

Course Syllabus

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Introductory Genetics

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| Instructor: | University Instructor Maureen Walter |
| Phone: | (305) 919-5898 (do not leave voice mail; email me if I'm not in office.) |
| Office: | Office Academic 1, room 380, BBC |
| Office Hours: | By Appointment (can have phone appointment) |
| E-mail: | walterm@fiu.edu |

If I am in my office when you call, I will answer phone. Do not leave voice mail message if I do not answer. Email me, putting your name and specific course in the subject line of email. I usually respond within a few hours, depending on what time the email is sent.

Course Description And Purpose

PCB2061, Introductory Genetics, is a course primarily directed towards non-science majors. It is part of the Group II Natural Science within the University Core Curriculum. The UCC is required of freshmen admitted to FIU beginning Summer B 2015 and transfer students beginning Fall 2015. It does not fulfill any degree requirements for Biology majors.

This course is designed to give the online student the greatest amount of flexibility in how you schedule your course work while still helping to keep the students on track for completing the work on schedule.

PCB2061 is the study of biologically inherited traits from three perspectives. (i) Mendelian Genetics: the rules of genetic transmission and heredity. (ii) Molecular Genetics: the biochemical and chromosomal basis of heredity. (iii) Population & Evolutionary Genetics: the variation in genes among individuals and populations, heritability, and changes in genes over time. Since this course has no pre-requisites, it will start with the basics of chemistry, macromolecules, the cell, and energy before moving into Mendelian genetics and onward.

“The Human Genome Project and the subsequent explosion of genomic information is transforming our knowledge of how organisms function and how genes and the environment interact. These insights have led to advances in personalized medicine, stem cell treatments, and genetic testing. Students, teachers, and the public must be prepared to make informed decisions about participation in genomics research, genome-related health care, use of genetically modified agricultural products, and public funding for stem cell research.” *Louisa A. Stark and Kevin Pompei*

Question: Why teach genetics to non-science majors?

“A scientifically literate public is essential if citizens are to engage effectively with policymakers on issues of scientific importance. Perhaps nowhere is this conjunction more personally meaningful than in human genetics and medicine. Rapid changes in our field have the potential to revolutionize healthcare, but the public is ill prepared to participate in this transformation.”

Dougherty MJ. 2009. [Closing the Gap: Inverting the Genetics Curriculum to Ensure an Informed Public \(Links to an external site.\)Links to an external site.](#). American Journal of Human Genetics 85: 1-7

Course Objectives

The learning objectives for the course:

- Build a basic understanding of the chemistry of life, cells, energy and enzyme’s role in catalysis
- Explore Mendel’s experiments with the heredity of pea plants and assess its lasting value in terms of laying a foundation for modern genetics
- Deduce information about genes, alleles, and gene functions from analysis of genetic crosses and patterns of inheritance
- Describe the molecular anatomy of genes and genomes
- Describe the mechanisms by which an organism's genome is passed on to the next generation
- Compare different types of regulation of gene expression and describe how specific molecules are able to acts as controls
- Apply learned knowledge to interpret the Theory of Evolution
- Utilize Theory of Evolution to quantify micro and macro evolution

Important Information

Policies

Please review the [FIU's Policies \(Links to an external site.\)Links to an external site.](#) webpage. The policies webpage contains essential information regarding guidelines relevant to all courses at FIU, as well as additional information about acceptable netiquette for online courses.

Technical Requirements and Skills

One of the greatest barriers to taking an online course is a lack of basic computer literacy. By computer literacy we mean being able to manage and organize computer files efficiently, and learning to use your computer's operating system and software quickly and easily. Keep in mind that this is not a computer literacy course; but students enrolled in online courses are expected to

have moderate proficiency using a computer. Please go to the "[What's Required \(Links to an external site.\)](#)" webpage to find out more information on this subject.

Please visit our [Technical Requirements \(Links to an external site.\)](#) webpage for additional information.

Accessibility And Accommodation

The Disability Resource Center collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive and sustainable. The DRC provides FIU students with disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact the Center at 305-348-3532 or visit them at the Graham Center GC 190.

Please visit our [ADA Compliance \(Links to an external site.\)](#) webpage for information about accessibility involving the tools used in this course.

