SYLLABUS

PLS 480/580; ARLS 480/580 – MEDICINAL PLANTS
ENR2, Room S210; Tuesdays & Thursdays 6:00 – 7:15 pm

Historical and cultural aspects of plants and medicine, therapeutic uses of plants, psychoactive and food plants, contribution of medicinal plants to modern medicine, future of medicinal plants

Course Prerequisites: General Chemistry (101a-101b)

Instructor and Contact Information

Instructor: Leslie Gunatilaka leslieg1@email.arizona.edu

Office: 1. UA Natural Products Center (NPC)
250 E. Valencia Rd.
Tel: 621-9932
(Available at NPC on any week day by appointment)

2. School of Natural Resources & the Environment (SNRE)
ENR2 Building, Room N257
(Available at SNRE during Office Hours on Tuesdays & Thursdays 5:00–6:00 pm by appointment calling 621-9932)

Course Objectives and Expected Learning Outcomes: This course is designed to provide an appreciation for the contribution of plants to traditional (alternative) and modern medicines worldwide. In order to achieve this, we will examine: historical and cultural aspects of plants and medicine, therapeutic uses of plants, illnesses caused by some plants and their toxins to humans and animals, psychoactive plants, beneficial effects of some food plants, contribution of medicinal plants to alternative and modern medicines, some medicinal plants of the U.S. Southwest, and the future of medicinal plants.

Absence and Class Participation Policy:

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences
Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

**Required Texts or Readings:** There is no required text for this course. Summaries of some lectures will be handed out. Copies of some selected scientific papers will also be provided and/or made available on D2L web site. See list provided for Recommended Additional Reading.

**Required Extracurricular Activities:** Demonstration of some techniques involved in medicinal plant research and relevant to this course will be held at the University of Arizona Southwest Center for Natural Products Research (250 E. Valencia Rd, Tucson, AZ 85706-6800) on Saturday Oct 27, 2018 from 10:00 – 11:30 am. All students are highly encouraged to attend this.

### Assignments and Examinations:

**Undergraduate Students:** Examinations for undergraduate students will differ from those for graduate students and will consist of:

- **Exam 1**
  - 30 min.
  - **12.5%** of the final grade

- **Exam 2**
  - 30 min.
  - **12.5%** of the final grade

- **Exam 3**
  - 60 min.
  - Short answer and essay-type questions drawn from concepts developed in lectures and discussions
  - **25%** of the final grade

- **Exam 4**
  - Take Home Exam
  - Essay-type questions drawn from concepts developed in lectures and discussions
  - **25%** of the final grade

- **Term Paper**
  - 5–10 pages, double spaced, including references, on an approved topic on medicinal plants
  - involves library and/or internet research that integrates concepts developed in lectures
  - first draft of the paper will be reviewed and edited, and students are expected to respond to the comments provided when preparing their final paper for grading due dates (see Course Outline)
  - objectives:
    - allow the student to become more knowledgeable in some specific aspect of medicinal plants
    - provide the student some practice and feedback on writing
  - **25%** of final grade: grade based on timeliness (10%), organization and style (30%), and content (60%). For additional details, see Undergraduate Term Paper

**Graduate Students:** Examinations for graduate students will differ from those for undergraduate students and will consist of:

- **Exam 1**
  - 30 min.
  - **10%** of the final grade

- **Exam 2**
  - 30 min.
  - **10%** of the final grade
Exam 3
- 60 min.
- Short answer and essay-type questions drawn from concepts developed in lectures and discussions
- 20% of the final grade

Exam 4
- Take home exam.
- Essay-type questions drawn from concepts developed in lectures and discussions and from assigned special readings
- 25% of the final grade

Critical Summaries
- On each assigned special readings on various topics on medicinal plant research.
- 2 - 3 pages, double spaced, in your own words
- Due dates (see Course Outline)
- Objectives:
  - allow the student to become more knowledgeable in some specialized aspect of medicinal plants
  - provide the student some practice and feedback on critical reading of published literature
- 15% of the final grade (for all 4 critical summaries): grade based on timeliness (10%), style (30%), and content (60%)

Oral presentation
- 20 min., followed by 5-10 min. discussion
- involves library and/or internet research that integrates concepts developed in lectures
- 20% of the final grade: grade based on organization of subject matter (25%), clarity of presentation (50%) and ability to answer questions (25%

For additional details, see Graduate Critical Summaries and Oral Presentations

Schedule/Due Dates: See attached Examination Schedule and Other Important Dates.

Final Examination: For details, see Exam 4 above

Grading Scale and Policies: All exams are cumulative. If you know you will miss an exam, inform the instructor at least a week in advance to make the necessary arrangements. Missed exams necessitated by an illness can be made up within 7 days of the exam date, although make-up exams may be more rigorous than the original exam.

Assignment of final grade will not be based on any preconceived thresholds for letter grades, but roughly follows: > 90% = A; 80-89% = B; 70-79% = C; 60-69% = D; < 60% = E.

University policy regarding grades and grading systems is available at http://catalog.arizona.edu/policy/grades-and-grading-system

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete and http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal respectively.

Scheduled Topics/Activities: For details, see Course Outline.

Classroom Behavior Policy: To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).
Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

The use of personal electronics such as laptops, iPads, and other such mobile devices is distracting to the other students and the instructor. Their use can degrade the learning environment. Therefore, students are not permitted to use these devices during the class period.

**Threatening Behavior Policy:** The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See [http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students](http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students).

**Accessibility and Accommodations:** At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let me know so that we can discuss options. You are also encouraged to contact Disability Resources (520-621-3268) to explore reasonable accommodation.

**Code of Academic Integrity:** Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See [http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity](http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity).

The University Libraries have some excellent tips for avoiding plagiarism, available at [http://new.library.arizona.edu/research/citing/plagiarism](http://new.library.arizona.edu/research/citing/plagiarism).

*Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor’s express written consent.* Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

**UA Nondiscrimination and Anti-harassment Policy:** The University is committed to creating and maintaining an environment free of discrimination; see [http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy](http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy).

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Additional Resources for Students:** UA Academic policies and procedures are available at [http://catalog.arizona.edu/policies](http://catalog.arizona.edu/policies). Student Assistance and Advocacy information is available at [http://deanofstudents.arizona.edu/student-assistance/students/student-assistance](http://deanofstudents.arizona.edu/student-assistance/students/student-assistance).

**Subject to Change Statement:** Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.