**VALENCIA COLLEGE**

**Fundamentals of Biology I – BSC 1010C-CRN 22301**

**FALL 2018 COURSE SYLLABUS**

**INSTRUCTOR INFORMATION**

|  |  |
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| NAME: | Dr. Richard Gonzalez Diaz |
| **OFFICE** | **AHS 231Science Division Office** |
| PHONE: | Office: 407-582-1407 |
| E-MAIL: | rgonzalezdiaz@mail.valenciacollege.edu |
| FAX: | 407-582-1215 |
| OFFICE HOURS:  | Appointments are to be made with me at a mutually convenient time (using Blackboard Messages). Prior to or right after lecture are the ideal times to meet with you. |
|  INSTRUCTIONAL METHODS: | Knowledge of **BlackBoard** is necessary for you to be successful in this course; if you need assistance, please contact BlackBoard support under My Courses. The course may require for you to read and listen to prerecorded mini lectures before coming to class. You also are assigned dated pre and post lecture homework. You may have a quiz on the prerecorded, written, online or reading assignments upon arrival to class. In class we will engage in problems (questions) and projects to cover the core content for the chapters. You will be responsible for specific content on your own. This material will be delineated by the instructor in class. You will bring any questions on any content to the classroom written in a 3x5 index card to be answered by the instructor at the beginning of lecture.You need to check you VC Outlook e mail and Blackboard Announcements and Messages at least once every day (best prior to class for any relevant information). |

**COURSE INFORMATION**

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| --- | --- |
| CONTACT HRS/WK:LOCATIONS: | 6 (3 lecture and 3 laboratory)**Lecture: Mondays 5:30 to 8:15 PM**– West Campus Bldg. HSB Room 118**Lab: Wednesdays 5:30 – 8:15 PM** – West Campus Bldg. AHS Room 318 |
| TERMS OFFERED:  | Every term (as needed) |
| CREDIT HOURS: REFUND OF FEES:WITHDRAWAL:COURSE DESCRIPTION:COURSE LEARNING OUTCOMES: | 4 The Drop/Refund deadline for this course is **January 16th 2018 (11:59PM).**Withdrawal Deadline for this course for- “W” grade is **March 30th, 2018 (11:59 PM)** Welcome to the Fundamentals of Biology I (BSC1010C) course. This course, and the accompanying laboratory, provides the foundation for future advanced biology courses and is primarily intended for those students who plan on majoring in Biology or for those students who plan to pursue a career in the allied health sciences.**The course focuses on the cellular and molecular portion of biology. It emphasizes the basic principles and concepts that pull together modern biology.** These include, but are not limited to, the **chemical** structure of living matter, the structure and function of living cells, the major metabolic functions of cells, reproduction, genetics and evolution.By the end of the course you will be able to:1. Learn the process of scientific inquiry (curiosity) and the scientific method of learning by generating hypothesis and by experiments designed to prove or deny the answer to your question. This will have you show and apply critical thinking and scientific reasoning.
2. Be able to explain the definition of life and what sets apart the living and non-living.
3. Build, draw and classify into different groups the structure and functions of the molecules that keep us and other organisms in the planet alive.
4. Compare and contrast the structure and function of prokaryotic (without) and eukaryotic cells (with a nucleus).
5. Demonstrate an understanding of the structure and functions of cell membranes and the implications these functions have for any cell to carry out the processes that keep it alive.
6. Explain the transformations of energy needed as they relate to keeping a cell living (metabolism).
7. Evaluate asexual and sexual reproduction as they relate to the differences in the genes of different species.
8. Model the processes and patterns of inheritance in eukaryotic organisms.
9. Describe or model the regulation and expression of the information contained in the genes (DNA). That covers how the material is replicated (doubled up), transcribed (copied in a different language), and translated (reading the instructions) to be used to build proteins.
 |
| INSTRUCTIONAL MATERIALS:Required | * **Biology, *Custom Edition for Valencia College*, Volume Taken from *Biology*, 11th edition. Pearson Learning Solutions.**
 |
| Required | **Laboratory Instructions:**The lab manual is available for you to purchase at the campus bookstore. The manual is required and will be graded.Use the titles in the class schedule to know the lab you need to print out each week.You will also need:A set of 8 colored pencils; a drawing pad, a set of 3x5 index cards; a separate hand in notebook for homework |
| Required: | **A My lab and Mastering Biology student code to register the first week of class using Blackboard Resources Tools and clicking on “Pearson’s My lab and Mastering” green button link.** |

