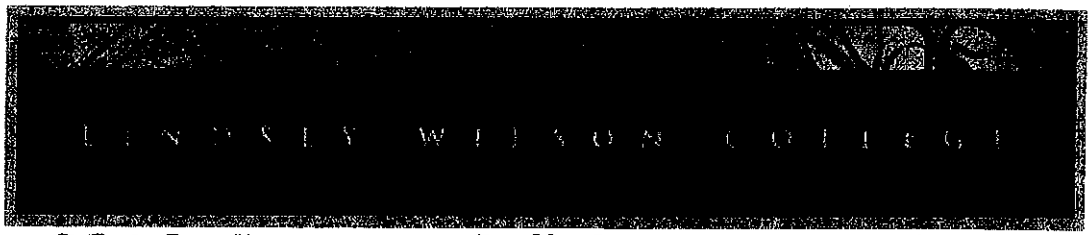


2016, Spring - Syllabus: MATH 3113

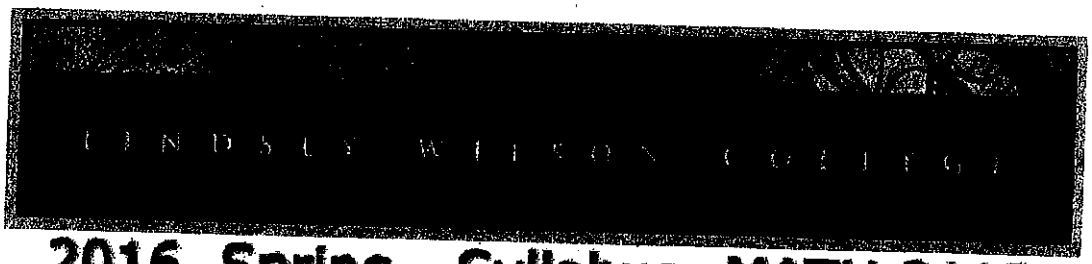
General Information

Course: MATH 3113 – *Geometry*
Section: M01 (MWF, 1:30pm – 2:20pm)
Location: Fugitte 106

Instructor: Michael Ratliff, Ph.D.
Office: Fugitte 212
Office Phone: (270) 384-8110
Email: ratliffm@lindsey.edu

Office Hours: MWF, 10:30am – 11:30am and 2:30pm – 3:30pm; TR, 9:30am – 11:30am

syllabi@lindsey.edu

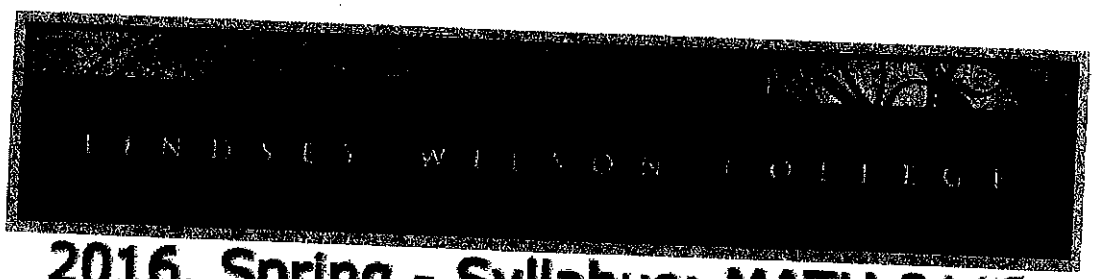


2016, Spring - Syllabus: MATH 3113

Course Description

Math 3113 – *Geometry* – 3 credit hours: Concepts and topics explored include constructions, the axiomatic method, Euclidean geometry, finite geometries, transformational geometry, and other non-Euclidean geometries. ***Prerequisite*:** MATH 2315. ***Course Rotation*:** Spring.

syllabi@lindsey.edu



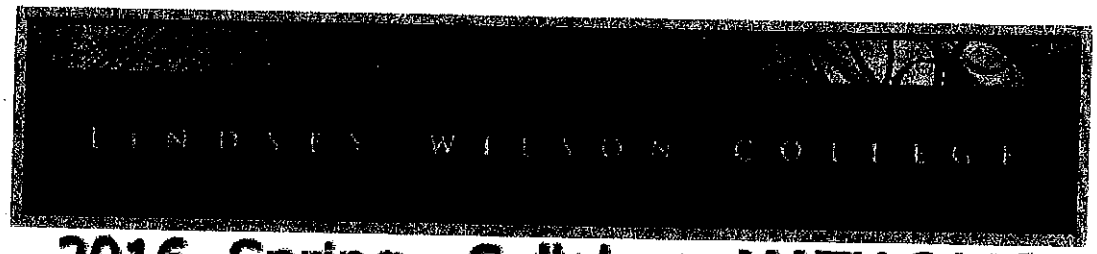
2016, Spring - Syllabus: MATH 3113

Required Texts

Text: Musser, Gary L., Lynn E. Trimpe, and Vikki R. Maurer. *College Geometry: A Problem-Solving Approach with Applications*, 2nd Edition. Upper Saddle River, NJ: Pearson Prentice Hall, 2008.

