

Introduction of Diversity into the Organic Chemistry Courses

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The Project


- The author has developed this project in 2009 during her participation in the "UW-Parkside's Third Summer Institute: Infusing Diversity in the Curriculum". In the fall of the same year the following two projects have been introduced in the Organic Chemistry 322 curriculum.

The Project on the Medicinal Plants used by the Wisconsin Native Americans


At the very beginning of the semester, the students were trained on the use of the Science Finder Scholar search engine, the on-line journals of the American Chemical Society, and other journals. With these tools the students are researching the active ingredients of the Native American medicinal plants which they have chosen from the publication: V.M. Kolb, "Herbal Medicine of Wisconsin Indians", *Progress in Drug Research,* **58**, 52-97 (2002). Based on their research, the students will submit a written report (3-4 pages).

The Project on the Key Chemical Discoveries by the Scientists of Diverse Backgrounds

- The students will research the discoveries of various prominent chemists of diverse backgrounds. Examples include the Nobel-prize winners Kenichi Fukui (Japan) (frontier orbital theory), Mario Molina (Mexico) (the chemistry behind the ozone layer destruction), Chandrasekhara Ventaka Raman (India) (spectroscopy), and other prominent chemists, such as Percy Lavon Julian (African American) (synthesis of physostigmine), among others.

The Project on the Key Chemical Discoveries by the Scientists of Diverse Backgrounds, continued

- Our librarian, Qinghua Xu, has developed a web site dedicated to this project, with many useful links to the resources on the diverse groups of chemists. The students will research the original chemical questions these scientists posed, the experiments they did, and the importance of these scientific discoveries. The students will also research biographies of these scientists, which will help put the discoveries in the historical context. Finally, the students will produce a paper on their research (4-5 pages). The instructor will discuss selected key discoveries of the diverse scientists in her lectures.

Explanation of the library research

- http://homepages.uwp.edu/xuq/Instruction/Chemistry/Diversity%20Project.htm

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