**STUDENT SUCCESS INFORMATION**

**Grades:**

            -  The **grading scale** for the course is:

               (90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; less than 60% = F)

            **The grading system has a total of 1000 points:**

-          **6 Exams (100 points each) ………………………......... 600 points**

**Final Exam is comprehensive (includes all the core material covered in the entire semester) and cannot be dropped).**

-          **Homework Assignments……………………………….. 100 points**

-          **Lecture Quizzes…………………………………………..  50 points**

-          **Lab Work (per completing the manual) ………………. 50 points**

-          **1 lab Practical Examinations/ and Quizzes…………… 50 points**

 **Total:850 points**

 **This is a broad setup of the point system. You will be given a weekly outline of the work for points in Blackboard Announcements and Content.**

Missing the final exam will result in a grade of F until you take a make-up final, at which time a grade of A, B, C, D or F will be given.

Any changes in the lecture or lab schedule will be announced in class and through **Atlas** email and or Blackboard when necessary.

**Make-up and Extra Credit Policies and Procedures**

 **Lecture tests** can be made up only at the discretion of the professor, in the case of an emergency. A student has 2 calendar days, after the scheduled test date, to make up a missed test at the West Campus Testing Center.

 **Of the 100 points each test is worth, up to 10 points may be given from hand in material that is done at home prior to the test. This homework must be handed in at the beginning of the test session. The requested material to hand in will be posted in Blackboard and is based on the chapters covered by the test. Usually a written test will cover up to 3 Chapters.**

 **Every test may have any points based on short essay, fill in the blanks and other non-multiple choice or matching questions.**

**The rest of the written test will be objective questions (e.g. choosing the best answer or true/ false questions). Every one of these objective questions will be worth 1 point.**

**The test is based on the material covered in class or any content specifically pointed out by the instructor during class.**

“Missing any exam will result in a grade of 0 until the student takes a make- up, at which time a grade of A, B, C, D or F will be given.”

The make-up exam will be taken at the West Campus Testing Center only. The make-up needs to be taken no later than 72 hours after the written test is given. This allows you to continue with the pace of the course with minimal interruption.

Final exam schedule can be found at <http://valenciacollege.edu/calendar/FinalExam.cfm>

**Practical Examinations will be conducted in the laboratory setting. It may consist of diagrams, models, microscope mounted slides, and projected power point slides of the material covered by the lab exercises.**

**There are no lab make-ups**. Lab practical exams can only be made up in the case of a true documented emergency at the discretion of Dr. Gonzalez-Diaz during the final’s week. An appointment needs to be scheduled.

**The Written Test and the Lab Practical will add up to a total of 100 points for each test.**

**Any extra credit points will be announced in Blackboard. This is mainly a one-time opportunity.**

 **There will be no make up for missed homework**. This will only put you out of schedule and place you 1 week behind me in class. In this course there is no time or room to catch up.

**Attendance and Tardy Policy and Expectations**

 **Attendance to lectures and laboratory exercises is mandatory. Consider this course with the responsibility of a job. You are working for your future goals and earning the salary of a good grade as a product of your work.**

**During each lecture and laboratory period, a roster will be provided for you to sign**; if you are late to lecture or lab, it is your responsibility to add your signature to the roster. Missing signatures are viewed as absences; leaving early from a lab, without professor approval, will be counted as a lab absence. More than one absence has proven, in the past, to be a sign that your grade will be substantially less than you may have hoped for and will result in the loss of lab points. Signing in for another student will result in the student who forges the sign-in being referred to the Science Division Dean and the Academic Dean of Students. Forgery may result in suspension from the class with a grade of F.

