

CUNY Common Core Course Submission Form

Instructions: All courses submitted for the Common Core must be liberal arts courses. Courses may be submitted for only one area of the Common Core. All courses must be 3 credits/3 contact hours unless the college is seeking a waiver for another type of Math or Science course that meets major requirements. Colleges may submit courses to the Course Review Committee at any time. Courses must also receive local campus governance approval for inclusion in the Common Core.

College	Lehman College
Course Prefix and Number (e.g., ANTH 101, if number not assigned, enter XXX)	BIO 184
Course Title	Plants and People
Department(s)	Biological Sciences
Discipline	Biology
Credits	3
Contact Hours	4
Pre-requisites (if none, enter N/A)	n/a
Co-requisites (if none, enter N/A)	n/a
Catalogue Description	An introduction to the world of plants and how human history was influenced by them.
Special Features (e.g., linked courses)	
Sample Syllabus	Syllabus must be included with submission, 5 pages max recommended

Indicate the status of this course being nominated:

☒ current course
 ☐ revision of current course
 ☐ a new course being proposed

CUNY COMMON CORE Location

Please check below the area of the Common Core for which the course is being submitted. (Select only one.)

Required ☐ English Composition ☐ Mathematical and Quantitative Reasoning ☒ Life and Physical Sciences	Flexible ☐ World Cultures and Global Issues ☐ Individual and Society ☐ US Experience in its Diversity ☐ Scientific World ☐ Creative Expression
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Waivers for Math and Science Courses with more than 3 credits and 3 contact hours

Waivers for courses with more than 3 credits and 3 contact hours will only be accepted in the required areas of "Mathematical and Quantitative Reasoning" and "Life and Physical Sciences." Three credit/3-contact hour courses must also be available in these areas.

If you would like to request a waiver please check here:	☐ Waiver requested
If waiver requested: Please provide a brief explanation for why the course will not be 3 credits and 3 contact hours.	
If waiver requested: Please indicate whether this course will satisfy a major requirement, and if so, which major requirement(s) the course will fulfill.	

Learning Outcomes

In the left column explain the course assignments and activities that will address the learning outcomes in the right column.

I. Required Core (12 credits)

A. English Composition: Six credits

A course in this area must meet all the learning outcomes in the right column. A student will:

	Read and listen critically and analytically, including identifying an argument's major assumptions and assertions and evaluating its supporting evidence.
	Write clearly and coherently in varied, academic formats (such as formal essays, research papers, and reports) using standard English and appropriate technology to critique and improve one's own and others' texts.
	Demonstrate research skills using appropriate technology, including gathering, evaluating, and synthesizing primary and secondary sources.
	Support a thesis with well-reasoned arguments, and communicate persuasively across a variety of contexts, purposes, audiences, and media.
	Formulate original ideas and relate them to the ideas of others by employing the conventions of ethical attribution and citation.

B. Mathematical and Quantitative Reasoning: Three credits

A course in this area must meet all the learning outcomes in the right column. A student will:

	Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
	Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical problems.
	Represent quantitative problems expressed in natural language in a suitable mathematical format.
	Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
	Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
	Apply mathematical methods to problems in other fields of study.

C. Life and Physical Sciences: Three credits A course in this area <u>must meet all the learning outcomes</u> in the right column. A student will:	
The lab portion of the course illustrates the progression of plant-related techniques in research over time. Starting with taxonomy and agriculture, all the way through testing and developing a commercial product. Throughout the semester students will have the opportunity to apply what they've learned through plant dissections and propagation techniques, as well as creating their own medicinal ointments and tinctures.	Identify and apply the fundamental concepts and methods of a life or physical science.
Students will investigate ancient and modern techniques in tincture making, running antioxidant and antibacterial analysis on their final products. Students will hypothesize which methods are more effective in yielding positive results and present their findings as a group research paper.	Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.
Group discussions will be the foundation of classroom activities and two larger group projects will be assigned. The first group project critically evaluates extraction methods based on data from lab activities. The second group project will encompass everything learned through the semester. Students will work in teams to propose a pitch for a new plant-based good for product development. As part of this presentation, students will need to investigate the history of traditional uses for this plant, current research evidence on its efficacy, generate a plan for commercial development, and defend why this is a beneficial product for the consumer market.	Use the tools of a scientific discipline to carry out collaborative laboratory investigations.
A written report will be due for the extraction methods laboratory activities requiring data tables and graphs. The plant product pitch will require students to apply what they've learned about human relationships with plants, plant technology and research, and the public literature to construct a development plan for a plant product. Students will present their projects to each other at the end of the semester.	Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.
Throughout the semester the students will learn about the implications of plant research and learn to demystify fake news to identify quality sources of information. In-class discussions, as well as group projects, will have students exercise the new terminology they learn, as well as apply scientific approaches and critical thinking to problem solving.	Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.
II. Flexible Core (18 credits) Six three-credit liberal arts and sciences courses, with at least one course from each of the following five areas and no more than two courses in any discipline or interdisciplinary field.	
A. World Cultures and Global Issues	
A Flexible Core course <u>must meet the three learning outcomes</u> in the right column.	
	Gather, interpret, and assess information from a variety of sources and points of view.
	Evaluate evidence and arguments critically or analytically.
	Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.A) <u>must meet at least three of the additional learning outcomes</u> in the right column. A student will:	
	Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring world cultures or global issues, including, but not limited to, anthropology, communications, cultural studies, economics, ethnic studies, foreign languages (building upon previous language acquisition), geography, history, political science, sociology, and world literature.

