Miami Dade College

Course Description

PLS1005| Biology of Cannabis | 3.00 credits

This course will provide an extensive review of Cannabis species. Students will learn about the history, classification, reproduction, genetics, and the role of metabolites in human health. The course will emphasize medicinally important pharmacological compounds extracted from Cannabis including cannabinoids and terpenes. Corequisite(s): HOS 1010.

Course Competencies

Competency 1: The student will understand scientific classification systems and the structural characteristics that define the order, family, general and species levels by:

1. Discussing the identification, classification, and naming of plants.
2. Examining the level of classification of Cannabis and determine the identifying characteristics for plants in this division including typical plant structural characteristics.
3. Defining various floral states including dioecious, monecious, perfect, and imperfect.
4. Identifying the different species of Cannabis.

Competency 2: The student will basic principles of genetics analyses including hybridization techniques by:

1. Examining basic Mendelian genetics of inheritance.
2. Exploring monohybrid and other crosses for angiosperms.
3. Analyzing strains of Cannabis produced via hybridization.
4. Discussing transgenic methods of hybridization
5. Relating hybrids to geographical distribution, growth characteristics, and ethnobotanical use

Competency 3: The student will demonstrate knowledge of Cannabis metabolites of medicinal importance by:

1. Discussing the history of the use of Cannabis as a mind-altering drug and as a fiber source.
2. Examining the distinction between CBD and THC chemically.
3. Reviewing relevant clinical trials on the effects of CBD and THC.
4. Analyzing the neurological pathways of CBD and THC metabolites in the human brain and how they interact with corresponding receptors for medicinal properties.
5. Identifying percent active compounds and comparison to medical effects.

Competency 4: The student will demonstrate the risks and benefits of Cannabis use on health outcomes by:

1. Evaluating the risks and benefits of use with the available scientific data and research.
2. Discussing the signs and symptoms of potent Cannabis use and withdraw symptoms.
3. Identifying the dosage forms and routes of administration used by the industry.
4. Discussing differences in the devices used for Cannabis administration.
5. Examining how the industry labels the product.

Learning Outcomes:

1. Communication
2. Critical Thinking
3. Cultural / Global Perspective
4. Environmental Responsibility
5. Ethical Issues
6. Numbers / Data