**Withdrawal Deadline and Policy**

 Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals) a student who withdraws from class before the **withdrawal deadline of March 30, 2018** will receive a grade of “W.” You will not be permitted to withdraw from this class after the withdrawal deadline; if you remain in the class after the withdrawal deadline, you can only receive a grade of A, B, C, D, F or I. An I grade (Incomplete) will only be assigned under extraordinary circumstances that occur near the end of the semester. If you receive an I, the work missed must be made up during the following semester, at which time you will get an A, B, C, D or F. Failure to make up the work during the following semester will result in you getting a grade of F in the course. It is your responsibility to withdraw before the withdrawal deadline and to be aware of the date of the withdrawal deadline. Any student who withdraws from this class during a third or subsequent attempt in this course will be assigned a grade of “F” by the registrar.

**Course Attempts/Course Withdrawal**

Agencies and organizations which provide financial assistance/scholarships (federal and state government, businesses, etc.) may have requirements relative to withdrawal, course repeats and grade forgiveness which are more stringent than those described below. It is your responsibility to verify the effects of enrollment and/or withdrawal upon your financial assistance (financial aid, scholarships, grants, etc.).

According to State Rule 6A-14.0301, you may attempt the same course only three times at Valencia including the original grade, repeat grades and withdrawals at any point in the term. Students in Bachelor’s degree programs are limited to two attempts. The same course usually means the subject prefix and course number are the same when posted on a Valencia transcript. Courses that have been deemed equivalent will all count as attempts even if the current course number is not the same as your previous attempt(s). Being enrolled in a course for credit beyond the Drop/Refund Deadline counts as an attempt. The Drop/Refund Deadline for each term is listed in the Academic Calendar in the online official catalog.

**Conditions That Apply to a First or Second Attempt in a Course**

On or Before the Withdrawal Deadline:

During a first or second attempt in the same course at Valencia, if you withdraw, or are withdrawn by the professor, you will receive a W (Withdrawn). You will not receive credit for the course, and the W will not be calculated in your grade point average; however, the enrollment will count in your total attempts in the specific course.

Following withdrawal, you may, with the professor’s approval, continue to attend the course for the remainder of the term.

After the Withdrawal Deadline:

A student is not permitted to withdraw after the withdrawal deadline. A professor may withdraw you up to the beginning of the final exam period for violation of the class attendance policy, as published in the faculty member's syllabus, in which case you will receive a grade of “W”. If the professor does not withdraw you, your grade will be what you had earned.

 For a complete policy and procedure overview on Valencia Policy 4-07 please got to:

 <http://valenciacollege.edu/generalcounsel/policy/default.cfm?policyID=75&volumeID_1=4&navst=0>

**Notice to Students Seeking to Withdraw from a Course(s)**

Before you withdraw from a course, you should be aware that course withdrawals:

* Will increase the cost of your education
* May affect your financial aid status
* May affect your transfer grade point average
* May result in your having to pay the full cost of instruction fee to retake the course
* May affect your anticipated graduation date
* May result in your being denied access to limited access programs
* May affect your eligibility for the Honors Program
* May affect your immigration status if you are attending Valencia on a nonimmigrant visa
* Will result in your required repayment of course fees paid by a Bright Futures scholarship.

To withdraw from a course(s) you must access registration on Atlas. The Withdrawal Deadlines for each term are published in the Academic Calendar in the online official catalog. All requests for withdrawals must be submitted by 11:59 p.m. on the Withdrawal Deadline **date (March 30, 2018)**.

