

Brooklyn College of the City University of New York
Department of Biology
Bio 4022 – Biotechnology of Algae

Instructor: TBA

Office: TBA

Office hours: TBA or by appointment. If necessary, contact the instructor by email for an appointment.

Email: TBA

Topics covered will include general biotechnology and algae.

2 hours lecture; 2 credits

Phylogeny, evolution, habitats, growth cycles, and genetic engineering of algae; biosynthetic pathways of algal products and their metabolic regulation; interdisciplinary topics such as designing bioreactors and nutritional sciences including values of natural products. The economic aspect of patent law and management of companies dealing with algae will be covered.

Prerequisite: Biology 1002 or 1072 [29] and Chemistry *1100 [1].

Textbook

No textbook required.

Required Electronic Resource for the Lecture:

Access to Blackboard - Course materials will be posted on Blackboard.

Course lecture outlines (subject to change)

See class schedule below and complete syllabus on blackboard

Outcomes Assessment

Course grading

The course grade will be based upon students' performance in lecture exams and lab.

- Attendance	10%
- Midterm exam	30%
- Midterm exam	30%
- Course assignments (Assay & Presentation)	30%

Total Grade 100%

Exams

The exams will assess your ability to retain and recall the material covered in lecture as well as your ability to integrate and extrapolate the material covered by solving problems.

In addition to the midterm exams and the final, one course assignments will be given for the semester. No late assignments will be accepted.

Make-up exams and quizzes: There are no make-up exams. *If you miss one exam it will be entered as a 'zero' or you will have to take a cumulative final exam.*

Lecture Attendance - According to Brooklyn College policy attendance of lectures is mandatory. Lectures provide essential information that may not necessarily be covered in the textbook. It is therefore important that you attend all lectures. If you miss a lecture you are responsible for the material covered. You are also responsible for all announcements made in lecture. If you miss a class or come late, be sure you obtain missed material from a classmate. Missed lectures will be counted as '0'. Each attended lecture hour will be counted as '1'. 14 weeks with 2 lecture hours accumulates to 28, which is 100% of attendance.

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Draft Class Calendar (subject to change)

Course Introduction: Biotechnology and Algae

Introduction & How to give a presentation

Cultivation of Algae and Utilization of Algae

Conversion Day – no class

Genetic Engineering

Cultivation of Algae and Utilization of Algae II – Assignment of Topics

Midterm 1, Discussion of Assignment Topics

Algae Biofuels

Establish & Manage a Culture collection.

Algal Genetics & Life Cycles

How to set up an Algal Company

Midterm 2, Presentation by TBD

Student Presentations

Student Presentations

Student Presentations

