PLB 317: Introduction to Medical Botany

Course Syllabus Spring 2016

Lecturer: Dr. Aldwin M. Anterola
Life Science II, Rm 429

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Lecture: Tue and Thu 11-11:50 AM, LSII-453
Laboratory: Tue or Thu 1-4:50 PM, LSII-457

Teaching Assistant: Heather Osborn (heather.osborn@siu.edu)

Office hours: TR 2-5 P.M.

Textbooks: ***Medical Botany: Plants Affecting Human Health, 2nd ed.*** Walter H. Lewis and Memory P.F. Elvin-Lewis. New York: John Wiley & Sons, 2003. 812 pp. ISBN 0-471-62882-4. (Required)

Medicinal Plants of the World**.** Ben-Erik Van Wyk and Michael Wink. Oregon: Timber Press, 2004. 480 pp. ISBN 0-88192-602-7. (Required)

Web Sites: https://online.siu.edu; https://sites.google.com/a/siu.edu/medicalbotany/; http://echo360.org http://medicalbotany.blogspot.com/

Course Description: A survey of plants affecting human health and how they are used historically and in modern times, with emphasis on the biologically active constituents. Laboratory experiments will introduce students to techniques in production, isolation, chemical analysis and biological testing of medicinal compounds from plants.

Prerequisites: BIOL 200a and 200b, CHEM 140a or CHEM 200 and 201. **Lab Fee:** $ 25

Course Objectives:

1. To appreciate how plants have influenced medicine throughout human history
2. To know the bioactive components of common medicinal plants
3. To gain familiarity with plants that affect human health
4. To learn laboratory techniques in medicinal plant research

Disclaimer: This class is not intended to train anyone to practice herbal medicine, nor is it designed to provide medical/pharmaceutical advice. All lectures are based on the assigned textbook readings, which may provide information that is in conflict with current practices of licensed health professionals.

Grading Scheme:

Lecture Exams (highest 3 out of 4)	300 Points
Online Quizzes and Projects	200 Points
Lab Exercises and Quizzes	300 Points
Final Exam	200 Points
Total	1000 Points

900 -1000	= **A**
800 – 899	= **B**
700 – 799	= **C**
600 – 699	= **D**
Less than 600	= **F**

EMERGENCY PROCEDURES: Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Attachment: http://pvcaa.siu.edu/_common/documents/syllabus%20attachments/syllabus-attachment-spring-2016.pdf

PLB 317 Class Schedule*

Wk	Date	Lecture Topics	Plant materials	Lab Topic/Activity
1	Jan 19	Chapter 1: Introduction to Medicinal Plants	**Various plants and herbs**	**1. Medicinal Plants**
	Jan 21	Chapter 2: Complementary & Alternative Medicine		
2	Jan 26	Chapter 3: Plant Constituents & Families	**Tea leaves and Ginger rhizomes**	**2. Decoctions and Water Infusions**
	Jan 28	Chapter 4: Immune System		
3	Feb 2	Chapter 5: Allergies	**Thyme, Lavender, Rosemary, Sage**	**3. Vinegar Infusions**
	Feb 4	Chapter 6: Cancer		
4	Feb 9	Review 1	**Cayenne, Orange, and Peppermint**	**4. Oil infusions and Essential Oils**
	Feb 11	**Lecture Exam 1**		
5	Feb 16	Chapter 7: Musculoskeletal System	**Peppermint, Ginger and Witch-Hazel**	**5. Tinctures & Spirits (Houghton, p. 62)**
	Feb 18	Chapter 8: Peripheral Nervous System		
6	Feb 23	Chapter 9: Heart and Circulation	**Onion bulbs**	**6. Flavonoids (Harborne, p. 58)**
	Feb 25	Chapter 10: Metabolism		
7	Mar 1	Chapter 11: Eyes and Ears	**Grapes (with seed)**	**7. Proanthocyanidins (Harborne, p. 88)**
	Mar 3	Review 2		
8	**Mar 8**	**Lecture Exam 2**	**Alfalfa sprouts**	**8. Isoflavones (Harborne, p. 82)**
	Mar 10	Chapter 12: Oral Hygiene		
Spring Break				
9	Mar 22	Chapter 13: Gastrointestinal Tract	**Belladonna, Periwinkle, Tomato, Coffee**	**9. Alkaloids I (Houghton, p. 155-8)**
	Mar 24	Chapter 14: Respiratory System		
10	Mar 29	Chapter 15: Urogenital System	**Belladonna, Datura or Hyoscyamus**	**10. Alkaloids II (Houghton, p. 163-5)**
	Mar 31	Chapter 16: Skin		
11	Apr 5	Chapter 17: Deterrents	**Black, Green and White Tea (in tea bags)**	**11. Alkaloids III (Houghton, p. 177-8)**
	Apr 7	Review 3		
12	**Apr 12**	**Lecture Exam 3**	**Dyer's woad, and Dyer's knotweed**	**12. Pigments**
	Apr 14	Chapter 18: Panaceas, Adaptogens and Tonics		
13	Apr 19	Chapter 19: Central Nervous System	**Anise, Coriander, Dill, Caraway, Fennel seeds**	**13. Terpenoids I (Harborne, p. 114)**
	Apr 21	Chapter 20: Stimulants		
14	Apr 26	Chapter 21: Hallucinogens	**Foxglove (Digitalis)**	**14. Terpenoids II (Houghton, p. 128)**
	Apr 28	Chapter 22: Depressants		
15	May 3	Review 4	**Spinach leaves**	**15. Terpenoids III (Carotenoids)**
	May 5	**Lecture Exam 4**		
16	**May 12**	**Final Exam 10:15 a.m. − 12:15 p.m.**		

* Schedule is subject to change. Modifications to the lecture and laboratory will be announced in class or posted on D2L.