**Before you withdraw:**

* + Talk with me to discuss your progress in the course
	+ See a Student Services staff member to discuss how a withdrawal will affect your career and education plans and/or the status of your financial aid

 ***“The professor will not withdraw any student for any reason; it is the responsibility of the student to withdraw themselves before the withdrawal deadline and to be aware of the date of the withdrawal deadline.”***

 If you are on financial aid, please consult an advisor or a counselor before withdrawing from a course; there may be financial aid implications to you which you need to know about to make an informed decision before withdrawing from this course. Students with some scholarships who withdraw or are withdrawn from a class must pay the college for the cost of the class. Other scholarship sponsors may also require repayment.

**In order to academically maintain financial aid, students must meet all of the following requirements:**

* **Complete 67% of all classes attempted, and**
* **Maintain a Valencia GPA of 2.0 or higher, and**
* **Maintain an overall GPA of 2.0 or higher, and**
* **Complete degree within the 150% timeframe**

**Detailed information about maintaining satisfactory academic progress (SAP) can be found at:**

[**http://valenciacollege.edu/finaid/satisfactory\_progress.cfm**](http://valenciacollege.edu/finaid/satisfactory_progress.cfm)

For a complete policy and procedure overview on Valencia Policy 4-07 please got to:

<http://valenciacollege.edu/generalcounsel/policy/default.cfm?policyID=75&volumeID_1=4&navst=0>

**Valencia College Core Competencies**

*“The faculty of Valencia College has identified four core competencies that define the learning outcomes for a successful Valencia graduate. These competencies are at the heart of the Valencia experience and provide the context for learning and assessment at Valencia College. You will be given opportunities to develop and practice these competencies in this class. The four competencies are:*

**THINK** = Think clearly, critically, creatively; analyze, synthesize, integrate and evaluate in many domains of human inquiry.

1. you will analyze data and scientific principles as they pertain to Biology
2. you will employ facts, formulas and procedures in lecture and in lab groups
3. you will discover and understand how Anatomy and Physiology are important in various fields and in disciplines other than in medicine
4. you will be able to draw well supported conclusions about the importance of Biology in your daily life and in your career
5. you will be able to revise information and conclusions from the learned material in light of new observations and interpretations

**VALUE** = Make reasoned judgments and responsible commitments.

1. you will be able to compare personal, ethical, and scientific values in the field of the life sciences
2. you will be able to see the value of the time commitment needed to succeed in nursing and allied health programs, as well as careers in the Science, Technology, Engineering and Mathematics (STEM)

**COMMUNICATE** = Communicate with different audiences using varied means.

1. you will be able to practice written communication skills
2. you will be able to verbally communicate to fellow students and teachers using professional, scientific language during lectures and labs

**ACT** = Act purposefully, effectively and responsibly.

1. you will be able to manage your time and activities to achieve your academic goals
2. you will meet deadlines
3. you will apply the knowledge you learn to your career goals

**Please go over these Valencia College Core Competencies. Understand that I am your mentor for all of these. Establish a clear avenue of communication with me early on in the section. I will be more than available to guide you and answer any questions along your effort to satisfy these competencies. If you take these competencies seriously your academic and professional success is nearly guaranteed.**

**Additional Classroom Information**

Security Statement

 *We want to reassure you that our security officers are here around the clock to ensure the safety and security of the campus community. It’s important to remain alert and aware of your surroundings, especially during the early morning or evening hours. Remember that you can always call security for an escort if you feel uncomfortable walking alone on campus. White security phones can also be found in many of our buildings; simply pick up the phone and security will answer.
Finally, report any suspicious persons to West Campus Security at 407-582-1000, 407-582-1030 (after-hours number) or by using the yellow emergency call boxes located on light poles in the parking lots and along walkways.*

Faculty/Student Communication

 *“Valencia College is committed to providing each student a quality educational experience. Faculty members have set high standards of instruction for themselves and for you. If you have a problem in a class, your first step is to talk to your instructor. If you are still dissatisfied, you may talk with the academic dean of the division for your class. We will work together to resolve any issues that arise.”*

* During non-classroom hours, you can talk to me one half hour before and after class or lab or I can be reached by email at rgonzalezdiaz@valenciacollege.edu .

* I read my email every day and you will receive a response to your emails within 24 hours.

