# General Biology II – SNCB113

**American College of Thessaloniki**

Spring 2018

Instructor: Andreas Anestis, Ph.D

Office: Bissell Library Basement, 019. Phone: 2310 398 343, e-mail: aanestis@act.edu
Office hours (tutoring offered – USE IT!): Friday, 16:00-18:00 (or any other time after an appointment)

CLASS SCHEDULE
Monday – Wednesday, Friday: 15:00-16:00, Thursday: 14:00-16:00, Room: 207

**Text:** McGraw Hill "Biology" 4th edition, by Brooker R. This is an entirely online e-book. Your instructor will provide information on how to get access to the Biology e-book.

**Resources:** Course material (presentations, tutorials etc.) will be uploaded in the course management system **Moodle**. Access to ACT's Learning Management System *Moodle* is required for this class. Students will use Moodle to obtain updates to the syllabus and for course activities, quizzes, email and grades. *Lack of Internet access will not be an excuse for missed assignments.* To access Moodle go to http:// moodle.act.edu in any browser. Communication is asynchronous, meaning that a student can go online any time to receive information.

## Learning Outcomes

Students should be able to:

1) Describe the theory of evolution, the mechanisms of evolution especially by means of natural selection, the evolution of populations and species, and the evidence in support of evolution.
2) Describe the history of life on Earth and research into the origin of life as well as the major periods of geologic time, the fossil record and the role of changing environmental conditions and mass extinctions in the evolution of life.
3) Recognize a phylogenetic tree and the principles involved in grouping organisms on an evolutionary tree.
4) Distinguish between organisms in the 3 domains of life and provide identifying characteristics of each.
5) Identify groups of protists, the main clades of fungi, major groups and evolution of land plants and key characteristics and evolution of both invertebrate and vertebrate animals
6) Describe the societal implications of biopharmaceuticals, ocean acidification, climate change, habitat destruction and loss of biodiversity on human health.

## Teaching & Learning Strategies

The course involves five hours of class contact per week for a total of 11 weeks. Lectures, practical work, class discussions, presentations, and directed study are used for teaching the course. Active learning will be the main mode of presenting new material during each lecture: in short, anything that you will do in the classroom other than merely passively listening to lectures. This includes everything from listening practices which will help you absorb what you hear to short written exercises in which you will apply the lecture material, homeworks, reviews, special sessions and quizzes to assist you along the learning process.

## Class attendance and absences policy

Your regular classroom attendance is expected. Attendance will be taken in some lecture periods by passing around a signature sheet. Your signature is the only proof of your attendance. It is your responsibility to know whether a sheet was passed out on a given day and to sign it. Large amounts of material will be presented during each lecture and it will be difficult for a student to keep up if classes are missed. Make sure you come in class or lab on time.

The **maximum allowed number of unexcused absences** for this course stands at **7 (seven) hours**, which corresponds to 7 one-hour classes.

To **excuse absences** for good cause (such as medical reasons or personal crises), the student should contact the Registrar's office and, ahead of time or at the latest within a week from the time the absences took place, provide written proof of the cause of the absences. The documents submitted are then evaluated by the Assistant Dean, who decides whether there are valid grounds for excusing the absences.

A student is considered to have **successfully attended** the course if he/she has attended 75% of the course lectures. Thus, the maximum number of absences (excused or not) stands at 13 hours (13 classes). In case of an unsuccessful attendance, the student is administratively withdrawn from the course. The student has the right to appeal the decision to be administratively withdrawn from a course due to excessive absences and seek reinstatement. In this case, the student, within three working days, must fill in a 'mitigating circumstances' form in the Registrar's office, where the reasons of the appeal should be explained. Following this, a formal hearing of the Academic Standards and Performance Committee (ASPC) takes place. The decision of the Committee is final.

**Make-up exams** will not be allowed (except in cases of family tragedy, serious illness or other serious situations as determined by the course instructor. A note from student health or physician is required if you miss the exam due to illness).

