Ashwaubenon High School
College Credit in High School
GEO SCI 202 – Physical Geology
4 undergraduate credit hours
1st Term 2019
Focus Period & 2nd Period (9:05 – 11:10) daily
Room 183

Instructor Contact Information
Mr. Brack W. Gillespie

I am available to meet with students before school each day at 6:30 and after school on Monday, Tuesday and Thursday between 2:50 and 3:20. Additional times may be made after school by arrangement with me. My e-mail address is:
bgillespie@ashwaubenonk12.org

This class is a dual credit class in collaboration with the University of Wisconsin-Green Bay. Students at Ashwaubenon High School may choose to enroll for UWGB credits in addition to high school credit. This creates a college transcript; therefore, it creates a GPA for you which is permanent.

Course Overview/Description

Volcanoes, earthquakes and torrential floods...the Badger State has seen them all over its 2.8 billion year history. Even the selection of our state mascot has a geologic origin. Geology of Wisconsin will cover a wide variety of geologic processes and the role they played in shaping Wisconsin. Topics will include: variations in bedrock, the formation of oil and gas deposits, precious metals, local fossils you might find in Northeastern Wisconsin, groundwater chemistry, the Niagara Escarpment and the rocks, minerals and fossils you're likely to come across in the state. Students will learn to identify native geologic samples as well as those transported to Wisconsin.
Course Learning Outcomes
After successful completion of the course, students will be able to:
1. Define selected vocabulary from assigned chapters and use them to understand and explain topics.
2. Discuss the basic principles of scientific inquiry, especially as they apply to the field of geology.
3. Differentiate between the three types of plate boundaries by noting common geologic features and processes and explain why plate tectonics is the unifying theory in geology.
4. Classify minerals and rocks using common physical properties observed in a laboratory setting.
5. Analyze igneous, metamorphic, and sedimentary rocks to determine which processes were involved in their formation.
6. Apply the principles of relative dating to interpret the geologic history of a cross-section and understand the application of radiometric dating to the geologic time scale.
7. Explain what causes earthquakes, and be able to determine the source and calculate the magnitude of an earthquake.
8. Differentiate the internal structure and composition of the Earth.
9. Compare and contrast depositional and erosional environments, features, and processes associated with streams and shorelines.
10. Explain the various parts of the water cycle including the interaction of surface and groundwater.
11. Differentiate various landscape forming processes that act on the Earth’s surface (agents of weathering and erosion) and those that act from the planet’s interior (mountain building, volcanism, earthquakes).
12. Describe multiple connections between components of the Earth System and the effects humans and nature may have in terms of intended and unintended consequences.
13. Discuss the geologic history of Wisconsin, outlining the landscape forming processes that have shaped the geology and geography of the state.

How to be successful in this course
This course is divided into four distinct units. Each unit will have its own tests, quizzes and assignments. Additionally, there will be a cumulative final exam at the end of the term. This outline is intended to aid you in your collection of notes and information from classroom presentations, videos, online quizzes, labs, assignments and readings. Please do not rely on it solely as a means of study for you will fall well short of an acceptable grade on the tests. You will have a brand new text from which to study and research. Assigned readings from the text will not be completely reviewed in the class but will be included on the applicable test. It is your responsibility to raise questions you have from the readings.

The easiest way to assure your success in the class is to come to class every day prepared to work and learn. If you miss a class it is your responsibility to collect the notes, lab data etc. that you missed. At the start of each unit you will be given a detailed glossary like the one included with this syllabus. The glossary will contain terms, concepts and processes that will be covered for the next test. Keeping your glossary up-to-date will be your best source of study.

Grading Policies

<table>
<thead>
<tr>
<th>Breakdown of grade:</th>
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<tbody>
<tr>
<td>35% Tests</td>
<td></td>
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<tr>
<td>35% Assignments, labs, etc.</td>
<td></td>
</tr>
<tr>
<td>20% 8 Specimen quizzes (20 pts. each)</td>
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<tr>
<td>10% Final Exam</td>
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If you miss a test you are to make it up the day you return to class whether this absence was excused or unexcused. I will treat each of you as a responsible young adult and not chase you down for missed work.
NO CREDIT WILL BE GIVEN FOR WORK MORE THAN ONE WEEK LATE