Software: *The Geometer's Sketchpad®*, available on most of the College's common computers, will be used in this course. Information about *Sketchpad* can be found at the following website: *The Geometer's Sketchpad®*.

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Student Learning Outcomes

The primary purpose of this course is to "Gain depth of knowledge in a discipline *[mathematics]*" (Lindsey Wilson College Student Learning Outcome 5). To achieve this purpose, student learning outcomes for the course are as follows.

The Lindsey Wilson College student in this course will:

1. Justify mathematical statements based on known definitions and theorems (Mathematics Program Student Learning Outcome 2.1); and
2. Communicate mathematical ideas and results with ease and clarity (Mathematics Program Student Learning Outcome 4.1).

The first outcome will be assessed on the final exam (one exam item) using a rubric designed by the Mathematics Program Faculty. The second outcome will be assessed on the final exam (one exam item) using the Association of American Colleges and Universities' (AACU) Written Communication VALUE Rubric.

In addition to the previously stated goals, this course specifically addresses Kentucky Teacher Standard 1 for certification from the Kentucky Education Professional Standards Board.

Standard 1: *The teacher demonstrates applied content knowledge.*

The teacher demonstrates a current and sufficient academic knowledge of certified content areas to develop student knowledge and performance in those areas.

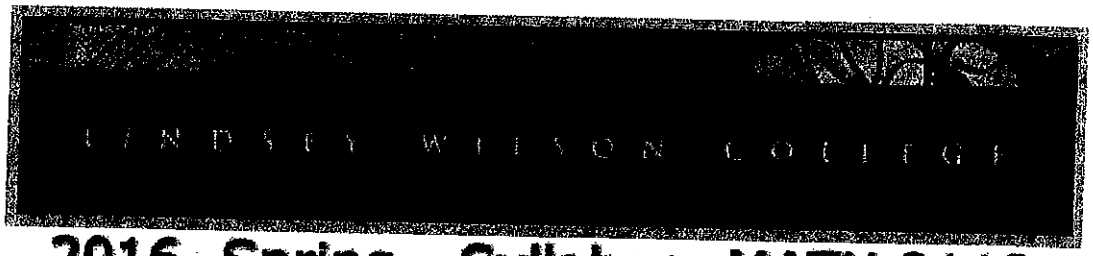
Performance criteria:

1.1 - *Communicates concepts, processes, and knowledge;*
1.2 - *Connects content to life experiences of students;*
1.3 - *Demonstrates instructional strategies that are appropriate for content and contribute to student learning;*
1.4 - *Guides students to understand content from various perspectives; and*
1.5 - *Identifies and addresses students' misconceptions of content.*

Education Program Preparation: This course is required for content preparation in the Middle Grades Education 5-9 Major (Mathematics Emphasis) and Secondary Education 8-12 Program (Mathematics Major) and prepares teacher candidates with the knowledge base for mathematics required in the Kentucky Core Academic Standards and the College Career Readiness Standards. The Conceptual Framework for the Education Program, "Teacher as Leader for the 21st Century", is incorporated. The Natural and Behavioral Sciences Division works with the Education Program in preparing the teacher candidates with the knowledge base required to meet Kentucky Teacher Standard I and the Education Program Student Learning Outcome for Content Knowledge. Teacher candidates will be equipped to teach Middle Grades and Secondary students and meet requirements for Unbridled Learning.

WrittenC...Mike Rat... v.1

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Grading and Attendance

Grade Scale: This course has a total of 100 possible points partitioned as follows:

4 Problem Sets (4 points each)	*16 points*
8 Textbook Assessments (3 points each)	*24 points*
2 Assignments (5 points each)	*10 points*
Midterm Exam	*20 points*
Final Exam	*30 points*
Total:	*100 points*

The letter grade scale is as follows:

A (93 - 100)	*A- (90 - 92)*	*B+ (87 - 89)*
B (83 - 86)	*B- (80 - 82)*	*C+ (76 - 79)*
C (70 - 75)	*D (60 - 69)*	*F (below 60)*

Exams, Problem Sets, Textbook Assessments, and Assignments: The Midterm Exam will be administered on Wednesday, March 9th. Problem Sets and Assignments are due six times during the semester; due dates for these items will be announced when assigned. Textbook Assessments will be administered on-line

(ClassMarker™) eight times during the semester; due dates for these items will be announced when assigned. The Final Exam (comprehensive) will be administered during Final Exams Week at the assigned time. (*Note: Homework for student practice will be assigned at most class meetings.*)

Final Exams for day classes are scheduled for the Spring 2016 semester are scheduled on May 9th – 13th. The Academic Calendar, which contains the schedule for Final Exams, is in the current College Catalog and Course Schedule listing. Please make any necessary travel arrangements (especially flight arrangements) after Final Exams Week. Students will not be permitted to take early finals unless an extenuating circumstance exists. "Extenuating circumstance" means illness, a verified family emergency, or participation in officially sponsored travel in support of an event arranged by the College. All requests for early finals must be made in person to the Academic Affairs Office.