	Analyze culture, globalization, or global cultural diversity, and describe an event or process from more than one point of view.
	Analyze the historical development of one or more non-U.S. societies.
	Analyze the significance of one or more major movements that have shaped the world's societies.
	Analyze and discuss the role that race, ethnicity, class, gender, language, sexual orientation, belief, or other forms of social differentiation play in world cultures or societies.
	Speak, read, and write a language other than English, and use that language to respond to cultures other than one's own.

B. U.S. Experience in its Diversity

A Flexible Core course must meet the three learning outcomes in the right column.

	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.B) <u>must meet at least three of the additional learning outcomes</u> in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the U.S. experience in its diversity, including, but not limited to, anthropology, communications, cultural studies, economics, history, political science, psychology, public affairs, sociology, and U.S. literature.
	• Analyze and explain one or more major themes of U.S. history from more than one informed perspective.
	• Evaluate how indigenous populations, slavery, or immigration have shaped the development of the United States.
	• Explain and evaluate the role of the United States in international relations.
	• Identify and differentiate among the legislative, judicial, and executive branches of government and analyze their influence on the development of U.S. democracy.
	• Analyze and discuss common institutions or patterns of life in contemporary U.S. society and how they influence, or are influenced by, race, ethnicity, class, gender, sexual orientation, belief, or other forms of social differentiation.

C. Creative Expression

A Flexible Core course must meet the three learning outcomes in the right column.

	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.C) <u>must meet at least three of the additional learning outcomes</u> in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring creative expression, including, but not limited to, arts, communications, creative writing, media arts, music, and theater.
	• Analyze how arts from diverse cultures of the past serve as a foundation for those of the present, and describe the significance of works of art in the societies that created them.
	• Articulate how meaning is created in the arts or communications and how experience is interpreted and conveyed.
	• Demonstrate knowledge of the skills involved in the creative process.
	• Use appropriate technologies to conduct research and to communicate.

D. Individual and Society

A Flexible Core course must meet the three learning outcomes in the right column.

	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.

A course in this area (II.D) must meet at least three of the additional learning outcomes in the right column. A student will:

	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the relationship between the individual and society, including, but not limited to, anthropology, communications, cultural studies, history, journalism, philosophy, political science, psychology, public affairs, religion, and sociology.
	• Examine how an individual's place in society affects experiences, values, or choices.
	• Articulate and assess ethical views and their underlying premises.
	• Articulate ethical uses of data and other information resources to respond to problems and questions.
	• Identify and engage with local, national, or global trends or ideologies, and analyze their impact on individual or collective decision-making.

E. Scientific World

A Flexible Core course must meet the three learning outcomes in the right column.

	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.

A course in this area (II.E) must meet at least three of the additional learning outcomes in the right column. A student will:

	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the scientific world, including, but not limited to: computer science, history of science, life and physical sciences, linguistics, logic, mathematics, psychology, statistics, and technology-related studies.
	• Demonstrate how tools of science, mathematics, technology, or formal analysis can be used to analyze problems and develop solutions.
	• Articulate and evaluate the empirical evidence supporting a scientific or formal theory.
	• Articulate and evaluate the impact of technologies and scientific discoveries on the contemporary world, such as issues of personal privacy, security, or ethical responsibilities.
	• Understand the scientific principles underlying matters of policy or public concern in which science plays a role.

