SYLLABUS

Principles of Biology 2

(Web-Enhanced Course)

"Nobody is born intelligent: intelligence feeds from strong effort and a desire to learn"
-Anonymous

Term: 2015-3
Class Location: Room 1203
Class Meeting Days: Tuesdays and Thursdays; 5:40PM – 9:00PM

Professor: Dr. Félix E. Rivera-Mariani
Office: Room 1203
Office Hours: Thursdays 3:00PM – 4:00PM or by appointment
Email: friveram@mdc.edu
Phone: TBA

Note: Syllabus may be subject to change at the professor's discretion**.**

Required Textbook (print or e-book):
Reece, Jane B., Urry, Lisa A., Cain, Michael L., Wasserman, Steve A., Minorsky, Peter V., Jackson, Robert B. 2014. Campbell Biology. 10th Ed. Benjamin Cummings. San Francisco, CA. (ISBN 978-0321834959).

Pre-requisite: BSC2010, BSC2010L; CHM1045

I. Course Materials

A. Syllabus, Professor's credentials, Reading and other Assignments, Lectures, Supplemental materials will be available at mdc.blackboard.com.

B. **Required Textbook (print or e-book):** Reece, Jane B., Urry, Lisa A., Cain, Michael L., Wasserman, Steve A., Minorsky, Peter V., Jackson, Robert B. 2014. Campbell Biology. 10th Ed. Benjamin Cummings. San Francisco, CA. (ISBN 978-0321834959).

II. Rational of the course

To provide an understanding of the principles of modern biology with regard to evolution, phylogeny, and biological diversity. In addition, apply our knowledge to understand, compare and contrast structures, functions, and behavior between plants and animals. Finally, to identify factors that may treat evolution and biological diversity, and propose actions to limit or overcome the effect of these threatening factors.

III. Learning Objectives: *By the end of this course, you should be able to:*

A. Understand the evolutionary concepts and mechanisms, and biological diversity
B. Analyze and evaluate historical and recent evolutionary data
C. Understand and exemplify the diversity within different kingdoms of living organisms
D. Evaluate and analyze the interrelationships between living organisms and the environment
E. Discriminate biological hierarchies, structures, and functions between plants and animals
F. Evaluate the importance of the interactions of plants and animals with the environment
G. Understand the mechanisms by which plants and animals respond to environmental stimuli
H. Describe genetic and environmental mechanisms influencing plants' and animal behavior
I. Infer effects of genetic and environmental mechanisms in plants and animal communities
J. Identify factors and mechanisms that may pose evolutionary and diversity threats
K. Propose solutions to factors and mechanisms posing evolutionary and diversity threats

IV. Skills to be developed are:

A. Learning with technology: *we'll use different technological approaches in the classroom*
B. Reading comprehension: *we'll begin understanding new topics through textbook reading*
C. Applying the scientific method: *use and understand how the scientific method was used*
D. Analyzing and interpreting data: *gaining knowledge from existing and newly gather data*
E. Implementing higher levels of learning: *applying*, *analyzing, evaluating, and creativity*
F. Exemplifying from learned information: *provide examples from gained knowledge*
G. Proposing solutions to problems: *create solutions to existing and prospective problems*

V. Methods of Instructions

A. ***Reading assignments:*** Reading assignments will prepare us for lab. In order to understand and start to familiarize with what will be performed in lab as well as with the topics and terminology, we must examine the corresponding topic in the textbook. A series of online questions to be completed in Blackboard will be posted each week for the corresponding labs. These online questions will always be due the day before the lab: **Wednesday by 12:00PM. These online questions count for a grade (see Grading Scales)**.

B. ***In-class*** discussion will be facilitated by completing the corresponding reading assignments. Given that you'll begin to get familiarized with the topics that we'll be covering in class beforehand, this will facilitate active learning through discussion, debates, listening to each one opinions, etc.

C. Because we need ***to reinforce*** what we learn, we'll have **short quizzes in class**. These will provide an opportunity for you to showcase what you have learn, inform you the learning areas you need to reinforce, and inform me as a professor how and what you are learning. We'll be using **Reef-Quizzing™,** which will allow us to take quizzes on our smartphones and receive instant feedback by the professor.