Make-ups: All requests for exam make-ups must be submitted in writing (via email) to the instructor. The instructor reserves the right not to grant make-ups of any kind for absences not deemed excused by College policy. There are no make-ups for Problem Sets, Textbook Assessments, or Assignments.

Attendance and Participation: The *College Catalog* states (p. 48): At Lindsey Wilson College, students are responsible for regular class attendance, in-class participation, and completion of assignments. Specific expectations concerning attendance and class performance in each course are stated in the course syllabus. When a pattern of excessive absence or other unsatisfactory performance occurs, the instructor will take one or more of the following actions:

1. Request the student make special arrangements to improve his or her performance (e.g., meeting with a tutor);
2. Enter the student in Starfish, a system which electronically notifies

the student's instructors, advisor, the Academic Affairs Office, the Student Affairs Office, and coaches (if the student is an athlete) of the attendance issue;
3. Place the student on attendance probation, whereby an additional unexcused absence would result in a grade of *F* for the course; and
4. Contact the student's parent (s)/legal guardian about continuing problems if the student has given written permission for contacts.

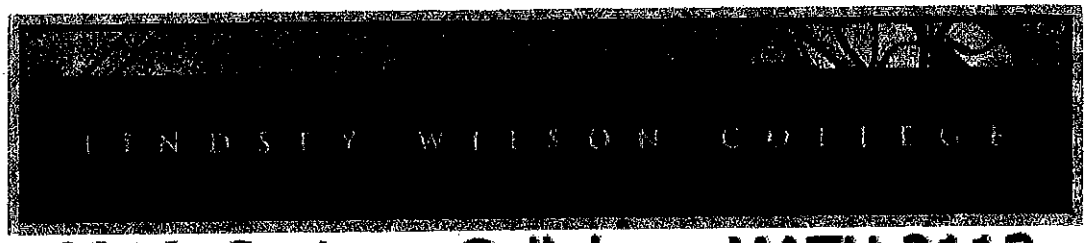
The *College Catalog* addresses authorized activities and absence (p. 48 – 49): A student's principal responsibility is to the academic program. However, the living-learning nature of campus life may impose additional and sometimes conflicting expectations and demands on the individual. Participation in student government, choral activities, and athletic events are examples of authorized activities that may create conflicts for the student. The College policy concerning absence from class includes the following:

1. Absences for scheduled, authorized obligations (e.g., athletic events, choir tours, field trips in other classes, etc.) are not counted as class absences;
2. Students must notify their instructors prior to the absence;
3. Students are responsible for completion of missed class work due to an authorized absence within a reasonable (defined by the instructor) length of time;
4. By the end of the first week of classes, coaches are expected to communicate directly and clearly with instructors as to schedules and rosters of students involved, including subsequent follow-up as changes occur. Sponsors, directors, and teachers responsible for other activities should notify faculties as far in advance as possible; and
5. Faculty are encouraged to remind students that participation in extracurricular activities

(intercollegiate athletics in particular) places additional demands and responsibilities on them and therefore requires that any additional absences be kept to a minimum.

In this course, absences are categorized as *excused* or *unexcused*. (*Note: For my courses, I am the authority on the determination as whether an absence is excused or unexcused.*) Also, though present for class, a lack of participation (e.g., sleeping in class, head down on the desk, not engaged in the day's topic, or not completing assigned homework) merits an unexcused absence and possibly dismissal from class.

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Academic Integrity

Academic integrity is essential to the existence of an academic community. Every student is responsible for fostering a culture of academic honesty, and for maintaining the integrity and academic reputation of Lindsey Wilson College. Maintaining a culture that supports learning and growth requires that each student make a commitment to the fundamental academic values: honesty, integrity, responsibility, trust, respect for self and others, fairness, and justice.

To foster commitment to academic integrity, faculty are asked to require each student to sign the following Honor Code on assessments as appropriate: *On my honor as a student, I have neither given nor received any unauthorized aid on this assessment.*

Violations of the academic integrity policy include cheating, plagiarism, or lying about academic matters. Plagiarism is defined as any use of another writer's words, concepts, or sequence of ideas without acknowledging that writer by the use of proper documentation. Not only the direct quotation of another writer's words, but also any paraphrase or summary of another writer's concepts or ideas without documentation is plagiarizing that writer's materials. Academic dishonesty is a profoundly serious offense because it involves an act of fraud that jeopardizes genuine efforts by faculty and students to teach and learn together. It is not tolerated at Lindsey Wilson College.