**Academic Honesty Statement**

*“Each student is required to follow Valencia policy regarding academic honesty. All work submitted by any student is expected to be the result of the student’s individual thoughts, research, and self-expression unless the assignment specifically states ‘group project.’”*

 *Any student discovered to be cheating on an exam will receive a 0 grade for that exam and in my class you will also receive an F in the course. I have no tolerance for lack of integrity. Integrity is one of the most important values to succeed both as a student and a professional. You will need to be fully trusted in any work environment to sustain employment.*

***If you feel unprepared for an obligation in the class, please notify me immediately. Expressing your concern is key to your growth as a person, demonstrates commitment and the responsible attitude of an adult. There is a possibility that a solution can be worked out and you can remain progressing in the class.***

***No VCC property may be removed from the lab.***

**Classroom Rules of Student Behavior**

 College policy prohibits children from attending lectures or labs; please, do not violate this policy.

 **Proper classroom etiquette** is required for you to attend this class; please do not create distractions while the professor is lecturing. More than one warning for improper classroom behavior, following a referral to the academic dean or the calling of security, will be grounds to be dropped from the course without a refund.

**No Food or Drink Allowed in the Lecture or Lab Rooms!**

**Additional Classroom Policies**

 **Beepers or cell phones** which emit audible tones should be **turned off or to vibrate** during periods when lectures are given in the lecture or the lab. Please, do not use your phone for text messaging during lectures; text messaging and phone calls can be completed outside the lecture room.

The second time a student fails to comply with this policy will result in a referral to the academic dean; a warning after your meeting with the academic dean will be grounds to be dropped from the course without a refund.

If you are expecting an unavoidable call, please inform me. I do not need the details. After I am made aware, put the phone in vibrate; check the call and if needed, walk quietly out of the class session and return quietly after the call is attended to. **The same instructions apply to text messaging and or using any electronic device for anything but the class.**

I will fully respect any decision you make managing the demands of the class. Please understand that I am also expecting that you assume full responsibility for the consequences these actions will bring.

**Not preparing or following a precise schedule for the class is your option as well as the consequent effects of not approving an exercise for points that is based on such preparation.**

Under no circumstances will your test scores, total points or final grades be discussed over the telephone. FERPA rights to privacy prevent the divulging of scores or related materials by that means. Scores will only be given face-to-face with each student or by accessing your Atlas account.

**All tests are the material of Dr. Gonzalez-Diaz. Any test that is copied or that leaves the room with a student will be entered in the grade book as a zero. Hats or caps, cell phones and any other electronic device, food and beverages are NOT allowed when taking a test or a quiz.**

**Alternative Arrangements for Pregnant Students**

The laboratory environment often times will involve the use of and/or exposure to chemicals or other substances.  If you are pregnant and concerned about your exposure to these chemicals, please see your instructor, lab manager, or Dean to discuss possible alternative arrangements.  Students are also invited to contact Mr. Ryan Kane, Title IX Coordinator/Equal Opportunity Officer, 407-582-3421, rkane8@valenciacollege.edu, regarding requests for alternative arrangements relating to pregnancy.

**Student Feedback on Instruction (SFI)**

Each term students taking courses are asked to complete the electronic Student Feedback on Instruction survey to let us know more about their experiences. It is used at Valencia by faculty members to improve the teaching and learning experience. Faculty cannot access your student feedback until after final grades are posted. Through this link you can find answers to other commonly asked questions about the SFI.