Please visit [Accessibility within Canvas \(Links to an external site.\)](#) webpage for more information.

For additional assistance please contact FIU's [Disability Resource Center \(Links to an external site.\)](#).

Academic Misconduct Statement

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Academic Misconduct includes: **Cheating** – The unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not. **Plagiarism** – The use and appropriation of another's work without any indication of the source and the representation of such work as the student's own. Any student who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, is responsible for plagiarism.

Learn more about the [academic integrity policies and procedures \(Links to an external site.\)Links to an external site.](#), as well as [student resources \(Links to an external site.\)Links to an external site.](#) that can help you prepare for a successful semester.

Proctored Exam Policy

There are no proctored or on-campus exams for this course.

Expectations Of This Course

This is an online course, which means most (if not all) of the course work will be conducted online. Expectations for performance in an online course are the same for a traditional course. In fact, online courses require a degree of self-motivation, self-discipline, and technology skills which can make these courses more demanding for some students.

Students are expected to:

- **Review the how to get started information** located in the course content
- **Introduce yourself to the class** during the first week by posting a self-introduction in the appropriate discussion forum. This posting **will NOT** count towards the required 8 Article postings
- **Take the practice quiz** to ensure that your computer is compatible with Canvas
- **Take Student/Instructor Quiz as many times as necessary to earn a perfect score. This Quiz acts to certify your knowledge of the course rules and deadlines and your acceptance of said rules.**
- **Interact** online with Instructor/s and peers
- **Review** and follow the course calendar for due dates and times. **All material in this specific course opens and closes at 9AM.** If you have a smart phone, put those dates and times with alerts in your phone so you do not miss them.
- Log in to the course as many times **as necessary to keep up with the work and complete scored material by the closing date and time**
- Regularly check your registered FIU email and Canvas page for course Announcements.

The Instructor will:

- Log in to the course at least **3 times a week.**
- Respond to **emails or messages** within **72 hours.**

Textbook

The text is Biology by Openstax. This is an open source college textbook. Segments of the book are included in this Canvas shell. You may go to this website if you wish to download a pdf version of the book.

- <https://openstax.org/details/biology#resources> (Links to an external site.)Links to an external site.

Course Detail

Course Communication

Communication in this course will take place via **internal messages and announcements**. You may also email me at my regular FIU email, walterm@fiu.edu. But be sure to put your name and course number in the subject line indicating you are an online student. I teach multiple courses, so I will not try to figure out which course you are in if you do not include this information.

The course message feature is a private, internal Canvas only communication system (labeled Inbox). Users must log on to the Canvas system to send/receive/read messages. It is recommended that students check their messages routinely to ensure up-to-date communication.

The Announcements are messages posted on your My Course page and sent to your registered email account. This is typically your FIU account email. If you do not check your registered email account, you will still be responsible for checking for announcements on the Course Canvas website. The announcement messages are very helpful because I use this tool to inform the whole class about course issues such as material closing or any technology problems students have encountered. I will be sending out an announcement the first day of class. **If you do not receive it, contact Technology Support (through link on left-hand menu) and ask them to confirm your email account.**

I receive many messages throughout the semester. For some, I respond individually, but to others I will respond as a message to the whole class because I view it as an issue that everyone needs to know about. And for some messages, I do not respond at all. Some of these are the messages that request I reopen material that has closed. Since the course guidelines are very clear on this matter, and since all students will have taken the Student-Instructor quiz covering these guidelines, there is no reason for me to tell the student what they already know: the material will not be reopened.

I typically log in to the course 3 times a week, so you can expect to receive an answer to any messages within 72 hours. If it is an emergency or if you do not receive a Blackboard message response within the 72 hours, send an email to my regular FIU email account.

Discussion Forums

Discussion Forum will be used for class discussions and other postings of general interest that are directly related to the course. Keep in mind that forum discussions are public, and care should be taken when determining what to post.