Students who are determined to have plagiarized an assignment or otherwise cheated in their academic work or examinations may expect an *F* for the assessment in question or an *F* for the course, at the discretion of the instructor. All incidents of plagiarism or cheating are reported by the instructor to the Academic Affairs Office along with copies of all relevant materials. Each instance of plagiarism or cheating is counted separately. If the evidence is unclear, or if a second offense occurs, the VP for Academic Affairs or Associate Dean will work in cooperation with the Dean of Students to move the student before the campus Judicial Board for review. Violations will ordinarily result in disciplinary suspension or expulsion from the College, depending on the severity of the violation involved. (*Note: The College encourages the use of Safe Assign to detect plagiarized documents.*)

syllabi@lindsey.edu

2016, Spring - Syllabus: MATH 3113

Classroom/Course Etiquette

Classroom Behavior: The following behaviors are appropriate for the classroom setting:

1. Be on time; arriving late (tardiness) is unacceptable behavior in the classroom setting. Arriving late is often distracting to other students and the instructor. There are situations where arriving late is unavoidable (e.g., car trouble or a previous class runs over). The point here is consistently arriving late is unacceptable behavior.
2. The classroom is not a dining center (i.e., cafeteria); students are to refrain from eating during class (i.e., no food). Bottled water or bottled soft drinks are permitted.
3. Refrain from other classroom disruptions. Specifically, putting books away before the class ends and consistently leaving and re-entering the classroom. Such disruptions are distracting for both students and the instructor.

Any violations of the above may result in dismissal from the class session and an unexcused absence.

Technology Policy (cell phones, media players, headphones, computers, etc.): Student cell phones, media players,

headphones, and computers will be *off* and *out of sight* during class time unless prior arrangement is made with the instructor. Pencils/pens, paper, textbook(s), and calculators are the necessary *technologies* for class sessions. Any violations of this policy may result in dismissal from the class session and an unexcused absence.

Email Policy: All Lindsey Wilson College students are required to communicate with LWC faculty and staff via LWC (lindsey.edu) email addresses only. Alternative email addresses (including Facebook) should not be used when communicating with LWC faculty and staff.

2016, Spring - Syllabus: MATH 3113

Tutoring

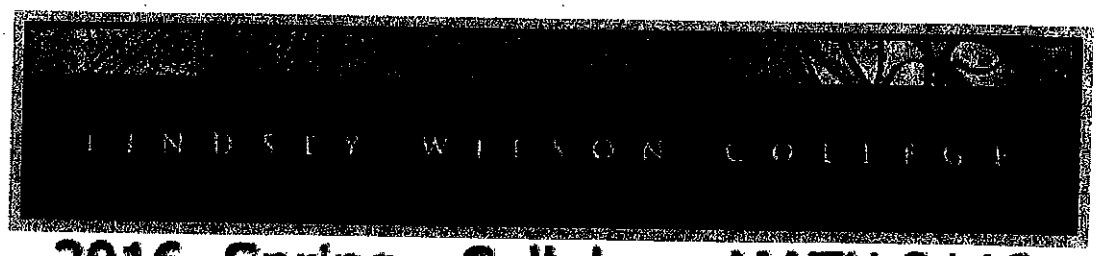
Academic Success Center: The Academic Success Center, located in the Everett Building, offers peer tutoring to aid students in completing class assignments, preparing for exams, and improving their understanding of content covered in a particular course. In addition, computers are available for student use.

Students are encouraged to utilize this Center as a resource for improving study strategies and reading techniques. The Center also offers assistance with other academic problems resulting from documented learning disabilities. All services are free of charge to all Lindsey Wilson College students. Please contact Maretta Garner, Tutor Coordinator, at (270) 384-8037 for further information and assistance. (*Note: Students with learning disabilities are responsible for providing documentation from an appropriate outside professional source such as a professional evaluation or school IEP. See the* **Statement on Learning/Physical Disabilities** *for further information.*)

Writing Center and Mathematics Center: The Writing Center (located in the Slider Humanities & Fine Arts Building) and the Mathematics Center (located in the Fugitte Science Building) are available for specialized tutoring at no charge to Lindsey Wilson College students. Please contact Jared Odd, Writing Center Coordinator, at (270) 384-8209 or Linda Kessler, Mathematics

Tutor Coordinator, at (270) 384-8115 for further information and assistance.

syllabi@lindsey.edu

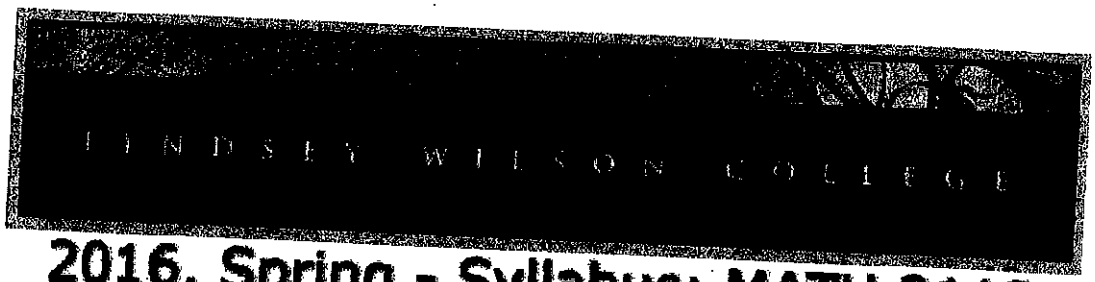


2016, Spring - Syllabus: MATH 3113

Statement on Learning/Physical Disabilities

Lindsey Wilson College accepts students with learning disabilities and provides reasonable accommodation to help them be successful. Depending on the nature of the disability, some students may need to take a lighter course load and may need more than four years to graduate. Students needing accommodation should apply as early as possible, usually before May 15th. Immediately after acceptance, students need to identify and document the nature of their disabilities. It is the responsibility of the student to provide to the College appropriate materials documenting the learning disability, usually a recent high school Individualized Education Program (IEP) and results from testing done by a psychologist, psychiatrist, or qualified, licensed person. The College does not provide assessment services for students who may have a learning disability. Although the College provides limited personal counseling for all students, the College does not have structured programs available for students with emotional or behavioral disabilities. For more information, please contact Ben Martin at (270) 384-7479.

