

Isolation and identification of microorganisms

1. Lecturer: Popova Yulia Viktorivna, assistant of the department of plant and microorganism physiology and biochemistry.
2. Status: optional for bachelors.
3. Course, semester: 4th academic year, 7th semester.
4. Number of credits – 4, general academic hours – 144, labs – 90; self-study – 54.
5. Preliminary requirements: basics of Biochemistry, Microbiology, Genetics, Biotechnology
6. Description of the course: special lab practice provides knowledge and skills of cultivation, isolation and identification of microorganisms. Within the practice students get acquainted with the organization of a microbiological laboratory and normative documents and equipment. Students work out methods of sterilization, learn to prepare nutritious media for culturing microorganisms and do procedures with microorganisms and identify unknown culture.

Parts: Work in microbiological laboratory. General information about the components of the media, principles of their preparation and conditions of microorganism cultivation; Storing, pure culture isolation techniques and bacteria identification methods.
7. Course organization, forms of control: writing tests, oral tests, writing final test.
8. Educational and methodological support: program, work plan, educational and scientific literature, multimedia presentations, microorganisms from the collection of the Plant and Microorganism's Physiology and Biochemistry department.
9. Language of teaching: Ukrainian.

References:

1. Желдакова Р.А. Выделение и идентификация микроорганизмов. – Мн.: БГУ, 2003 . – 36 с.
2. Методы общей бактериологии (в 3-х томах) / Под ред. Ф. Герхардта. – М.: Мир, 1983
3. Нетрусов А.И., Егорова М.А., Захарчук Л.М. и др. Практикум по микробиологии / Под ред. А.И. Нетрусова. – М.: Академия, 2005. – 608 с.
4. *Определитель бактерий Берджи*: в 2 т. Справочник: перев. с англ. / Кол. Авторы: Беркли Р., Бок Э., Бун Д., Бреннер Д., Хоулт Д., Криг Н. Снит, П., Заварзин Г.А и др. - 9-е изд. – М.: Мир, 1997. – 430 с.
5. *Практична мікробіологія*: Навч. посіб. для вузів / Кол. авторів Климнюк С.І., Ситник І.О., Творко М.С., Ширококов В.П.. - Тернопіль: Укрмедкнига, 2004 . – 440 с.