- **Articles taken primarily from the New York Times and other similar sources are included in the Course Units. Read the posted Articles. During the first half of the semester: Choose 2 of the Articles and post an original comment on the Article. Essentially, you will be entering in a conversation with the rest of the class about what you thought of the Article, what you found interesting, did you agree or disagree with the Article's points, etc. After students have made these original postings, you will choose 2 of other student's original postings and you will post a response to these 2 original postings. By the end of the first half of the semester, you will have posted at least 4 times...2 original postings and 2 responses to other student's postings. You will duplicate this process during the second half of the semester so that at the end of the semester you will have a total of at least 8 postings.**

Discussion Forum Expectations:

- Provide clear guidance on the expectations and requirements
- The approximate length of a response is as long as is necessary for you to say what you wished to say.
- During each half of the semester, you will post 2 original comments about the article you read. Do not recap the Article. You will also post 2 responses to other student's original comments. Think of it as engaging in a conversation with another student. (4 postings during each half, 8 postings total).
- The Articles for each half of the semester will be available from the opening of the quizzes to the closing of the exams.
- I will be monitoring the postings during the semester and will assign the 5% of the grade at the end of the semester. **This 5% is an all or nothing score.** Students who do not make the required 8 postings will receive NO points. So even if you post 7 times, you will receive NO points since it would be viewed as incomplete.

Assessments

In order to mitigate any issues with your computer and online assessments, it is very important that you take the "Practice Quiz" from each computer you will be using to take your graded quizzes and exams. It is your responsibility to make sure your computer meets the minimum [hardware requirements \(Links to an external site.\)](#)[Links to an external site.](#)

Quiz and Exam Expectations:

- Please note that the semester is divided into two periods. Within each period, the Lecture Units open as a block of material. The first 5 Units open on May 7 and the 5 Units Assignments close on June 11 and the Quizzes close on June 13, always at 9am. Exam 1 opens on June 9 and closes on June 15 at 9am. The second half of the semester follows the same pattern with all 5 Units (Unit 6 through Unit 10) opening on June 15 and the

Assignments closing on July 22 at 9am and the Quizzes closing on July 24 at 9am. Exam 2 opens on July 20 at 9am and closes on July 26 at 9am.

- Quiz duration: 30 minutes
- Exam duration: 1 hour
- Quiz and Exam links are seen on the Home page within each Unit
- Details for results:
 1. Students will be able to see the results immediately after Quiz or Exam.
 2. Students will be able to see the total earned score only.
 3. Students may take each Quiz or Exam 2 times. But if you choose to do so, you will receive the **average** of the two scores. Questions on the second attempt may be different from the first attempt.
- Each student will be required to enter into a "course contract" with the Instructor by taking the STUDENT/INSTRUCTOR CONTRACT QUIZ found on the Course Content page and under Assessments. This contract specifies that you have read the Syllabus and therefore understand the time frame for completion of the Exams, Quizzes, and Discussion Postings. You do not receive points for this quiz. ***But completing it and earning a perfect score is a requirement.*** You may take the quiz as many times as is required for you to earn a perfect score.

Assessments in this course are not compatible with mobile devices and should not be taken through a mobile phone or a tablet. If you need further assistance please contact [FIU Online Support Services \(Links to an external site.\)](#)[Links to an external site.](#).

Assignments

Each Unit has a Review/Worksheet that covers the material given in the included text. When you click on this link within the Unit, the page will open as a Word document. Open it as an editable document or copy and paste it into another document and answer the questions. Save it on your computer and then submit as Assignment. You will have 5 Assignments for the first half of the semester (Units 1-5) and 5 Assignments for the second half of the semester (Units 6-10).

Assignments 1-5 open when Unit opens all close (are due) on June 11, 9AM

Assignments 6-10 open when Unit opens all close (are due) on July 22, 9AM

Grading

| Course Requirements | Number of Items | Points for Each | Total Points Available | Weight |
|---------------------|-----------------|-----------------|------------------------|--------|
| Quizzes | 10 | 10 | 100 | 40% |
| Exams | 2 | 50 | 100 | 40% |

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|--------------------------|----|----|-------------|
| Discussion/Participation | 8 | | 5% |
| Assignments | 10 | 10 | 15% |
| Total | | | 100% |

| Letter | Range (%) | Letter | Range (%) | Letter | Range (%) |
|--------|-------------|--------|-----------|--------|------------|
| A | 93 or above | B | 83 - 86 | C | 70 - 76 |
| A- | 90 - 92 | B- | 80 - 82 | D | 60 - 69 |
| B+ | 87 - 89 | C+ | 77 - 79 | F | 59 or less |