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Questioning a Grade – Student Academic Complaint Policy

A student, who wishes to question an *assignment grade*, or *other academic issue*, should follow the procedure below:

1. Whenever possible, the student will first go to the faculty member who has assigned the disputed grade. Complaints regarding grades should be made within seven (7) days of receipt of the disputed grade and, if possible, will be decided by the faculty member within seven (7) days of receipt. If the disputed grade is the final grade for the course, "receipt" is defined by when the final grade is posted online by the registrar. (*Note: Please refer to the next section for appealing a final grade.*)
2. Unless there are extenuating circumstances, the student may, within seven (7) days request in writing a review of such decision by the Chair of the division in which the grade was assigned. Upon receipt of such request, that Chair will direct the faculty member and the student to each submit, within seven (7) days, if possible, a written account of the incident, providing specific information as to the nature of the dispute.
3. Upon receipt of these written accounts, the Chair will meet, if possible, within seven (7) days

with the faculty member and the student in an effort to resolve the dispute and will render his or her decision in writing.

4. If either the student or the faculty member desires to appeal the decision of the Chair, the student or faculty member may, within seven (7) days by written request to the Chair, ask that the matter be reviewed by a Grade Appeals Panel convened by the Academic Affairs Office.
5. If the disputed grade is assigned at the end of a fall or spring semester and the student and faculty member cannot meet to resolve the issue, the student should contact the faculty member by email within seven (7) days of receipt of the disputed grade. If the issue cannot be resolved by email within the time limit, steps 2, 3 and 4 of the appeal may extend into the beginning of the semester immediately following receipt of the disputed grade by following the timeline above.

A student who wishes to question a *final grade* should follow the procedure below:

1. Confer with the faculty member who assigned the disputed grade.
2. If the disputed grade cannot be resolved, a written request for a grade appeal must be submitted to the Academic Affairs Office before the first day of the semester following the one in which the grade was issued. The written request must include the specific basis for the appeal.
3. The Academic Affairs Office will convene a Grade Appeals Panel, comprised of the Vice President for Academic Affairs, the Associate Academic Dean, and the Chair of the academic unit which houses the course for which the grade is appealed. If one of the members is the faculty member who issued the grade, an alternate will be

appointed. The student and the faculty member may appear separately before the panel to explain their positions. The hearing is non-adversarial. Neither the faculty member nor the student may be accompanied by other individuals to the meeting of the Grade Appeals Panel. The Grade Appeals Panel will notify the student of its decision, if possible, within seven (7) days of the meeting.

syllabi@lindsey.edu

2016, Spring - Syllabus: MATH 3113

Adding/Dropping a Course

Students enrolled in the following courses cannot drop these courses during the semester: READ 0713, 0723, 0733, 0903, 1013 and 1023; STSK 1003; ENGL 0903 and 0904; and ESL 0803, 0804 and 0854.

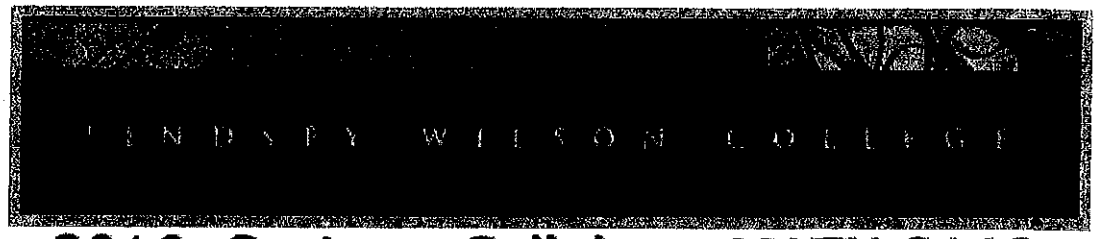
For undergraduate classes at the Columbia campus, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the advisor and the instructor for each course involved as indicated on the Add/Drop Form. The change must be reported to the Business Office and the Registrar's Office on an Add/Drop Form, which may be obtained from the Registrar's Office. For AIM courses, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Director of the Evening Program. For courses taught at Community sites, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Site Coordinator for the campus. Permission to add courses will not be given after the last date for late registration. Authorization for dropping a course will not be approved after more than 75% of the instructional days for a course are completed, as outlined below:

Course	***Deadline***	***Su*** ***the*** ***to***

Columbia undergraduate and graduate full semester courses	Not later than 30 days before the end of the semester
AIM courses	By the 6th week of class
Courses at Community Campuses	By the 3rd weekend of class

If changes are not properly approved and officially reported as stated above, students will receive a grade of *F* in the courses for which they are officially registered, and they will be charged for all such courses. Students will not receive credit for changed or added courses unless they officially register for those courses.