D. ***Group work*** will facilitate the discussion and peer-teaching in the classroom. These will provide opportunities for you and your classmates to learning from each other, and develop group work skills.

E. ***Student Responses Systems*** ("clicker"), through the **Reef-Polling™** applications, will help discussion in the class when questions, biological data, and illustrations are discussed in class. More importantly, will allow real-time feedback on your learning and facilitate in-class discussion.

VI. Academic Integrity

A. Each student is expected to maintain a high level of integrity and abide by the procedure 4035 of the Miami-Dade College Student Rights and Responsibility Handbook. Any work submitted by a student in the course for academic credit will be the student's own work. For the purpose of this course, collaboration is allowed in the following instances: in-class group work, case studies discussions, or when stated by the professor. Nevertheless, each student must submit their individual work unless stated otherwise by the instructor. Avoid at all costs copying and pasting information from your classmates' response or from any other sources.

As part of a collaborative and encouraging classroom, you are encouraged to study together and to discuss topics and concepts covered in class with other students. You can obtain "consulting" help from students as well as provide "consulting" help to other students. However, this allowed form of cooperation should never involve one student having possession of a copy of all or part of the work done by another student or someone else, in the form digital files or hard copy documents.

In the case that copying occur, both the student who copied work from another student and the student who contributed to this behavior will both automatically receive a zero for the corresponding assignment. **The penalty for violation of this Code can include failure of the course and/or notifying the corresponding University authorities for disciplinary action**.

During exams (i.e. quizzes and exams), you must do your own work. Talking or discussions are not allowed during the examinations. In addition, you cannot compare papers, copy from others, or collaborate in any way. Any form of the behaviors mentioned above will result in failure of the exam and can include notifying the corresponding University authorities for disciplinary action. **Cell phones cannot leave the classroom during exams, and must be turned off during class unless needed for in-class discussions.**

Any form of Academic Dishonesty listed in the Miami-Dade College Student Rights and Responsibility Handbook will not be accepted during in the course.

VII. Attendance

A. Attendance at each class sessions parallels with your learning in the course. The Microbiology Lab course requires time and effort in order to learn and be proficient in the learning objectives stated earlier in the syllabus. In addition, **30 easy points for good attendance will provided towards your final grade**. **For each unexcused absence, unfortunately I'll have to deduct 1 point, and 0.5 point for each unexcused tardiness.**

In the event of an absence, the student will be allowed to make up work if the absence results from one of the following:

1. Official campus activities (as designated by MDC)
2. Family or personal emergencies (as designated by MDC)
3. Medical reasons (discussed with the instructor)
4. Work-related reasons (discuss with the instructor)

5. **Important Note**: **With two unexcused absences**, I won't be able to keep you in the class roster.

B. **Make-up for exams and quizzes**
   1. **Make-up exams are allowed <u>only</u>** if your excuse meets any of the four requirements above, and can only me make-up during the week of the exam and with prior authorization.
   2. **Make-up for quizzes** are not allowed.

VIII. Late policy

A. Unless arrangement have been made prior to the due date or have a valid absence excuse (as stated in the Attendance section of this syllabus), I won't be able to award full grade on assignment submitted late **(the final grade for any late assignment will be 30% less)**.

IX. Accommodations for students with disabilities

A. In compliance with the Miami-Dade College and the Student Rights and Responsibility Handbook policy and equal access laws, I more than available to discuss any necessary academic accommodations that may be required for the student with disabilities. Requests for academic accommodations are to be made during the first week of the term, except for unusual circumstances, so arrangements can be made. Students are encouraged to contact the Student Services to verify their eligibility for appropriate accommodations.