**Quizzes:** If you are absent during a quiz, your quiz grade is zero (0). You are not allowed to make up a quiz.

## Evaluation Criteria

| Criterion | Points (%) |
|---|---|
| **4 Quizzes**<br>Quizzes will cover lectures and other material presented in class (readings, movies, video clips, and class discussions). The lowest quiz score will be dropped off and will not count towards the final grade. | 15% |
| **Final Exam**<br>One final, cumulative exam. | 35% |
| **Mid-terms**<br>One mid-term exam during the semester. | 20% |
| **Homeworks**<br>Five homeworks during the semester | 12% |
| **Deep Dive Presentations**<br>Details will be given by the instructor during the first week of classes | 10% |
| **Digital Storytelling Project**<br>Details will be given separately by the instructor | 8% |
| **TOTAL** | **100%** |

***The grade of this course corresponds to 80% of the total grade, and the other 20% comes from the Laboratory Course grade.***

**Grades will be assigned according to the following criteria:**

| Grade Description | % points | US Letter Grade | US point grade |
|---|---|---|---|
| Excellent | 95-100 | A | 4.0 |
| Very Good (high) | 90-94 | A- | 3.67 |
| Very Good (low) | 85-89 | B+ | 3.33 |
| Good (high) | 80-84 | B | 3.0 |
| Good (low) | 75-79 | B- | 2.67 |
| Satisfactory (high) | 70-74 | C+ | 2.33 |
| Satisfactory (low) | 65-69 | C | 2.0 |
| Fail | 0-64 | F | 0 |

**Extra credits:** No extra credit is available for students who wish to raise their grade. Focus on doing the work assigned at the best of your abilities.

