

Washtenaw Community College Comprehensive Report**MTH 157 Geometry and Trigonometry****Proposed start term: Fall 2010****Course Cover****Division:** Math, Natural and Behavioral Sciences**Department:** Mathematics**Discipline:** Mathematics**Course Number:** 157**Org Number:** 12200**Full Course Title:** Geometry and Trigonometry**Transcript Title:** Geometry and Trigonometry**Is Consultation with other department(s) required:** No**Publish in the Following:** College Catalog , Time Schedule , Web Page**Reason for Submission:** Three Year Review / Assessment Report**Change Information:**

Outcomes/Assessment

Objectives/Evaluation

Rationale: The course has been taught for several years and we have discovered a few inconsistencies in the course objectives that need correcting.**Proposed Start:** Fall 2010

Course Description: This is a course in the measurement of geometric shapes. Topics include: general measurement principles; perimeter; area; volume; and the measurement of length and angle (in general and applied settings). A two-line scientific calculator is required for this course. See the time schedule for current brand and model. This course contains material previously taught in MTH 107 and MTH 152.

Course Credit Hours**Variable hours:** No**Credits:** 3**Lecture Hours:** Instructor: 45 Student: 45**Lab:** Instructor: 0 Student: 0**Clinical:** Instructor: 0 Student: 0**Other:** Instructor: 0 Student: 0**Total Contact Hours:** Instructor: 45 Student: 45**Repeatable for Credit:** NO**Grading Methods:** Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)**College-Level Reading and Writing**

College-level Reading & Writing

Requisites**Prerequisite**

Academic Reading and Writing Levels of 6; Academic Math Level 3

General Education**Degree Attributes**

Assoc in Applied Sci - Area 3

Request Course Transfer

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Proposed For:**Student Learning Outcomes**

1. Find the perimeter, area, and volume of various geometric shapes.

Assessment 1

Assessment Tool: Common departmental constructed response questions for both outcomes.

Assessment Date: Fall 2010

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: all

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will achieve an average of 3 or better on the questions.

Who will score and analyze the data: Members of the math department.

2. Find the lengths and angles in triangles.

Assessment 1

Assessment Tool: Common departmental constructed response questions for both outcomes.

Assessment Date: Fall 2010

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: all

How the assessment will be scored: departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will achieve an average of 3 or better on the questions.

Who will score and analyze the data: Departmental faculty.

Course Objectives

1. Find perimeter of polygons.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

2. Find perimeter of figures that are combinations of polygons.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

3. Find arc length in a circle.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

4. Find circumference of a circle.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

5. Use similar figures to find perimeter of polygons.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

6. Find area of polygons.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

7. Find area of figures that are combinations of polygons.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

8. Find areas of shaded portions of figures.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

9. Find areas of sectors of circles.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

10. Find areas of circles.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

11. Find volume of 3-D figures including prisms, pyramids, cones, cylinders and spheres.

Methods of Evaluation

Exams/Tests

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

12. Find the length of a side of a triangle using measurement tools.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

13. Find the length of a side of a triangle using approximation.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

14. Find the length of a side of a triangle using the properties of similar triangles.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

15. Find the length of a side of a triangle using the Pythagorean Theorem.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

16. Find the length of a side of a triangle using sin, cosine and tangent.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

17. Find the length of a side of a triangle involved in an application problem.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

18. Find the length of a side of a triangle using the Laws of Sines and the Law of Cosines.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

19. Find an angle measure in a triangle using measurement tools.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

20. Find the length of a side of a triangle using the Pythagorean Theorem.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

21. Find an angle measure in a triangle using the Pythagorean Theorem.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

22. Find an angle measure in a triangle involved in an application problem.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

23. Find the measure of an angle of a triangle using the Law of Sines and the Law of Cosines.

Methods of Evaluation

Exams/Tests

Matched Outcomes

2. Find the lengths and angles in triangles.

24. Find the surface area of prisms, pyramids, cones and cylinders.

Methods of Evaluation

Matched Outcomes

1. Find the perimeter, area, and volume of various geometric shapes.

New Resources for Course
Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software
Other

Equipment/Facilities