[**http://valenciacollege.edu/academic-affairs/institutional-effectiveness-planning/institutional-assessment/saicc/SFIFrequentlyAskedQuestions.cfm**](http://valenciacollege.edu/academic-affairs/institutional-effectiveness-planning/institutional-assessment/saicc/SFIFrequentlyAskedQuestions.cfm)

**Baycare Behavioral Health’s Student Assistance Program**

 “*Valencia is committed to making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help that may assist them with psychological issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work.*

*Students have 24 hour unlimited access to the* ***Baycare Behavioral Health’s confidential student assistance program*** *phone counseling services by calling* ***(800) 878-5470****. Three free confidential face-to-face counseling sessions are also available to students.”*

**Students with Disabilities Information:**

*"Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class; accommodations will not be applied retroactively. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities."*

Information about the Office for Students with Disabilities can be found at <http://valenciacollege.edu/osd/CurrentStudents.cfm>

*West Campus SSB, Rm. 102 Phone: 407-582-1523 Fax: 407-582-1326*

**College Catalog/Student Handbook/Policy Manual**

* A full description of all College policies can be found in the College Catalog at [http://www.valenciacollege.edu/catalog/](http://www.valenciacc.edu/catalog/)
* The Student Handbook can be found at: <http://valenciacollege.edu/studentdev/CampusInformationServices.cfm>
* The Policy Manual can be found at <http://www.valenciacollege.edu/generalcounsel/>
* The college calendar can be found at <http://valenciacollege.edu/calendar/> for important dates.
* Information about maintaining satisfactory academic progress can be found at

 <http://valenciacollege.edu/finaid/satisfactory_progress.cfm>

**Learning Support Services**

 Biological Sciences tutoring services are available in bldg. 7-240 (extension 1633)

 - Valencia College offers a variety of SkillShops: short seminars covering a variety of topics which deal with student success, goals and purpose. T

To check out Valencia’s Skillshop offerings, go to: <http://valenciacollege.edu/studentservices/skillshops.cfm>

You can also use Smarthinking (smarthinking.com), an online on-demand student support site.

**Lab Technique grade:**

 Some activities involve dangerous dissections and/or expensive equipment. Proper care and cleaning of the microscope is critical. Errors in lab disinfection, proper attire or microscope care will result in the deduction of points from your lab technique grade. You will lose lab technique points for each of the following lab-related infractions:

|  |  |
| --- | --- |
| No lab jacket (or suitable substitute), lack of gloves, wearing inappropriate footwear  | 1 point/each infraction |
| Improper microscope care and cleaning  | 1 point/ infraction |
| Lack of lab attendance | 3 points/ lab missed after 1 lab absence |
| Eating or drinking in the lab Not informing professor of a spill | 5 points/ infraction10 points/ infraction |

**The laboratory environment often times will involve the use of and/or exposure to chemicals or other substances.  If you are pregnant and concerned about your exposure to these chemicals, please see your instructor, lab manager, or Dean to discuss possible alternative arrangements.  Students are also invited to contact Mr. Ryan Kane, Title IX Coordinator/Equal Opportunity Officer, 407-582-3421,**[**rkane8@valenciacollege.edu**](https://webmail.valenciacollege.edu/OWA/redir.aspx?SURL=BFLjWfnpipWYYVYon7fxzs03f6DL-AyKemmYARhk99RZkw9JpbPSCG0AYQBpAGwAdABvADoAcgBrAGEAbgBlADgAQAB2AGEAbABlAG4AYwBpAGEAYwBvAGwAbABlAGcAZQAuAGUAZAB1AA..&URL=mailto%3arkane8%40valenciacollege.edu)**, regarding requests for alternative arrangements relating to pregnancy.**

**Disclaimer**

 *“The course outline and syllabus are subject to change as needed; changes will be announced in class and as an announcement in BlackBoard, in a timely manner. Your continued participation in this course after the drop-add deadline period constitutes an agreement with and an acceptance of the conditions presented in this syllabus.”*

**Study Tips**

“*LEARNING IS AN ACTION VERB!! Most students need to do more than just sit through lectures and reread their notes.* ***Spend 1-2 hour blocks of time EVERY DAY*** *actively writing or discussing concepts to make them a part of your memory. Use the words you learn often, they will sink in better☺.*

*Here are* *some study and classroom management tips that have assisted former students:*

*- Attend class daily and don’t be tardy. The introduction to each lecture explains the purpose of the entire lecture. Students who follow this rule won’t miss important information.*