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Course Blog by Dr. Ratliff

Wednesday, May 4th: Sometime over the summer, review The Ship Problem that was discussed in class today. See if you can start from scratch and complete the problem using a spreadsheet as we did in class. Also, make sure that you complete your problem set as we will discuss it and the final exam on Friday.

Homework: Read Section 3.4 (beginning on page 147).

Textbook Assessment 8 will be available at ClassMarker™ until 10:30pm on Thursday (May 5th). You will have three attempts for this assessment as it covers finding areas.

Monday, May 2nd: Review The Ship Problem partially discussed in class today. On Wednesday, we'll complete the problem.

Homework: Read Section 3.4 (beginning on page 147).

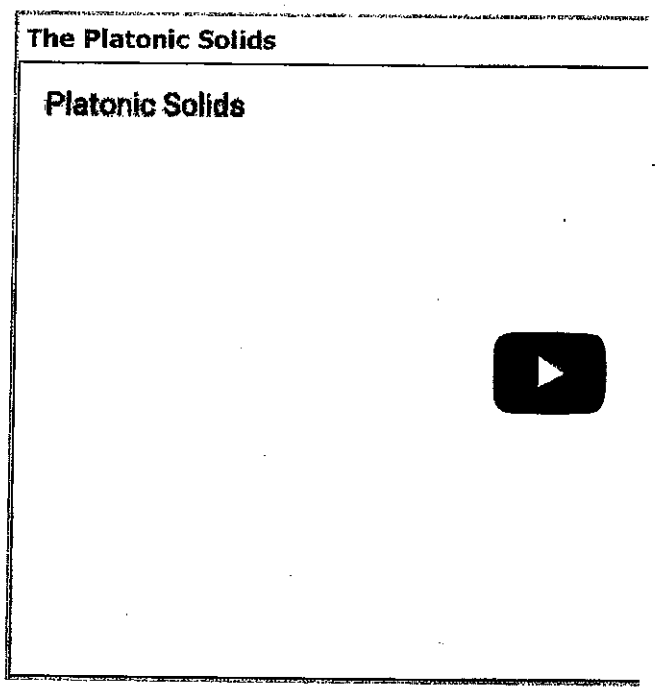
Textbook Assessment 8 will be available at ClassMarker™ from 2:30pm on Monday (May 2nd) until 10:30pm on Thursday (May 5th). You will have three attempts for this assessment as it covers finding areas.

Friday, April 29th: Class did not meet as only one student could attend today.

Wednesday, April 27th: We discussed estimating the area of a circle with

a radius of 1 using regular polygons circumscribing the circle. A spreadsheet was used after appropriate formulas were derived. Note that the estimates approach pi sooner using the circumscribed regular polygons.

Also, we viewed the video *The Platonic Solids.* Below is the youtube link to the video.



Monday, April 25th: Review the technique used in class today for estimating the area of a circle. The technique involved inscribing regular polygons in a given circle. (We used a circle with a radius of 1 unit and estimated using a spreadsheet.) See if you can estimate the area of a circle with a radius of 1 using regular polygons circumscribing a circle. (Use a spreadsheet.)

Friday, April 22nd: Textbook Assessment 6 was discussed is class. Also, review the proof for the proposition that the perimeter of a triangle is greater than the sum of the triangle's medians.

Textbook Assessment 7 will be available at ClassMarker™ from 5:30pm on Friday

(April 22nd) until 10:30pm on Thursday (April 28th). Make sure that you complete this assessment.

Wednesday, April 20th: Again review the *Proof Schemes* powerpoint, the proof for the proposition about a line passing through a circle's center bisecting a chord, and review the spreadsheet modeling the proposition that the perimeter of a triangle is greater than the sum of the triangle's medians.

Homework:

- Read Section 7.1 (beginning on page 362) and complete exercises 1 thru 46 (pages 369-371) and proofs 47 and 51 (page 371); and
- Read Section 7.2 (beginning on page 373) and complete exercises 1 thru 43 (odd) (pages 378-381).

Textbook Assessment 6 will be available at ClassMarker™ until 10:30pm on Thursday (April 21st). Make sure that you complete this assessment.

Monday, April 18th: Review the *Proof Schemes* powerpoint and the two proofs discussed in class today. If you have additional questions, please see me. On Wednesday, we'll discuss a few more proofs.

Homework:

- Read Section 7.1 (beginning on page 362) and complete exercises 1 thru 46 (pages 369-371) and proofs 47 and 51 (page 371); and
- Read Section 7.2 (beginning on page 373) and complete exercises 1 thru 43 (odd) (pages 378-381).

Textbook Assessment 6 will be available at ClassMarker™ until 10:30pm on Thursday (April 21st). Make sure that you complete this assessment.

