

# Syllabus

## Introductory Genetics

**1171-FIU01-PCB-2061-SECRVC-32748**

[General Information](#) | [Important Information](#) | [Course Detail](#) | [Course Calendar](#)

### General Information

#### Professor Information



Instructor:  
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By Appointment  
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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 amongst 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](#). *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 act 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](#) 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 & 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](#)" webpage to find out more information on this subject.

Please visit our [Technical Requirements](#) 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](#) webpage for information about accessibility involving the tools used in this course.

Please visit [Blackboard's Commitment Accessibility](#) webpage for more information.

For additional assistance please contact FIU's [Disability Resource Center](#).

## 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](#) as well as [student resources](#) that can help you prepare for a successful semester.

## Proctored Exam Policy

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

## Course Prerequisites

There are no prerequisites 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 Blackboard
- **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. Students will not have access to Exam 1 until the Quiz is taken and a perfect score earned.**
- **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 Blackboard 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 Blackboard shell. You may go to this website if you wish to download a pdf version of the book.

- <https://openstax.org/details/biology#resources>

## 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](mailto: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 Blackboard only communication system. Users must log on to the blackboard system to send/receive/read messages. There are no notifications in Blackboard to inform users when a new

message has been received; therefore, 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 Blackboard 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](#).

### 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 January 13 and **the 5 Units in the first half of the semester all close on February 24 at 9am.** Exam 1 opens on February 24 and closes on March 3 at **9am.** The second half of the semester follows the same pattern with all 5 Units (Unit 6 through Unit 10) opening on March 3 and closing on April 14. Exam 2 opens on April 14 at 9am and closes on April 21 at **9am.** :

<ul style="list-style-type: none"> <li>○ January 13 (Unit 1-5 open) – February 24 (Units 1-5 close, 9AM)</li> <li>○ February 24 - March 3, 9AM to 9AM</li> </ul>	<ul style="list-style-type: none"> <li>○ 5 Quizzes</li> <li>○ 5 Assignments</li> <li>○ Exam 1</li> </ul>
<ul style="list-style-type: none"> <li>○ March 3 (Unit 6-10 open) – April 14 (Units 6-10 close, 9AM)</li> <li>○ April 14 - April 21, 9AM to 9AM</li> </ul>	<ul style="list-style-type: none"> <li>○ 5 Quizzes</li> <li>○ 5 Assignments</li> <li>○ Exam 2</li> </ul>

- Quiz duration: 30 minutes
- Exam duration: 1 hour 15 minutes
- Quiz and Exam links are seen on the Assessments page
- 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 for accessing Exam 1.*** You may take the quiz as many times as is required for you to earn a perfect score.

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](#).

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](#).

## 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 February 24, 9AM

Assignments 6-10    open when Unit opens    all close (are due) on April 14, 9AM

## Adobe Connect Pro Meeting

No Adobe Connect Pro Meetings

## Grading

Notes about grading...



The Instructor has no specific control over some of what is seen in the student's "My Grades". It shows students what scores have been earned only on completed work. **It does NOT show missing work.** So it is each student's responsibility to keep a record of assigned work (as seen in the Syllabus) and use that list to check the My Grades information, thereby confirming that the student has completed all of the necessary work. **It is NOT Blackboard's responsibility to inform students that they have not completed specific quizzes or exams.** Any figures shown on My Grades, such as 158 (earned points)/ 340 (total points) will NOT be used to calculate your grades since it does not reflect the weights seen below or missing work.

Just about every semester, I have students who contact me after the closing of quizzes or exams and tell me that they did the work but the scores are not showing up on their MyGrades. The Blackboard program has very comprehensive tracking applications built into it so we are able to determine every keystroke a student makes while logged on to the Blackboard shell. **So here is a VERY strong suggestion...when you have determined that yes, you have completed all of the assigned work (by comparing the syllabus to your MyGrades and confirming you have a score for each piece of work), take a screenshot of your MyGrades page (being sure your name and number is included) and save it. That way, you have supporting evidence if there is a situation after the material closes.**

Course Requirements	Number of Items	Points for Each	Total Points Available	Weight
Quizzes	10	10	100	40%
Exams	2	50	100	40%
Discussion/Participation	8			5%
Assignments	10	10		15%
<b>Total</b>				<b>100%</b>

  

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 Schedule

Semester's Schedule

Please note:

The suggested work pattern is to do at least one Unit per week. So the suggested schedule below 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 ~6 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.*

<b>Date (suggested schedule)</b>	<b>Tasks</b>
January 9 - 13	<i>Supports Learning Objectives: Familiarize yourself with Course Content of Unit 1, Syllabus</i>  <i>Tasks: Take Student/Instructor Quiz</i> <i>Supports Learning Objectives: found within Unit 1</i>
January 13 - 20	<i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 1, answer questions in document, save on computer, and submit as <u>Assignment 1 (Due February 24, 9AM)</u> 3) take Unit 1 <u>Blackboard Quiz (due February 24)</u></i>