*- REWRITE YOUR NOTES soon after the lecture; in my class you can* ***tape record*** *lectures; replay these to refresh your memory when you rewrite your notes.*

***I will provide you with many visual, auditory and other analogies as well as mnemonics to trigger your memory. Place close attention to these. Make a solid effort to***

***understand how they apply to the content discussed in class. Answer the question: how exactly can I match the information in class and in the book with the example the instructor has just given me? How do they compare? Can I make a perfect match?***

*- Create flash cards with questions you make up from the lecture and lab with answers on the back. You should purchase a set of 3X5 index cards and have them with you in class. You can generate the cards during the lecture.*

*- Use your own mnemonic devises and other games to remember concepts; go to Google images, YouTube and Khan Academy for additional pictures and videos to clarify concepts.*

*- Make lists of confusing topics from your studying and ask questions. The first part of every lecture is a review.*

*- Take advantage of the time available before and after class for questions and discussions of your ideas. Get creative and bring in new information to share with me and the class (a student called a capillary network a “pipeline” and I have always used it in class as a perfect analogy).*

*-* ***JOIN A STUDY GROUP and predict what questions the professor could ask on the test.***

*- Get the telephone number of one or more buddies in case you are absent from a class.*

Learning Support Services

Valencia offers free services outside of the classroom to assist your learning. The **Tutoring Center** (7-240) provides math tutoring in a walk-in basis and tutoring for languages, science, business, and many other subjects by appointment. Study rooms are open for reservations and math materials are also available for check out with your Valencia ID card. You can also get tutoring online 24 hours a day, 7 days a week through **Smarthinking**. Click the Tutoring (Online) link in the Course tab in Atlas to access the full schedule of Smarthinking subjects such as various math, writing, business, nursing and allied health, science and computer technology.

The **Computer Access Lab** (first floor of the Library, Building 6) is an open lab with computers, project spaces, printing, scanning, and equipment check out. One-on-one training is also available for Microsoft Office products, Photoshop, OneDrive, and Blackboard. **The West Campus Testing Center** (11-142) is where you go to make-up exams arranged with your professor, take exams for online classes, or receive pre-arranged special accommodations. Make sure you have your Valencia ID card or a state driver’s license with you when you go to take your test.

**BSC 1010C Spring 2018 Laboratory SCHEDULE**

**WEDNESDAY CLASSES**

|  |  |
| --- | --- |
| Date: | Experiments |
| Jan 10 | Reaction Times |
| Jan 17  | Atoms and Molecules |
| Jan 24  | Use of the Microscope |
| Jan 31 | The Cell |
| Feb 7 | Diffusion I |
| Feb 14 | Diffusion II |
| Feb 21  | Open or Lab Practical 1 |
| Feb 28 | Enzymes |
| Mar 7  | ***Spring Break!!*** |
| Mar 14 | Respiration |
| Mar 21 | Photosynthesis |
| Mar 28 | Mitosis and Meiosis |
| Apr 4 | Mendelian Genetics |
| Apr 11  | Human Phenotypes |
| Apr 18 | **Practical Exam** |