Friday, April 15th: In class, we reviewed many of the problems from **Textbook Assessment 5**. If you have additional questions, please see me. Also, we briefly

discussed *Proof Schemes*. (Note: The *Proof Schemes* powerpoint is available in Course Documents.) Next week will be proof week.

Homework:

- Read Section 7.1 (beginning on page 362) and complete exercises 1 thru 46 (pages 369-371) and proofs 47 and 51 (page 371); and
- Read Section 7.2 (beginning on page 373) and complete exercises 1 thru 43 (odd) (pages 378-381).

Textbook Assessment 6 will be available at ClassMarker™ from 5:30pm on Friday (April 15th) until 10:30pm on Thursday (April 21st). Make sure that you complete this assessment.

Wednesday, April 13th: Review 'The Pirate Problem' problem, modeling it in Sketchpad as we did in class. Also, see if you can show why the treasure remains in a fixed location regardless of where the palm tree was located (i.e., construct your argument as we did in class using a coordinate system and matrices).

Homework:

- Read Section 7.1 (beginning on page 362) and complete exercises 1 thru 46 (pages 369-371) and proofs 47 and 51 (page 371); and
- Read Section 7.2 (beginning on page 373) and complete exercises 1 thru 43 (odd) (pages 378-381).

Textbook Assessment 6 will be available at ClassMarker™ from 5:30pm on Friday (April 15th) until 10:30pm on Thursday (April 21st). Make sure that you complete this assessment.

Monday, April 11th: Review the reflection problem discussed in class today. Make sure that you understand how to transform an object in a plane using those special matrices presented in class.

Homework: Here's an interesting problem. Try it. (Do not research this problem on the internet.)

The Pirate Problem

The following parchment, written by a pirate was discovered on an uninhabited island off the coast of Japan in 2006. It reads:

> *On this 20th day of September in the year 1842, I buried my treasure chest of silver, gold, and diamonds on this island that contains a single palm tree. Find the tree. Starting at the palm tree, walk directly to the falcon-shaped rock. Count your paces as you walk. Turn a quarter-circle to the right, and walk the same number of paces. When you reach the end, put a stick in the ground. Return to the palm tree, and walk directly to the owl-shaped rock, again counting your paces. Turn a quarter-circle to the left, and walk the same number of paces. Put another stick in the ground. Connect the sticks with a rope drawn tight, and dig beneath its midpoint to find the treasure.*

The rocks are still there, but there was no palm tree on the island. Can the treasure still be found?

Textbook Assessment 5 will be available at ClassMarker™ until 10:30pm on Tuesday (April 12th). Make sure that you complete this assessment.

Problem Set 3 is due on ~~Wednesday~~ Friday, ~~April 13th~~ April 15th.

Friday, April 8th: Class cancelled. (I'm at a professional meeting in Louisville.)

Wednesday, April 6th: Class cancelled due to illness.

Monday, April 4th: Review the transformation matrices discussed in class today, then complete the problem assigned in class where a point, (6, -4), is reflected

through a line, $y = 8x - 5$. We'll discuss the problem at our next class meeting. Also complete the previously assigned homework.

Homework (previously assigned):

- Find the area of a triangle whose vertices have the following coordinates: (1, 6), (-2, -5), and (10, -2). (Note: You may use technology (graphing calculator) to compute the determinant of the matrix used in finding the area of the given triangle.)
- Express the equation of line $y = 2x + 9$ as the product of a row vector and column vector equaling 0.

Textbook Assessment 5 will be available at ClassMarker™ from 5:30pm on Monday (April 4th) until 10:30pm on Tuesday (April 12th). Make sure that you complete this assessment.

Friday, April 1st: Review transformation constructions (i.e., the previously assigned homework hand-outs) and what we have discussed regarding the *elevated plane*. (Note: Below are two *elevated plane* problems for homework.). On Monday, we'll continue our discussion eventually defining basic matrices for translations, rotations, and reflections.

Homework:

- Find the area of a triangle whose vertices have the following coordinates: (1, 6), (-2, -5), and (10, -2). (Note: You may use technology (graphing calculator) to compute the determinant of the matrix used in finding the area of the given triangle.)
- Express the equation of line $y = 2x + 9$ as the product of a row vector and column vector equaling 0.

Wednesday, March 30th: Problem Set 2 was returned and discussed. If you have additional questions about any of the problems, please see. Also, we discussed the formal definition of rotation given on the

'(some) Transformations' hand-out. Please complete the transformation constructions: line reflection, translation, and rotation. If you have problems with any of the constructions, see me.

Textbook Assessment 4 will be available at ClassMarker™ until 10:30pm on Thursday (March 31st). (Note: Remember that you have 3 attempts for this assessment.)

Monday, March 28th: Review your notes from the transformation hand-out distributed and discussed in class today. Then complete the homework on constructing transformations (i.e., the reflection and translation problems). On Wednesday, we'll briefly discuss that homework, formally define rotations, and then approach transformations from a different perspective (using matrices) if time permits.

