for solving problems.

TEXT Mathematics for Elementary School Teachers, 5th Edition (Sybilla Beckmann)

LETTER GRADE Your letter grade in the course will be determined by assessment of your ***understanding*** of predefined learning standards. For each standard, I will write an assessment that will provide me with the ability to assess your understanding on a 4-point scale according to:

Score	Student demonstrates...	Classification
4	...mastery beyond the learning target	Beyond Proficient
3	...full mastery of the learning target	Proficient
2	...partial mastery of the learning target	Nearing Proficient
1	...minimal mastery of the learning target	Novice
0	...no mastery of the learning target	Beginner

Each mid-semester exam will assess 3 or 4 standards. You will have the opportunity to "challenge" your first assessment results one time during the semester. Each project will assess 1 standard. You will not have the opportunity to challenge any project assessment results. Let S be your average score over all assessments, then, your letter grade in the course will be determined according to:

$$\begin{array}{rcccl} 3.50 & < & S & \leq & 4.00 \Rightarrow \text{A} \\ 3.00 & < & S & \leq & 3.50 \Rightarrow \text{B} \\ 2.50 & < & S & \leq & 3.00 \Rightarrow \text{C} \\ 2.00 & < & S & \leq & 2.50 \Rightarrow \text{D} \\ 0 & < & S & \leq & 2.00 \Rightarrow \text{F} \end{array}$$

± GRADE Your plus/minus grade will be determined by assessment of your ***effort*** in the course. This aspect will be measured through the collection of homework practice and reading quizzes. Let T be the proportion of homework practice and reading quizzes earned out of the total possible, then, your plus-minus grade will be assigned according to:

$$\begin{array}{rcccrcl} 0.90 & \leq & T & < & 1.00 & \Rightarrow & + \\ 0.80 & \leq & T & < & 0.90 & \Rightarrow & \\ 0 & \leq & T & < & 0.80 & \Rightarrow & - \end{array}$$

Please note that there is no "$A+$" grade given at the University of Montana.

HONESTY All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at the following web address:

`http://life.umt.edu/vpsa/student_conduct.php`.

ACCOMMODATION The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors and Disability Services for Students (DSS). If you think that you may have a disability adversely affecting you academic performance, and you have not already registered with DSS, please contact DSS in Lommassen 154. I will work with you and DSS to provide an appropriate accommodation.

POLICIES You must earn a C- or better in this course to pass the requirement in the School of Education. You may change to Credit/No Credit up the last day of the class. Credit will be awarded to students earning a D- or better. However, if you choose this option the grade cannot be counted towards the School of Education requirement nor the UM graduation requirement.

DATES January 31st is the last day to drop or add the course using Cyberbear. March 15th is the last day to drop with instructor and advisor signatures (W appears on transcript). April 26th is the last day to drop the course or change grading option using a late drop form (WP/WF appears on transcript). Acceptable reasons for a late drop are listed in the university catalog and are limited to: accident, illness, family emergency or a change in work schedule. The following examples are not considered sufficient for a late drop: protecting GPA, forgetting to turn in the change slip, losing financial aid, losing eligibility to engage in sports.

SEMESTER SCHEDULE

Monday	Wednesday	Friday
Jan 7	Jan 9	Jan 11 10-1
Jan 14 10-1	Jan 16 10-2	Jan 18 10-3
Jan 21 MLK	Jan 23 10-4	Jan 25 10-4
Jan 28 Lab	Jan 30 Assessment	Feb 1 11-1
Feb 4 11-2	Feb 6 11-3	Feb 8 11-4
Feb 11 Lab	Feb 13 Assessment	Feb 15 12-1
Feb 18 Presidents' Day	Feb 20 12-2	Feb 22 12-3
Feb 25 12-4	Feb 27 12-4	Mar 1 12-5
Mar 4 12-6	Mar 6 12-7	Mar 8 12-8
Mar 11 12-9	Mar 13 Lab	Mar 15 Assessment
Mar 18 13-1	Mar 20 13-2	Mar 22 13-3
Mar 25 Spring Break	Mar 27 Spring Break	Mar 29 Spring Break
Apr 1 13-3	Apr 3 13-4	Apr 5 Lab
Apr 8 Assessment	Apr 10 14-1	Apr 12 14-2
Apr 15 14-3	Apr 17 14-4	Apr 19 14-5
Apr 22 14-5	Apr 24 14-6	Apr 26 14-7
Final Assessment Wednesday, May 1, 10:10-12:10		

HOMEWORK ASSIGNMENTS

Section	Problems for Section	Due Date
10.1	2,3,7,8,11	Jan 18
10.2	6,	Jan 23
10.3	1,3	Jan 25
10.4	3,5,7,9,12,16	Jan 30
11.1	2,5	Feb 6
11.2	1,4,6	Feb 8
11.3	3,5	Feb 11
11.4	1,3,7,9,12,14,17,19	Feb 13
12.1	1,3,5	Feb 22
12.2	2,3,4,7	Feb 25
12.3	2,3,4,5,8,9,11	Feb 27
12.4	2,4,5,9,10,11,13	Mar 4
12.5	1,3,4,6,7	Mar 6
12.6	2,3,5,6,8	Mar 8
12.7	1,3	Mar 11
12.8	4,6,8,10,12	Mar 13
12.9	1,2,3,7	Mar 15
13.1	2,3,4,7,8	Mar 22
13.2	3,4,7,11,13,15	Apr 1
13.3	2,3,7,11,12,14,15,18,22	Apr 5
13.4	1,2,3	Apr 8
14.1	1,2,3,4,5,8,17,18	Apr 15
14.2	2,4,7,8,12	Apr 17
14.3	1,2,7,8,9,10,	Apr 19
14.4	1,4,5,6,7,8	Apr 22
14.5	2,3,4,5,8,9	Apr 26
14.6	1,2,3,5,6,8,9	May 1
14.7	1,4,5,6,7	May 1

Homework Philosophy

I view homework assignments as *formative* assessments. Formative assessments are meant to give students feedback so that adjustments in learning can be made to improve learning outcomes measured in *summative* assessments (i.e. mid-semester and final exams). As such, I expect you to correct your own homework assignments before handing them in for credit. This arrangement gives you immediate feedback on your understanding of course content and the opportunity to correct your misunderstandings and errors in thinking.

Homework Policies

- Corrected homework for each chapter is due at the start of the class period on the date indicated above. I do not accept late homework for any reason.
- Homework must be submitted on quad ruled loose leaf paper without frayed edges, homework must be done in pencil, and multiple pages must be neatly stapled.
- Homework solution keys will be provided on our class webpage at 5PM on the night before the homework is due in class. Use a colored pen to correct your homework and make notes to yourself. Your homework effort will only be counted if every problem has been attempted and corrected.