COURSE NUMBER: MATH175  
COURSE NAME: Mathematical Concepts for the Natural and Social Sciences  
Spring 2016, Session III, Montgomery, Wilson 104  
Dates: 3/30, 4/6, 13, 20, 27  
5:30-9:30

INSTRUCTOR’S NAME: Mr. Sam White

CONTACT INFORMATION: sam.white@hawks.huntingdon.edu

COURSE DESCRIPTION: An exploration of the nature and structure of mathematical thought from a historical and intuitive perspective using elementary mathematical models. Topics include: basic management science models such as planning and scheduling, linear programming, basic probability and statistics, basic growth and decay models.

PREREQUISITE: none


COURSE LEARNING OUTCOMES:  
Upon successfully completing this course, the student will be able to:
1. Demonstrate a basic understanding of Boolean Logic including conditional, contrapositive, and converse statements
2. Perform basic calculations in Geometry topics such as area, volume, and angle measure
3. Demonstrate an elementary understanding of functions of a single variable and their graphs on the Cartesian coordinate system
4. Perform basic analysis of statistics with methods and representations such as averages and standard deviation, histograms, and normal curves
5. Perform operations on graphs including finding Euler and Hamiltonian Circuits and solving the Traveling Salesman problems
6. Calculate probabilities of random phenomena using basic combinatorial counting methods
7. Calculate simple and compound interest, and evaluate basic annuity and amortization payments and values
8. Calculate values of the six Trigonometric functions in relation to right triangles

ATTENDANCE POLICY: 
Absences and Tardiness – All students are required to attend the first session. Those who do not attend the first session will be automatically dropped from the course. Students with more than one absence will receive an "F" for the course. Since this class meets only five times, missing a single class meeting is equivalent to missing three weeks of a regular term. If you cannot attend a class you must let the instructor know via email as soon as possible. In case of absences you are responsible for obtaining all handouts and assignments. Tardiness may result in a deduction in your class participation grade. Excessive tardiness may count as an absence.

Participation – Participation is not the same as attendance. Participation requires students to come to class prepared to actively participate, which makes the classroom experience more
meaningful. However, participation is not just speaking out in class. The contributions made by
the student should be related to the course content and meaningful to the class discussion.

**Late Assignments** – *No shows* fail the assignment. It is expected that the students fulfill their
assignments on the date they are scheduled to do so. Students with illness or other problems that
prevent them from attending class on the day a presentation or written assignment (including a
test and/or exam) is due must contact their instructors PRIOR to the deadline via Huntingdon
College email with supporting documentation to request an extension or a make-up. In most
cases, missed assignments are logistically difficult to make-up while maintaining the integrity of
the module. In rare cases, approval to make-up an assignment may be granted at the discretion of
the faculty member based on the seriousness of the circumstance and on the supporting evidence
provided by the student. Contacting a fellow class member does not substitute for contacting the
instructor.

**Accommodation of Special Needs** Huntingdon College makes every reasonable accommodation
for disabilities that have been processed and approved through our Disability Services Committee
order to request disability-related services at Huntingdon College, students must self-identify to
the Disabilities Intake Coordinator, Camilla Irvin, and provide appropriate and up-to-date
documentation to verify their disability or special needs. After the accommodations have been
approved by the Disability Services Committee, the 504 Coordinator, Dr. Lisa Olenik Dorman,
will notify your professor(s) of the committee’s decision. If you have any questions regarding
reasonable accommodation or need to request disability-related services, please contact Disability
Services at (334) 833-4577 or e-mail at disabilityservices@huntingdon.edu.

**Academic Honesty** – Plagiarism is literary theft. Failure to cite the author of any language or of
any ideas *which are not your own creation* is plagiarism. This includes any text you might
paraphrase, as well. Anyone is capable of searching the Internet or any printed media; your
research paper is intended to broaden your knowledge, stimulate your creativity, and make you
think, analyze, and learn. It is not consistent with the College Honor Code, nor with scholarly
expectations to submit work which is not the product of your own thinking and research. Severe
penalties will result upon the submission of any work found to be plagiarized, including potential
failure of the entire course. It is easy and simple to properly cite all sources used in your paper.
Take no risks – cite your sources.

**Medical Considerations** - If you have a medical condition that may preclude
participation in this course or any aspect of this course, the College suggests you consult
your physician. The College will work with you based upon physician recommendations
to find the best means to address any concerns.

**Title IX Statement** - Huntingdon faculty are committed to supporting students and
upholding the College's non-discrimination policy. Under Title IX, discrimination based
upon sex and gender is prohibited. If you experience an incident of sex- or gender-based
discrimination, we encourage you to report it. While you may talk to a faculty member,
understand that as a "Responsible Employee" of the College the faculty member MUST
report to the college's Title IX Coordinator what you share. If you would like to speak
with someone who may be able to afford you privacy or confidentiality, there are people
who can meet with you. Faculty can help direct you or you may refer to Huntingdon's
Sexual Misconduct Policy at [http://www.huntingdon.edu/student-life/student-
service/misconduct](http://www.huntingdon.edu/student-life/student-service/misconduct). You do not have to go through the experience alone.
COURSE ASSIGNMENTS & GRADING CRITERIA: You will have four exams (on weeks 2, 3, 4, and 5) worth 100 points each (500 points total). Your grade will be calculated as follows:

Your grade = (Exam #1 + Exam #2 + Exam #3 + Exam #4) / 400

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<thead>
<tr>
<th>Grading Elements</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Week 2 Exam</td>
<td>25%</td>
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<tr>
<td>Week 3 Exam</td>
<td>25%</td>
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<tr>
<td>Week 4 Exam</td>
<td>25%</td>
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<tr>
<td>Week 5 Exam</td>
<td>25%</td>
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<tr>
<td>Total Points</td>
<td>100%</td>
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GRADE POINT EQUIVALENTS

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 59-below
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<tr>
<th>Time Frame</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; hour</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; hour</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; hour</th>
<th>4&lt;sup&gt;th&lt;/sup&gt; hour</th>
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<tbody>
<tr>
<td>Prior to Week 1</td>
<td>Read and work on problems from Chapters 2, 3, and 6</td>
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<tr>
<td>Week 1</td>
<td>Review Ch. 2. Sets Ch. 3. Logic Ch. 6. Geometry</td>
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<td>Present Ch. 5. Functions Ch. 7. Graph Theory</td>
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<td>Week 2</td>
<td>Test Ch. 2, 3, &amp; 6</td>
<td>Review Ch. 5. Functions Ch. 7. Graph Theory</td>
<td>Present Ch. 8. Financial Mathematics Ch. 9. Probability</td>
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<td>Week 3</td>
<td>Test Ch. 5 &amp; 7</td>
<td>Review Ch. 8. Financial Mathematics Ch. 9. Probability</td>
<td>Present Ch. 10. Statistics Ch. 15. Trigonometry</td>
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<td>Week 4</td>
<td>Test Ch. 8</td>
<td>Review Ch. 9. Probability Ch. 10. Statistics Ch. 15. Trigonometry</td>
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<td>Week 5</td>
<td>Course Evaluation (IDEA)</td>
<td>Test Ch. 9, 10, &amp; 15</td>
<td>Go over solutions to test. Wrap-up final course details.</td>
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