BIOL 120 Flowering Plants of Southwestern Michigan
Muskegon Community College
Summer, 2009: Section BIOL 120 Lec S01

Instructor: Theresa Van Veelen
Office Phone: 231-777-0672
Office and hours: 243 D; W, TTH 10:30am-Noon
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BIOL 120 is a study of the identification, ecology and distribution of the flowering plants of southwestern Michigan. This course includes lectures, laboratory study, and field trips to a variety of habitats. This is a one-credit, elective course with 7 contact hours for 3.5 - 4 weeks. No prerequisites.

BIOL 120, TENTATIVE LECTURE TOPICS AND FIELD TRIPS:
Lecture: W 12:20-3:05pm Room 233
Lab: TH 12:20-5:20pm Room 245 and field trips

COURSE PURPOSE:
• Provides participant with an opportunity to become acquainted with the flowering plants of Southwestern Michigan.
• Enables participant to gain proficiency in identifying flowering plants through the use of taxonomic keys.
• Acquaints participant with the ecology of selected Southwestern Michigan communities.

COURSE OBJECTIVES:
1. Identify at least 75 flowering plants common to southwestern Michigan by both scientific name, common name, and family (Family, Genus, Species).
2. Become proficient using keys to identify flowering plants.
3. Construct mounted herbarium sheets.
4. Identify structure and function of floral components.
5. Diagram the flowering plant reproduction cycle.
6. Describe the characteristics of the some of the most common flowering plant families found in southwestern Michigan.
7. Become familiar with some basic ecology that affects the composition and distribution of communities of plants that occur in southwestern Michigan, including forests, prairies, dunes, and wetlands.

REQUIRED:
• Access to internet and Blackboard for course materials and grades
5 x 8 index cards. A collection of plant index cards will be due each week. For each assigned species include names (Latin and common), plant description, other plants in the community, habitat description, and a drawing or picture, etc.

**RECOMMENDED:**
- A spiral-bound or loose-leaf notebook for taking notes both in lecture and in the field.
- A camera, if desired.
- Especially for field trips: Drinking water, Insect repellent, comfortable walking shoes, Rain coat.

**COURSE POLICIES:**
- You are expected to attend all classes and field trips.
  - If you miss a lecture or a lab, 10% of final possible points will be deducted from your grade (for each missed time, no excuses in this short course and no labs can be made up.) You will be held responsible for all material covered.
  - All field trips will be taken even if raining. Only lightning or severe weather will prevent us from going outside and prompt us to visit an inside exhibit.
- Quizzes and exams must be taken when given. If you miss one because you are hospitalized or there is a death of an immediate family member, you must call me no later than noon of the day after the quiz or exam was given. Failure to notify me by that time will result in an automatic zero for that quiz or exam.
- Laptops and tape recorders may be brought to class, but may not be used during quizzes or exams. Cell phones or other electronic devices must be shut off when in class.

**STUDYING**
- About 2-3 hours of studying time for each hour in class are recommended.
- Some students find making note cards, recording lectures, studying with a group, and quizzing yourself are good preparation techniques for exams.

**HAVE A BACK UP PLAN** *(if your computer crashes or a flat tire...)*
- Complete assignments early and submit work early. DON'T WAIT TO THE LAST MINUTE!
- Have access to a friend’s computer.
- Recruit a friend or two that you can call if your car breaks down and you need a ride to campus. Ride the bus.
- Use our computer labs. Know their locations and open hours.
**OTHER ASSISTANCE**
- Campus Computer Technical problem contact number 24/7: 1.866.718.5170
- Biology Computers with learning programs (room 249). Bring your own headset for audio listening.
- Additional exam review sessions (outside of regular class time) upon request.
- If you have special learning needs, please inform instructor and contact Janice Alexander at #309.
- Check with tutoring center for tutor availability 777-0393.
- The Writing Center. They will help you with grammar, etc. 777-0474

**ACADEMIC INTEGRITY POLICY**
Cheating or plagiarism will not be tolerated and may lead to a failing grade. Cheating is using or attempting to use, **give**, and obtain materials or information including computer material pertaining to a quiz, examination, written paper or other work that a student is expected to do alone. Plagiarism is the use of another’s words or ideas without acknowledgement. Papers/tests will be immediately taken from the student and the instructor will notify the student on what action the instructor will take. See student handbook for more information. Our campus subscribes to *TurnITIN* which is plagiarism monitoring program.

*Your species paper must be submitted to Turnitin.com.*

**STUDENT BEHAVIOR**
Treat everyone with respect. See student handbook for more information.

**WITHDRAWAL**
See catalog, internet, and schedule book for more details on W, WP, WF, etc. To receive a WF or a WP is this course, **students must initiate action otherwise an E** will be given at the end of the semester.