Date (suggested schedule)	Tasks
January 20 - 27	<p><i>Supports Learning Objectives: found with Unit 2</i></p> <p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 2, answer questions in document, save on computer, and submit as <b>Assignment 2 (Due February 24, 9AM)</b> 3) take <b>Unit 2 Blackboard Quiz (Due February 24, 9AM)</b></i></p> <p><i>Supports Learning Objectives: found within Unit 3</i></p>
January 27 - February 3	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 3, answer questions in document, save on computer, and submit as <b>Assignment 3 (Due February 24, 9AM)</b> 3) take <b>Unit 3 Blackboard Quiz (Due February 24, 9AM)</b></i></p> <p><i>Supports Learning Objectives: found within Unit 4</i></p>
February 3 - 10	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 4, answer questions in document, save on computer, and submit as <b>Assignment 4 (Due February 24, 9AM)</b> 3) take <b>Unit 4 Blackboard Quiz (Due February 24, 9AM)</b></i></p> <p><i>Supports Learning Objectives: found within Unit 5</i></p>
February 10 - 17	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 5, answer questions in document, save on computer, and submit as <b>Assignment 5 (Due February 24, 9AM)</b> 3) take <b>Unit 5 Blackboard Quiz (Due February 24, 9AM)</b></i></p>
February 17 - 24 (catch-up)	<p>Confirm that you have submitted <b>5 Assignments</b> and <b>5 Blackboard quizzes</b> (both within Units 1-5) by <b>9AM, February 24</b>. Remember, Blackboard's MyGrades ONLY shows work completed, not missing work. It is your responsibility to confirm that you have completed all the work. The points ratio given in MyGrades does not reflect missing work or the way the work is weighted, per the syllabus, so do NOT use it to calculate your grade.</p>
February 24 - March 3 <b>Exam 1 and Discussion Postings</b>	<p><b>Exam 1</b>, opens 9AM, February 24 and <b>closes 9AM, March 3</b>. You will not have access to Exam 1 until you have completed the Student/Instructor quiz and earned a perfect score.</p> <p><b>4 (minimum) Discussion postings (2 original and 2 responses) must be posted by closing of Exam 1</b></p> <p><i>Supports Learning Objectives: found within Unit 6</i></p>
March 3 - 10	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 6, answer questions in document, save on computer, and submit as</i></p>

Date (suggested schedule)	Tasks
	<p><i>Assignment 6 (Due April 14, 9AM) 3) take Unit 6 Blackboard Quiz (Due April 14, 9AM)</i></p> <p><i>Supports Learning Objectives: found within Unit 7</i></p>
March 10 - 17	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 7, answer questions in document, save on computer, and submit as Assignment 7 (Due April 14, 9AM) 3) take Unit 7 Blackboard Quiz (Due April 14, 9AM)</i></p> <p><i>Supports Learning Objectives: found within Unit 8</i></p>
March 17 - 24	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 8, answer questions in document, save on computer, and submit as Assignment 8 (Due April 14, 9AM) 3) take Unit 8 Blackboard Quiz (Due April 14, 9AM)</i></p> <p><i>Supports Learning Objectives: found within Unit 9</i></p>
March 24 - 31	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 9, answer questions in document, save on computer, and submit as Assignment 9 (Due April 14, 9AM) 3) take Unit 9 Blackboard Quiz (Due April 14, 9AM)</i></p> <p><i>Supports Learning Objectives: found within Unit 10</i></p>
March 31 - April 7	<p><i>Tasks: 1) Read included <u>Biology</u> text. 2) Open StudyGuide/Worksheet for Unit 10, answer questions in document, save on computer, and submit as Assignment 10 (Due April 14, 9AM) 3) take Unit 10 Blackboard Quiz (Due April 14, 9AM)</i></p>
April 7 - 14	<p>Confirm that you have submitted <b>5 Assignments</b> and <b>5 Blackboard quizzes</b> (both Units 6-10). <b>Due April 14, 9AM</b>. Remember, Blackboard's MyGrades ONLY shows work completed, not missing work. It is your responsibility to confirm that you have completed all the work. The points ratio given in MyGrades does not reflect missing work or the way the work is weighted, per the syllabus, so do NOT use it to calculate your grade.</p> <p><b>Exam 2</b> opens <b>9AM</b> April 14 and closes <b>9AM</b> April 21.</p>
April 14 - 21 Exam 2 and Discussion Postings	<p><b>4 (minimum) Discussion postings (2 original and 2 responses) must be posted by closing of Exam 2. This will result in a total of at least 8 Discussion postings for the semester.</b> The 5% earned for the Discussions postings is <b>an all or nothing score</b>. If you do not post at least 8, you will not receive the 5%.</p>