

**Faculty of Pharmacy****Biotechnology****Information :****Course Code :** PM 906**Level :** Undergraduate**Course Hours :** 2.00- Hours**Department :** Pharm D**Instructor Information :**

Title	Name	Office hours
Associate Professor	MARWA ALI MOHAMED TAMMAM	1

**Description :**

The course aims to provide students with fundamentals, scope, and applications of biotechnology through studying fermentation technology, upstream and downstream processes, scaling up, production of metabolites and enzymes. The course addresses the methods of regulation of gene expression, production of recombinant proteins and the major biotechnological products such as vaccines and monoclonal antibodies. Recent molecular techniques and other applications of biotechnology including biotransformation, bioremediation, bioleaching, bioinsecticides, biosensors, biosurfactants and energy production are also included