

Hagerstown Community College

Master Syllabus

COURSE: BTC 201, Discovery Research, 4 Credits

DATE: Fall 2017

INSTRUCTOR: C. Dove

COURSE DESCRIPTION:

This is the first in a series of two lecture/laboratory courses that provides an overview of theory, application and hands-on experience in biotechnology. Topics covered include introduction to fundamentals of research in biotechnology, DNA, RNA, and protein analysis, as well as an introduction to cell tissue culture. Laboratory fee required. 45 hours of lecture and 45 hours of lab. Prerequisite: BTC 101 and 8 credits of BIO and/or CHM classes.

TEXTBOOK: Materials will be available on Moodle.

STUDENT LEARNING OUTCOMES:

At the end of this course the student should be able to:

1. Apply a basic core of scientific and quantitative knowledge to enhance understanding of DNA, RNA, protein and tissue culture related to advancement in biotechnology related to research.
2. Develop and maintain a notebook of laboratory records.
3. Analyze and evaluate the effect of variables on experimental results including enzymes, assay parameters and sample concentration while participating in a group environment.
4. Relate different biotechnology skills to various career paths.

MINIMUM CLOCK HOURS REQUIRED FOR THIS COURSE

Activity	DIRECT Faculty instruction IN CLASS	Student Work OUT OF CLASS
Lecture/Exams	37.5 hours	25 hours reading available materials
Studying for 3 Exams		36 hours (8 hours per exam)
Assignments		30 hours
Studying for Comprehensive Final Exam		12 hours
Total Hours for Lecture	37.5 hours	103 hours
Lab	45 hours	
Lab Notebook		45 hours (3 hours per week)
Studying for Lab Exams		16 hours (8 hours per exam)
Total Hours for Lab	45 hours	62 hours
Total Hours for Course	84.5 hours	165 hours

Services for Students with Disabilities: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as

possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.