Textbook Assessment 4 will be available at ClassMarker™ from 5:30pm today (March 28th) until 10:30pm on Thursday (March 31st). (Note: Remember that you have 3 attempts for this assessment.)

Wednesday, March 23rd: The proofs that were presented were very good and interesting. As I stated in class, personally I would struggle in the discovery of such proofs. Of course, we don't see the discover's 'scratch work' in the final versions --- thus, we don't see the actual discovery (which might of happened by accident) nor see the struggles. Regardless, I'm still amazed with many of the Pythagorean proofs.

On Monday, we'll begin a formal study of transformations. (Note: Transformations are fun!)

Textbook Assessment 3 will be available at ClassMarker™ until 10:30pm on Thursday (March 24th). Make sure that you complete this assessment. (Note: Remember that you have 2 attempts for this assessment.)

Monday, March 21st: Review your notes on the Pythagorean Theorem from today's class. Also, complete the following homework:

Homework:

- Go to the Geometry section, Pythagorean Theorem, at "Cut-The-Knot" and learn the Pythagorean proof assigned in class (i.e., determined by the random number generator in Excel). On Wednesday (March 23rd), be prepared to present the proof you learn to the class using the chalkboard with little to no additional aids (e.g., you cannot copy the proof from a sheet of paper).

Homework from the textbook:

- Read Section 3.2 from the textbook (beginning on page 121) and complete exercises/problems 1-43 (odd) (pages 127-133); and
- Read Section 3.3 from the textbook (beginning on page 134) and complete exercises/problems 1-49 (odd) (pages 141-145).

Probelm Set 2 is due on Wednesday (March 23rd).

Textbook Assessment 3 will be available at ClassMarker™ until 10:30pm on Thursday (March 24th). Make sure that you complete this assessment. (Note: Remember that you have 2 attempts for this assessment.)

Friday, March 11th: Review your notes from today's class. Make sure that you understand how to classify triangles and the relationships that exist among them.

Probelm Set 2 is due on Wednesday (March 23rd).

Textbook Assessment 3 will be available at ClassMarker™ until 10:30pm on Thursday (March 24th). Make sure that you complete this assessment. (Note: Remember that you have 2 attempts for this assessment.)

Wednesday, March 9th: Review your notes from today's class. Make sure that you understand 'good examples' of the quadrilaterals and know the relationships that exist among them. On Friday, we'll discuss triangle classifications and relationships.

The **Midterm Exam** (take-home) is due on Friday.

Textbook Assessment 3 will be available at ClassMarker™ from 5:30pm on Thursday (March 10th) until 10:30pm on Thursday (March 24th). Make sure that you complete this assessment. (Note: Remember that you have 2 attempts for this assessment.)

(Note: **Probelm Set 2** is due on Wednesday (March 23rd) instead of Friday (March 11th).)

Monday, March 7th: Review your notes from today's class. Make sure that you understand all of the content discussed today regarding regular polygons. See if you can derive formulas (as we did in class) for the measures of vertex angles, central angles, and exterior angles in regular polygons. Complete the homework below.

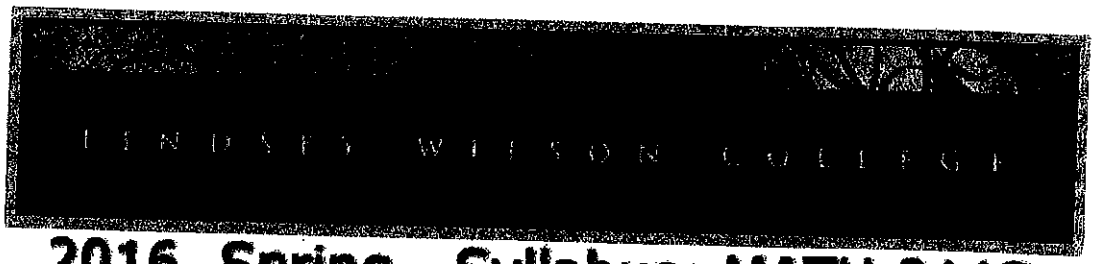
Homework (from the textbook):

- Read Section 2.3 from the textbook (beginning on page 65); and
- From the textbook, complete exercises/problems 1-34 (pages 71-74).
- Read Section 2.2 from the textbook (beginning on page 52); and
- From the textbook, complete exercises/problems 1-32, 33, 35, 36, 37 (pages 58-64).

The **Midterm Exam** (take-home) will be distributed on Wednesday.

Friday, March 4th: Review *The Metric Axioms* powerpoint that was discussed in class again today; then, verify (informally) that the Taxicab Metric satisfies those axioms. If you have questions about *The Metric Axioms*, please see me. Also, review the Post Office problems posed in class

syllabi@lindsey.edu



2016, Spring - Syllabus: MATH 3113

Course Links

ClassMarker™: http://www.classmarker.com

WolframAlpha: http://www.wolframalpha.com

LaTeX Equation Editor: http://www.codecogs.com/latex/eqnedi

Euclid's *Elements*: http://aleph0.clarku.edu/~d

National Library of Virtual Manipulatives: http://nlvm.usu.edu/en/nav/vlil