**GRADES**
- Grades will be posted on Blackboard, along with digital pictures and occasional supplemental material.
- Quizzes and plant index cards (50 pts). Quizzes may be over identified plants, keying out plants, or any other material covering during lecture and field trips. About 25 plants will be assigned each week for the plant index cards.
- Project (50 pts): One research paper, no more than 3 pages, on one flowering Southwestern Michigan plant of your choice (from my list) and two herbarium sheets of that particular plant (one with label on the front and one with label on the back, which will become College property). Paper must be in APA format with citations and include characteristics of the plant, its classification, habitat found, special uses. A hard copy is due on the last day with a five minute presentation about your project species. (45 pts for paper + 5 pts for presentation) See grading rubric below. Paper must be submitted to Turnitin.com.
- One exam (100 pts) on the last day will cover all material included in lectures, field trips, and vocabulary. This exam will include several “unknown plants” which will have to be keyed out using a key provided by the instructor.
- Total course points: 200
- Grading scale range in percentage

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**Rubric for Species research project:**

45 points for paper and 5 points for presentation = 50 points

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<th>Paper Grading Rubric</th>
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<tr>
<td>Grammar, spelling, sentences</td>
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<td>3-4: 2-3 mistakes</td>
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<td>5: no mistakes</td>
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<td>6-10: Average detail</td>
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<td>Habitat and special uses</td>
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<td>6-10: Average detail</td>
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<td>11-15: Very detailed</td>
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<td>Citations and herbarium sheets</td>
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<td>4-7: Average detail</td>
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<td>8-10: Great detail</td>
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**BIOL 120, TENTATIVE LECTURE TOPICS AND FIELD TRIPS:**

Lecture: W 12:20-3:05pm Room 233
Lab: TH 12:20-5:20pm Room 245 and field trips

**Lecture 1: Wednesday, MAY 13**

- Read all of forward pages through page 15 in Newcomb’s.
- Introduction to instructor, BIOL 120, and flowering plants.
- Plant classification: Why do we and how do we classify organisms? How are flowering plants classified?
- Flower Keys: What is a plant key? How do they work?
- Plant identification: What are some more differences among plants? Leaves, bark, flowers, etc.
- First plant identifications of plants on or near campus
- Preservation of plant samples: What are herbarium sheets?
- Explanation of plant index cards and species research project.
  - Assignment of week 1 – plant species for index cards
- **Quiz 1 (10pts) – over lecture 1**

**Lab 1: Thursday, May 14**

- Lab and Field trip
  - Lab: dissection of flower. Herbarium sheets of assigned plants
  - Kasey Hartz Natural Area: Muskegon Community College
  - Muskegon State Park: Lost Lake bog, Dune
Lecture 2, Wednesday, May 20
- Class work to aid learning of terms and keys
- Herbarium Sheets: How are herbarium sheets prepared? Poor vs good quality herbarium sheets.
- Characteristics of Plant Families: How do you recognize plant families?
- Important plant families. What are some examples from each family?
- Plant communities: How are they put together? How are they studied?
- Plant communities of Michigan: Oak Forests, Beech – Maple Forests, Mixed Mesophytic Forests, Coastal Dune
- Assignment of week 2 – plant species for index cards
- Plant index cards from week 1 due (5pts)
- Quiz 2 (10pts) – over lab one items and lecture 2

Lab 2, Thursday, May 21
- Lab: look at herbarium sheets of assigned plants
- Potential Field trips
  - Muskegon State Game Area: wetlands
  - Newaygo Wetland trail
  - Loda Lake Wildflower Sanctuary: Manistee
  - Oceana Prairie
  - Hesperia Moraine

Lecture 3, Wednesday, May 27
- Class work to aid learning of terms and keys
- Some more important plant families
- Changes in plant communities through time: succession
- More plant communities of Southwestern Michigan: Wetlands, Prairie
- Review for exam
- Practice keying out unknowns
- Learn how to submit papers to Turnitin.com
- Assignment of week 3 – plant species for index cards
- Plant index cards from week 2 due (10pts)
- Quiz 3 (10pts) – over lab two items and lecture 3

Lab 3, Thursday, May 28
- Lab: look at herbarium sheets of assigned plants
- Potential Field trips
  - Kitchell Dunes – Ferrysburg
  - Rosy Mound – Grand Haven
  - Hofma Park – Grand Haven

Lecture 4, Wednesday, June 3
- Group work on taxonomic key for all assigned plants (good review before final)
- Student presentations on research topic.
- Plant index cards from week 3 due (5pts)
- Plant project, herbarium sheets, and presentation due (50pts)
- Final exam (100pts) – identification of assigned plants, identification of an unknown, terms, plant communities, dichotomous keys.

Potential Back up Field Trips due to Weather: Gillette Nature Center at Hoffmaster State Park

**Note: If you would like your papers and index cards returned to you, please stop by the Life Science Office before the middle of July (or you may have to wait until the fall semester).