BIO 184 Plants and People Fall 2023
Tuesdays 9-11:40 AM, Davis Hall 226
1.5-hour lecture, 2.5-hour lab (3 Credits)

Instructor: Dr. Sarah Moroianu
Email: SMoroianu@X.edu
Office: Davis Hall Room 232
Office Hours: X

An introduction to the world of plants and how human history was influenced by them. Students will learn about the route of discovery by identifying plants, use traditional techniques of making tinctures and ointments in lab, and familiarize themselves with modern methods for testing wild plants for new potential drugs. A final project will apply what we have learned into a pitch on a new plant product for commercial use.

Learning goals

- An understanding of the intertwined relationship between human society and the plant kingdom
- A knowledge of basic plant science covering plant anatomy and function, propagation and cultivation
- Ability to distinguish between scientific findings and fake fads in plant product research and marketing
- Attain skills necessary to produce graphs, analyze results, and conduct literature reviews to write reports
- Critically evaluate ancient and modern experimental methods used to make herbal medicine
- Understand the progress of identifying an unknown plant and developing a commercialized product
- Students learn to effectively communicate results of their research to any audience
- Fluency in critical terminology and regulations surrounding quality botanical products

Course meeting times

Class will meet twice a week. Once on Tuesdays for a two-hour lecture, and again on X for a two hour lab.

Textbook information:

Suggested course book

Levetin, E., and K. McMahon. (2011). Plants and Society, 6th ed. McGraw-Hill Publishers, Boston.*

**purchase not required for course*

Laboratory manual: No purchase required; copies of each lab will be provided for the student a week in advance of each lab session.

Schedule for Lecture and Lab Fall 2023

Week of	Class Lecture	Lab Exercise	Assignments
8/28	Beginnings: Philosopher's, scientists, and fundamentals of plant curiosity	Logistics of Laboratory Report Preparation + Botanical Terminology	
9/4 (no Monday class)	Diversity of Plants: Evolution from water to land	Plant morphology; Monocots and dicots; Microscopy	
9/11 (no Friday class)	Plant Biology: Understanding what affects plant production and health	The Plant Cells and Tissues	
9/18	Food and Foraging: History of early human settlements	Plant Sexual Propagation I: Seed viability and seed germination Plant Asexual	
<u>9/25</u>	Exam 1	Propagation II: Leaf & stem cuttings	<u>Optional</u> : Extra Credit Due
10/2	War and Famine: Dependency on plants and control	Textiles Investigation: Dyes & fibers	
<u>10/9</u> (Tuesday is Monday)	The State of Agriculture: Current practices and food production	Lab Practical I	
10/16	Plants and medicine I: Ancient uses and systems	Chromatography and Plant Extractions (tinctures)	
10/23	Plants and medicine II: Current science and body systems	Early Medicine Making (ointments)	
<u>10/30</u>	Exam 2	Plant Propagation and Tincture Final Results	<u>Optional</u> : Extra Credit Due
11/6	Plant Products I: From field to pharmacy, product development	Antibiotic and Antioxidant Testing	Extractions Report Due
11/13	Plant Products II: Marketing fads and dietary supplements	Supermarket Investigation	
11/20 – Thanksgiving Week-			
11/27	Plants and You: Diet, nutrigenomics and future of plant technology	Preserving a Specimen and Field Techniques	Supermarket Survey Due
<u>12/4</u>	Plant Products Pitch Presentations // Final	Lab Practical II	Plant Product Presentations

Discussion on Plants and People

Grading policy:

Percentage	Activity
15%	Unit 1 Exam
15%	Unit 2 Exam
15%	Unit 3 Exam (cumulative)
12%	Final Plant Product Pitch
10%	Lab practical I
10%	Lab practical II
8%	Plant Extractions Report
5%	Lab notebook
5%	Attendance
5%	Participation

Grading Breakdown:

93% A	83% B	73% C	63% D
90% A-	80% B-	70% C-	59% F
87% B+	77% C+	67% D+	

F – student has attended regularly and completed all or most of the exams and assignments and has no passing grade in the course.

INC - student has attended regularly, completed most of the exams and assignments, and has a passing grade in the course but is missing only one assignment or the final exam.

WU – student stopped attending class, missed more than one exam or assignment, and did not show up for the final exam.

NOTE: When a student does not attend class three times in a row, faculty should email and text the student to ensure there is a track record of communication.

Submitting assignments policies

All assignments submitted through blackboard

Late submissions:

No late work accepted; all assignments are provided at the start of the semester. Should a scheduling issue arise please inform the professor as soon as possible.

Taking exams or making up missing exams:

Exam dates are provided at the start of the semester. Should students have a scheduling conflict or emergency, inform your professor as soon as possible to see if there is an opportunity to take the exam

earlier/later depending on the time conflict. Make-up exams due to emergencies require doctors note or other documentation supporting why the student was unable to attend the exam.