## Weekly Lecture Schedule

| WK Nr | WEEK STARTS | DAY | TOPICS | READINGS | EXAMS | ASSIGNMENTS |
|---|---|---|---|---|---|---|
| **1** | Jan 08 | We 10 | Class Overview. Introduction. Properties of life | Notes on moodle | | |
| | | Th 11 | History of evolution. From Aristotle to Darwin | Notes on moodle, chapter 23 | | |
| | | Th 11 | Overview of evolution. Underlying processes | chapter 23 | | **Students groups formation due** |
| | | Fr 12 | Population genetics and evolution | chapter 24 | | **Homework#1 out (chapters 22-26)** |
| **2** | Jan 15 | Mo 15 | Speciation | chapter 25 | | |
| | | Tu 16 | Taxonomy I | chapter 26 | | |
| | | We 17 | Taxonomy II | chapter 26 | | **Deep dive I** |
| | | Th 18 | **LAB SESSION I: Evolution** | | | |
| | | Th 18 | **LAB SESSION I: Evolution** | | | |
| | | Fr 19 | Origin of life on earth | chapter 22 | | **Digital storytelling Project: Story title due** |
| **3** | Jan 22 | Mon 22 | Origin of life on earth | chapter 22 | | |
| | | Tue 23 | The fossil record. History of life on earth. | chapter 22 | | |
| | | We 24 | Bacteria and Archae I | chapter 27 | | **Homework#2 out (chapters 27,28,31). Homework#1 due** |
| | | Th 25 | Bacteria and Archae II | chapter 27 | | |
| | | Th 25 | Revision for Quiz#1 | | | **Deep dive II: Bacteria as pathogens** |
| | | Fr 26 | **QUIZ #1 (chapters 22-26)** | | **QUIZ #1 (chapters 22-26)** | |
| **4** | Jan 29 | Mo 29 | Protists I | chapter 28 | | |
| | | Tu 30 | *Three hierarchs holiday - no classes* | | | |
| | | We 31 | Protists II | chapter 28 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Feb | Th 01 | **LAB SESSION II: Microscopy** | | | |
| | | Th 01 | **LAB SESSION II: Microscopy** | | | **Deep Dive III** |
| | | Fr 02 | Fungi I | chapter 31 | | |
| **5** | Feb 05 | Mo 05 | Fungi II | chapter 31 | | **Homework#3 out (chapters 29,30). Homework#2 due** |
| | | Tu 06 | Revision for Quiz#2 | | | **Digital storytelling Project: treatment due** |
| | | We 07 | **QUIZ#2 (chapters 27,28,31)** | | **QUIZ#2 (chapters 27,28,31)** | |
| | | Th 08 | Plants I | chapter 29 | | **Deep Dive IV** |
| | | Th 08 | Plants II | chapter 29 | | |
| | | Fr 09 | Plants III | chapter 30 | | |
| **6** | Feb 12 | Mo 12 | Plants IV | chapter 30 | | |
| | | Tu 13 | Introduction to animal diversity | chapter 32 | | |
| | | We 14 | Introduction to invertebrates. Porifera | chapter 33 | | **Deep Dive V** |
| | | Th 15 | **LAB SESSION III: Plants** | | | **Homework#4 out (chapters 32,33). Homework#3 due** |
| | | Th 15 | **LAB SESSION III: Plants** | | | |
| | | Fr 16 | Cnidaria | chapter 33 | | |
| **7** | Feb 19 | Mo 19 | *Clean Monday - no classes* | | | |
| | | Tu 20 | Revision for Midterms | | | |
| | | We 21 | **MIDTERM EXAMS (chapters 22-31)** | | | |
| | | Th 22 | Platyhelminthes, Nematoda | chapter 33 | | **Deep Dive VI** |
| | | Th 22 | Rotifera, Molluscs | chapter 33 | | |
| | | Fr 23 | Molluscs | chapter 33 | | |
| **8** | Feb 26 | Mon 26 | Molluscs | chapter 33 | | |
| | | Tu 27 | Annelids | chapter 33 | | **Digital storytelling Project: Storyboard v.1 due** |
| | | We 28 | Arthropods | chapter 33 | | **Deep Dive VII** |
| | Mar | Th 01 | **LAB SESSION IV: Invertebrates - Morphology** | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **and anatomy** | | | |
| | | Th 01 | **LAB SESSION IV: Invertebrates - Morphology and anatomy** | | | |
| | | Fr 02 | Arthropods | chapter 33 | | |
| **9** | Mar 05 | Mo 05 | Arthropods | chapter 33 | | |
| | | Tu 06 | Deuterostomia - Chordata | chapter 33 | | **Homework#5 out (chapter 34). Homework#4 due** |
| | | We 07 | Introduction to Vertebrates, Revision for QUIZ#3 | chapter 34 | | |
| | | Th 08 | **QUIZ#3 (chapters 32-33)** | | **QUIZ#3 (chapters 32-33)** | |
| | | Th 08 | Gnathostomes | chapter 34 | | **Deep Dive VIII** |
| | | Fr 09 | Gnathostomes | chapter 34 | | |
| **10** | Mar 12 | Mo 12 | Tetrapods | chapter 34 | | |
| | | Tu 13 | Tetrapods | chapter 34 | | **Digital storytelling Project: Storyboard-final version due** |
| | | We 14 | Amniotes | chapter 34 | | **Deep Dive IX** |
| | | Th 15 | **LAB SESSION V: Vertebrates morphology and anatomy** | | | |
| | | Th 15 | **LAB SESSION V: Vertebrates morphology and anatomy** | | | |
| | | Fr 16 | Mammals | chapter 34 | | |
| **11** | Mar 19 | Mo 19 | Mammals | chapter 34 | | **Homework#5 due** |
| | | Tu 20 | Biodiversity | chapter 60 | | |
| | | We 21 | **QUIZ#4 (chapter 34)** | | **QUIZ#4 (chapter 34)** | |
| | | Th 22 | Digital stories presentation | | | **Deep Dive X** |
| | | Th 22 | Revision for Finals | | | |
| | | Fr 23 | Revision for Finals | | | |
| **12** | Mar 26 | | **FINALS** | **FINALS** | **FINALS** | **FINALS** |

# General Biology II Lab – SNCB113 L

**American College of Thessaloniki**

Spring 2018

Instructor: Andreas Anestis, Ph.D.

A laboratory section accompanies General Biology 2. **The grade of the General Biology II - Laboratory corresponds to 20% of the total grade.**

SCHEDULE: Every other Thursday, 14:00-16:00

**Readings:** Materials provided by the instructors.

## Description & Organization of the lab

Lab meetings every other Thursday allow students to participate in a series of lab sessions. Lab sessions involve case studies – online research, observation of specimens and slides, dissections, taxonomy. Each lab is followed up with a practical exam (quiz) and a lab homework.

