

Ecological and Medicinal Aspects of Natural Products – SPPS 281 & SIO 296
Spring Quarter 2017; Course Instructor – Bill Gerwick
Tuesdays 3:00 – 4:50 pm in the Pharmaceutical Sciences Building
2 Units – PSB Room To Be Determined

Course Goal and Objectives: Through descriptions of some of the most interesting phenomena involving natural products, this course will provide the foundations of the natural product sciences, including ethnobotanical uses of plants, ecological interactions and contemporary drug screening programs, and will increase awareness of the pervasiveness of natural products in pharmaceutical products. Students will gain knowledge of specific natural products of special note for their pharmaceutical or ecological value, and will integrate various scientific disciplines such as organic chemistry, pharmaceutical chemistry, pharmacology, ecology and the drug discovery process.

There will be two planned but optional field trips (tide pool exploration, desert garden walk). Dates and times for these to be determined.

Lecture Schedule (Topic/Date)

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| 1. Introduction and Overview of Methods in Natural Products Chemistry | April 4 |
| (note - there will be no class in the first week of the SSPPS curriculum, as the SSPPS Spring quarter starts a week earlier than the rest of campus) | |
| 2. Traditional Natural Product Pharmaceuticals from Plants | April 11 |
| 3. Marine natural products and drug discovery – 1 | April 18 |
| 4. Marine natural products and drug discovery – 2 | April 25 |
| 5. The natural products of fungi and lower plants | May 2 |
| 6. Ethnobotany from around the world | May 9 |
| 7. The natural products of desert plants and cacti | May 16 |
| 8. Semiochemistry – the art and science of smell | May 23 |
| 9. Herbal natural products, functional foods and cosmeceuticals | May 30 |
| 10. Student presentations will be the week of May 29 at a time To Be Determined that works for all student schedules | |

There will not be a Final Exam in this course, but rather, 3 Quizzes given during the quarter.

Methods of Student Assessment

3 quizzes	33 pts
Term paper	33 pts
Presentation	18 pts
Attendance and participation	16 pts
Total	100 pts

Grading is S/U; > 70% will achieve a Satisfactory Grade

Text

There is no course text, however, primary research papers and review papers will be assigned and distributed in class and by email.

Course Instructor

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