X. Inclusivity Statement

A. Members (student, faculty, administrators) of the Miami-Dade College community represent a diversity of backgrounds and perspectives. In this course, and as a member of this community, I am a strong supporter of diversity and its benefits. Therefore, to maintain an adequate learning and diverse environment students in this course are strongly encouraged to:
   1. share their unique beliefs, experiences, and values
   2. be open to the opinions and views of others
   3. honor your colleagues' uniqueness
   4. appreciate the unique opportunity we have to learn from each other
   5. value each other's opinions and communicate in a respectful manner
   6. keep confidential discussions of personal and professional nature
   7. take advantage of this opportunity to share ways in an inclusive environment
   8. must maintain at all times a respectful environment

XI. Grading Scales:

Item	Points
Quizzes	90
Attendance	30
Reading Assignments	30
Midterm Exam	100
Final Exam/Practicum	100
Total points	**350**

Reef-Polling Questions = bonus points

Grade	Percentage	Points
A	100 – 90.0%	315
B	89.9 – 80.0%	280
C	79.9 – 70.0%	245
D	69.9 – 60.0%	210
F	Below 60.0%	Below 210

A. **Reading Assignments (30 total points):**

1. Online Reading Assignments will be available in Blackboard (http://mdc.blackboard.com), and their deadline will always be the day before class time: Mondays and Wednesdays by 5:40PM, unless otherwise stated. Keep in mind that these guide questions won't be available after their corresponding deadline. Similar to points for attendance, these questions will be 30 easy points towards your final grade. **To maintain these 30 easy points, answer 70% of the questions correct to avoid 0.5 point of deduction from the 30 points.**

B. **Exams (100 points each):**

1. Two 100 points exams (Midterm and Final) will be administrated during regular laboratory periods. Refer to the syllabus schedule to know the dates of the exams. Each of the exams will be multiple choice questions. No scantrons are needed: questions will be answered on the printed exam provided. Won't be able to allow calculators.

2. At the next lab sessions, the students will receive a Scorecard of the exam and copy of the exam: **exams must be returned to the professor and cannot be photographed**. Academic Dishonesty regulations, as stated in the MDC student handbook, will have to be strictly enforced. Any violations will lead to a zero on the exam.

3. **There are no make-ups for Exams unless the** absence meets the requirements of the Attendance sections of this syllabus.

C. **Quizzes (10 points each)**:

1. During the first 15 minutes of each class section, cumulative quizzes will be administered. These quizzes will rehearse your knowledge with effortful learning and open-ended questions. They will also provide valuable information on how and what you are learning.

XII. Incomplete Grades and Withdrawals

A. Incomplete (I) grades will be posted only in consultation between the student and professor, and only when extenuating circumstances will prevent the student to complete the requirements of the course. At least one half of the course must have been completed with a C or better grades. It is important that the incomplete (I) be completed

within the timeframe agreed between the student and the professor. Unfortunately, if not completed within the agreed time frame the incomplete must be submitted as an F.

B. Withdrawals: The professor is not entitled to withdraw a student from the course: it is the students' duty to evaluate and monitor how he/she is doing in the course. Knowing your status in the course will be important in the case you determine it is necessary to withdraw from the course. **The deadline to withdraw (W) from the course July 14, 2016**. Keep in mind that a "W" grade will be permanent in your grade transcripts, and constitute an attempt for the course.

XIII. Tentative Course Schedule (schedule may change due to unexpected events)

(*Note: Syllabus may be subject to change at the professor's discretion***)**

Date	Week	Topic	Due Dates Chapters to Read, Quizzes, and *Exams*
June 21 June 23	W1	-Evolution: Life from Darwin's point of view -Evolution of Populations -Species origins	-Chapters 22, 23, 24 -Quiz 1 -Quiz 2
June 28 June 30	W2	-Phylogeny -Life's origins	-Chapters 25, 26 -Quiz 3 -Quiz 4
July 5 **July 7**	W3	-Prokaryotes (no membrane-bound organelles) -Diversity of Prokaryotes -Eukaryotes (membrane-bound organelles) -Diversity of Eukaryotes	-Chapters 27, 28 -Quiz 5 -***Midterm Exam***
July 12 July 14	W4	-Diversity of the Plant Kingdom -Plant's structures and functions	-Chapters 29, 30, 35 -Quiz 6 -Quiz 7
July 19 July 21	W5	-Diversity of the Animal Kingdom -Invertebrates -Vertebrates	-Chapters 32, 33, 34, 40 -Quiz 8 -Quiz 9
July 28	**W6**	Final Exam	-***Final Exam***

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