ALL SCHOOL POLICIES WILL BE ENFORCED IN THE CLASS SO BE HERE ON TIME

### Letter-grade scale

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Text</th>
<th>Grade Points per Credit</th>
<th>Percent</th>
<th>Letter Grade</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4.0</td>
<td></td>
<td>A</td>
<td>93-100</td>
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<tr>
<td>AB</td>
<td>Very Good</td>
<td>3.5</td>
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<td></td>
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<tr>
<td>B</td>
<td>Good</td>
<td>3.0</td>
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<td>B</td>
<td>85-92</td>
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<tr>
<td>BC</td>
<td>Above Average</td>
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<td></td>
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<tr>
<td>C</td>
<td>Average</td>
<td>2.0</td>
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<td>C</td>
<td>77-84</td>
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<tr>
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<td>Below Average</td>
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<tr>
<td>D</td>
<td>Poor</td>
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<td>D</td>
<td>70-76</td>
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<td>Unacceptable</td>
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<td>F</td>
<td>&lt;70</td>
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### Learning Resources

#### Materials needed for class:
- 1” three-ring binder
- Loose-leaf paper
- Charged device
- Pencil or pen

#### Helpful Websites & Resources:
- Required Text: Earth Science, 12th Ed. Tarbuck, Lutgens & Tasa
- Companion Website: wps.prenhall.com/esm_tarbuck_escience_11/
- Class Time: 90 minutes daily plus Focus Period
- Google Class: wmltua
- Geology: www.uwgs.gov
- Layered Earth Site: login.simulationcurriculum.com Login Code: prQp3h7
Course Organization

Weeks

2

Unit I: Introduction to geology, mapping and remote sensing
Ch. 1 Introduction to Geology
"Birth of the Earth"
GB West Mapping
Compass and GPS work
Remote Sensing Lab (55 pts.)
Groundwater Article (50 pts.)
Ch. 2 Minerals: Building Blocks of Rocks
Ch. 3 Rocks: Materials of the Solid Earth
Specimen ID Quizzes & Unit I Test (100 pts.)

2

Unit II: Shaping Earth's Surface
Ch. 4 Weathering, Soil and Mass Wasting
Ch. 5 Running Water and Groundwater
Ch. 6 Glaciers, Deserts and Wind
Specimen ID Quizzes & Unit II Test (100 pts.)
Field Trip or Alternate Assignment (100 pts.)
Layered Earth Labs

2

Unit III: Forces Within
Ch. 7 Plate Tectonics: A Scientific Theory Unfolds
Ch. 8 Earthquakes and Earth’s Interior
Ch. 9 Volcanoes and Other Igneous Activity
Ch. 10 Mountain Building
Specimen ID Quizzes & Unit III Test (100 pts.)
Layered Earth Labs

1

Unit IV: Deciphering Earth's History
Ch. 11 Geologic Time
Ch. 12 Earth’s Evolution through Geologic Time
Specimen ID Quizzes and Unit IV Test (100 pts.)
Layered Earth Labs

2

Unit V: The Global Ocean
Ch. 13 The Ocean Floor
Ch. 14 Ocean Water and Life
Ch. 15 The Dynamic Ocean
Specimen ID Quizzes and Unit V Test (100 pts.)
Layered Earth Labs

Cumulative Final Exam 10% of overall grade
**UWGB Academic Integrity**

As stated from the UWS 14.01 Statement of principles, “The Board of Regents, administrators, faculty, academic staff and students of the University of Wisconsin System believe that academic honesty and integrity are fundamental to the mission of higher education and of the University of Wisconsin System. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others’ academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.” The entirety of the Student Academic Disciplinary Procedures can be located at https://docs.legis.wisconsin.gov/code/admin_code/uws/14

*These procedures state that if there is any academic dishonesty of your academic work, there are consequences that can become part of your permanent college record.*

**UWGB Drop, Withdrawal, and Extended Absences Policies***

This course follows the UW-Green Bay policies for drops and withdrawals. Information can be found at https://www.uwgb.edu/bursar/refunds/refund-and-drop-schedule/ and https://www.uwgb.edu/bursar/term-deadline-calendar/

For information on drops and withdrawals, please refer to the UW-Green Bay folder provided to you.

*By registering, you accept responsibility for compliance with UW-Green Bay rules, regulations, and policies (www.uwgb.edu/policies). CCIHS courses longer than 14 weeks or longer follow the 14 week course policies. Once 14 calendar days have passed from the course start date, courses cannot be dropped without academic/fee penalties; for courses shorter than 14 weeks in duration, students have 7 calendar days from the course start date to drop a course without academic/fee penalties.*

*Course grade(s) are final and will become part of my permanent college record. Enrollment in a CCIHS course does not guarantee admission to any college, including UW-Green Bay. By registering for this course you will be responsible for paying the high school for all tuition/fees owed for this course enrollment.*

For additional information and resources, visit the UW-Green Bay College Credit in High School website at https://www.uwgb.edu/ccihs/