Technology in the classroom (laptops, cell phones):

Laptops are permitted in lecture but should only be used for notetaking. Only hard copies of notes and materials are permitted in lab for your safety. There is a strict, no cellphone policy in lecture and lab to reduce distractions for your benefit.

Attendance policy

Strict attendance and punctuality will be enforced for this course as many in-class activities are discussion based on group work. Attendance and punctuality affect this as participation points cannot be earned outside of in-class meetings. In-class meetings will have regular group discussions and thus tardy students will pose as a distraction from other students who came on time. Students that miss a class may regain their attendance credit by submitting official documentation for their absence. This includes doctors' notes, ticket receipts (for travel), and team captain letters regarding athletic game meets. If you know that you will be missing a class and require an excused absence, see the professor as soon as you are aware of the conflict.

Student Disability

Lehman College is committed to providing access to all programs and curricula for all students. Students with disabilities who may need classroom accommodations are encouraged to register with the Office of Student Disability Services. For more information, please contact the Office of Student Disability Services, Shuster Hall, Room 238, phone number, 718-960-8441.

Student Resources

LEONARD LIEF LIBRARY <http://www.lehman.edu/provost/library/LibraryHours.htm> Mon – Th. 8-10:45, Fri 8-8:45, Sat 11-8:45, Sun 11-7:45 (718)-960-7766

IT CENTER <http://www.lehman.edu/itr/academic-it-center.php> Carmen Hall; Mon-Th. 8-10:45, Fri 8-5:45, Sat and Sun 8-4:45 718-960-1111 Printing and Computer use is available; Check website for holiday hours.

Lehman College Food Bank & Emergency Assistance

- If you are experiencing financial hardship and would like to see if you are eligible for an emergency grant, please visit the Student Affairs emergency grants website: lehman.edu/emergency-grants
- Students who have difficulty affording groceries or accessing sufficient food is urged to utilize the Herbert H. Lehman Food Bank, which is located in the Student Life Building, Room 108. The Food Bank is open Wednesdays 10am-8pm and Thursdays 10am-4pm. Make an appointment at: lehmanfoodbank.setmore.com

Academic integrity

Academic integrity is acting with honesty, respect, and responsibility in learning and in research. It is a moral code that binds us to do the right thing even when no one is looking.

Academic integrity is essential to any course, including this one _____. Students may fail to exhibit integrity by cheating, plagiarizing, obtaining unfair advantage, or falsifying records. In so doing, they hurt themselves, because they do not learn the material sufficiently and move on to later courses and careers as

impostors, assumed to have skills they do not yet possess. They hurt their classmates, because they cheapen their hard-won accomplishments and disrupt the class. And they hurt future students, because the reaction to cheating will be to create ever stricter testing conditions.

Examples of academic dishonesty include but are not limited to those shown at <http://lehman.smartcatalogiq.com/2019-2021/Undergraduate-Bulletin/Academic-Services-and-Policies/Academic-Integrity>. For example, cheating on an exam includes, but is not limited to: Consulting with others regarding the exam while it is ongoing (this includes tutors, classmates, people who took the class before and family members etc.) and posting exam questions online for others to answer while the exam is ongoing, and including posting exam questions to online tutoring services such as Chegg. For online or hybrid courses, academic dishonesty also includes communicating in any form electronically or otherwise during an exam, sharing answers with peers electronically, or sharing screenshots of exam questions. Copying and pasting answers from the internet and not writing in own words or paraphrasing another's written statements. Additional rules may apply to specific exams. If so, they will be listed in the instructions for the exam.

Academic dishonesty is a very serious issue and will not be tolerated for any lecture, lab, or research activity.

Cheating on an exam in this course: Should a student exhibit academic dishonesty, the instructor will inform the student of the suspicion, charges, and sanctions in writing. Any form of academic dishonesty will result in an F for the course, and a report to the College's Academic Integrity Officer, regardless of whether the cheating materially affected the score of the student in question.

Your pledge: To indicate that you understand academic integrity is central to the success of this course and your future success, you will be asked either to write out an honor statement during each exam or to confirm the receipt of this statement that has been approved and sponsored by the School of Natural and Social Sciences of Lehman College.

"I, _____ have read the syllabus and the statement of academic integrity. I understand that academic integrity is central to the success of myself and others during this and future courses. The work I present here in this exam/lab/homework is my own and is in my own words. I declare that I have fulfilled my responsibility as an honest student, and the work presented here is true representation of my ability in this course.