## Evaluation Criteria

| Criterion | Points |
|---|---|
| **5 Lab Homeworks** | 60% |
| **3 Lab Quizzes** | 40% |
| **TOTAL** | **100%** |

## Weekly Lab Schedule

| WK Nr | **DAY** | **TOPICS** | **CLASSROOM** | **EXAMS / ASSIGNMENTS** |
|---|---|---|---|---|
| 1 | | ***no labs*** | | |
| 2 | Jan 18 | Evolution | TBA | **Lab HW1 out** |
| 3 | | ***no labs*** | | |
| 4 | Feb 01 | Microscopy | Compton Hall - Biology Lab | **Lab HW1 due. Lab HW2 out.** |
| 5 | | ***no labs*** | | |
| 6 | Feb 15 | Plants diversity | Compton Hall - Biology Lab | **Lab HW2 due. Lab HW3 out. Lab Quiz#1** |
| 7 | | ***no labs*** | | |
| 8 | Mar 01 | Morphology and anatomy of invertebrates | Compton Hall - Biology Lab | **Lab HW3due. Lab HW4 out. Lab Quiz#2** |
| 9 | | ***no labs*** | | |
| 10 | Mar 15 | Morphology and anatomy of vertebrates | Compton Hall - Biology Lab | **Lab HW4 due. Lab HW5 out. Lab Quiz#3** |
| 11 | | ***no labs*** | | |
| 12 | | **FINAL EXAMS** | | **FINAL EXAMS** |

## A College-wide Policy on Academic Integrity

### Statement on Academic Integrity

"The College has the responsibility of maintaining the highest possible standards of academic integrity for the purpose of ensuring the quality of education it provides, underscoring its dedication to fostering a love of learning for its own sake, and of protecting those who rightly practice integrity in their academic affairs. It is the responsibility of the student to be informed about the college's policy on Academic Integrity, to refrain from infractions of that policy and from conduct, which may lead to suspicion of infractions, and to refrain from aiding or encouraging others in such infractions. It is the responsibility of the faculty to establish and maintain an environment which is conducive to Academic Integrity."

### Academic Honesty

"Academic Dishonesty is the violation of Academic Integrity, committed by engaging in any form of unethical behavior which violates acceptable standards of scholarly conduct. Such practices as cheating on examinations, submitting borrowed or purchased papers and/or prepared bibliographies as one's own, plagiarizing, falsifying or copying lab reports, or aiding another person in any of the above infractions of Academic Integrity, constitute acts of Academic Dishonesty."

### College-wide Policy on Academic Integrity

All academic divisions at ACT, both undergraduate and graduate, will apply the following policy on academic integrity:

“A student committing an act of Academic Dishonesty in a given course will receive an F (0 percentage points) in the assignment where the academic infraction took place. If a student commits an act of Academic Dishonesty for a second time in the same course, this student will receive a failing grade in that course.

The individual faculty is responsible for enforcing the policy in a conscientious manner, for reporting all cases to the Academic Standards & Performance Committee (AS&PC) for record-keeping and for informing the affected students of their right to appeal the faculty’s decision to the AS&PC. Faculty must also insert the college’s policy on Academic Integrity in their course syllabi.”

### Academic Standards & Performance Committee

A student may appeal an initial decision made by an individual faculty to a formal body called the Academic Standards & Performance Committee (an existing standing Committee), chaired by the Director of Academic & Student Affairs.

The AS&PC will meet as needed to evaluate appeals on alleged cases of academic dishonesty referred to the Committee by an involved party. Each case referred to the Committee will have a separate hearing (several hearings could conceivably take place during a single session of the Committee). Cases sent before the Committee deemed invalid will be dismissed. The AS&PC will keep records of all academic infraction cases, whether appealed or not and it will reserve the right to invite a student who has breached repetitively the school’s policy to a hearing that may lead to sanctions ranging from failure of an assignment, to failure of a course, semester-long dismissal from the college, expulsion from the college.