Course Calendar

Weekly Semester Schedule

Please note: The suggested work pattern is to do at least one Unit per week. So the suggested schedule seen on the Home Page under Link titled “General Information for PCB2061” is designed to complement this suggestion, even though the blocks of material (Units 1-5 for first half of semester and Units 6-10 for second half of semester) open and close on the same day and time. If you choose to wait until the last few days or hours to complete your work, you are taking the chance of having something preventing you from completing the work, much to your unhappiness, since the work will **not** be reopened.

If you have a Quiz or Exam scheduling conflict, let me know **in advance**. While I will **not** customize the course to fit your schedule, I **may** be able to open a Quiz or Exam early. **YOU MUST NOTIFY ME IN ADVANCE OF A CONFLICT, NOT AFTER THE EXAM HAS CLOSED!** You must provide specific information on why you need a schedule change and the Instructor has the right to either grant or deny the change based on the supporting information. Baring hurricanes and other natural disasters, there will be **no extensions** on the closing dates for the **Chapter quizzes or Exam 1 and Exam 2. Please refer to the opening and closing dates seen below.** Each student is allowed to take a quiz or Exam 2 times. **But if they do take it two times, they receive the average of the two scores.**

If you have an emergency that prevents you from accessing the material (minimum total time period: the last 3 weeks of the ~5 weeks for quizzes and the complete open period for exams), the Instructor **MUST** be contacted (at least 2 weeks for Quizzes and 4 days for Exams) before the closing of the material. These circumstances **must** be supported with original documentation such as the official hospital records showing day of admittance and release or police records showing day or arrest and release. **A release or excuse from work/school, such as what is given from FIU's Clinics or an Urgent Care facility will NOT be accepted as an excuse for missing the deadline for quizzes, assignments, or exams.**

If you choose to wait till the last few days (or hours) to do the work and something prevents you from completing the work (including an emergency), the material WILL NOT be reopened. By making the choice to wait, you are also accepting the possibility that (Murphy's Law) "If anything can go wrong, it will" and always at the worst possible time.

This syllabus is subject to change.

Course Summary:

| Date | Details | |
|------------------|---|------------|
| Mon Jun 11, 2018 | Assignment: Studyguide/worksheet for Unit 1 due by 9am | |
| | Assignment: Studyguide/worksheet for Unit 2 due by 9am | |
| | Assignment: Studyguide/worksheet for Unit 3 due by 9am | |
| | Assignment: Studyguide/worksheet for Unit 4 due by 9am | |
| | Assignment: Studyguide/worksheet for Unit 5 due by 9am | |
| Wed Jun 13, 2018 | Unit 1 - Chemistry quiz | due by 9am |
| | Unit 2 - Cells quiz | due by 9am |
| | Unit 3 - Energy and metabolism quiz | due by 9am |
| | Unit 4 - Cell Reproduction, Meiosis, and Sexual Reproduction quiz | due by 9am |
| | Unit 5 - Medel's Experiment, Heredity, and Modern Understanding of Inheritance quiz | due by 9am |
| Fri Jun 15, 2018 | Exam 1 due by 9am | |
| Sun Jul 22, 2018 | Assignment: Studyguide/worksheet for Unit 6 | due by 9am |
| | Assignment: Studyguide/worksheet for Unit 7: Genes and Proteins | due by 9am |
| | Assignment: Studyguide/worksheet for Unit 8 | due by 9am |
| | Assignment: Studyguide/worksheet for Unit 9 | due by 9am |
| | Studyguide/worksheet for Unit 10 | due by 9am |
| Tue Jul 24, 2018 | Unit 10 quiz | due by 9am |
| | Unit 6 quiz | due by 9am |
| | Unit 7 - Genes to Proteins quiz | due by 9am |

| Date | Details |
|------------------|---|
| Thu Jul 26, 2018 | Unit 8 quiz due by 9am Unit 9 - Evolution and Population Genetics quiz due by 9am Exam 2 due by 9am Academic Honesty Policies Practice Quiz Student/Instructor Contract Quiz |