 **Weekly Class Schedule with Assessment due dates:**

|  |  |  |
| --- | --- | --- |
| **WEEK OF** | **LECTURE TOPICS (Chapters)****AHS Rm 214** | **LABORATORY EXERCISES****AHS Rm 321** |
| **Jan 7th** | 1/8/2018Introduction and Student SuccessChapter 1: Evolution, the themes of Biology, and Scientific Inquiry | 1/10/2018**The Scientific Method****ReactionTimes** |
| **Jan 14th** | 1/15/2018**Martin Luther King Day****NO CLASS** | 1/17/2018**Atoms and Molecules**Chapter 2: The Chemical Context of LifeChapter 3: Water and Life |
| **Jan 21st** | 1/22/2018**Ph****Exam on Chapters 2,3** Chapter 4: Carbon and the Molecular Diversity of Life | 1/24/2018**Use of the Microscope** |
| **Jan 28th** | 1/29/2018**Quiz on pH**Chapter 5: The structure and Function of Large Biological Molecules | 1/31/2018**The Cell** |
| **Feb 4th** | 2/5/2018**Exam on Chapters 4, 5**Chapter 6: A Tour of the CellChapter 7: Membrane Structure and Function |  2/7/201**Diffusion I** |
| **Feb 11th** | 2/12/2018**Exam on Chapters 6, 7**Chapter 8: An Introduction to Metabolism | 2/14/2018**Diffusion II** |
| **Feb 18th** | 2/19/2018Chapter 9: Cellular Respiration and Fermentation | 2/21/2018**Lab Practical Examination 1** |
| **WEEK OF** | **LECTURE TOPICS (Chapters)** | **LABORATORY EXERCISES** |
|  |  |  |
| **Feb 25th** | 2/26/2018Chapter 10: Photosynthesis | 3/28/2018**Enzymes** |
| **Mar 5th** | 3/6/2018**Spring Break** | 3/8/2018**Spring Break** |
| **Mar 11th** | **Exam on Chapters 8,9 and 10**Chapter 12: The Cell Cycle | 3/14/2018**Respiration** |
| **Mar 18th** | 3/19/2018Chapter 13: Meiosis and Sexual Life Cycles | 3/21/2018**Photosynthesis** |
| **Mar 25th** | 3/26/2018**Exam on Chapters 12 and 13**Chapter 14: Mendel and the Gene IdeaChapter 15: The Chromosomal  Basis of Inheritance  | 3/28/2018**Mitosis and Meiosis** |
| **Apr 1st** | 4/2/2018**Exam on Chapters 14 and** **15**Chapter 16: The Molecular Basis of Inheritance | 4/4/2018**Mendelian Genetics** |
| **Apr 8th** | 4/9/2018Chapter 17: Gene Expression  From Gene to Protein | 4/11/2018**Human Phenotypes** |
| **Apr 15th** | 4/17/2018**Exam on Chapters 16 and 17** | 4/18/2018**Lab Practical Examination 2** |
| **Apr 22nd** | **Review for Final Examination** | **4/25/2018****COMPREHENSIVE FINAL EXAMINATION** |
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 **BSC 1010C Common Final Exam Learning Outcomes**

CHAPTER 1 – In studying nature, scientists make observations and form and test hypotheses:

* The scientific process, control group vs. experimental group, inductive vs. deductive reasoning, forming and testing hypotheses, the hypothesis - prediction method, quantitative vs. qualitative data, reading a graph, dependent vs. independent variables

CHAPTERS 2 through 5 – The Chemistry of Life

* Matter, elements, atoms, subatomic particles, atomic number and mass, electron distribution and chemical properties, valence electrons, compounds, types of molecular bonds and interactions, polar vs. nonpolar covalent bonds and molecules, the properties of water, hydrophilic, vs. hydrophobic, hydrocarbon solubility in water, acids vs. bases (alkaline), the pH scale, buffers, ions, isotopes, isomers, chemical reactions, catalysts, organic vs. inorganic chemistry, recognition of organic molecules and their building blocks, the structure and function of carbohydrates, the structure and function of lipids, the structure and function of proteins, monomers vs. polymers, dehydration synthesis, hydrolysis, biologically important functional groups, denaturation, 1o, 2o, 3o and 4o protein structure, structure and function of nucleic acids, ATP

CHAPTERS 6 through 12 – The Cell

* Microscopy, compare prokaryotic and eukaryotic cells, the endosymbiotic theory, compare animal cells vs. plant cells, structure and function of cellular organelles and other cellular structures, the structure and function of plasma membranes, the selective permeability of plasma membranes, the amphipathic nature of phospholipids, the types of cellular transport across membranes, effects of tonicity on cells of different types.
* Metabolism, catabolic vs. anabolic pathways, forms of energy, the laws of thermodynamics, the structure, hydrolysis and regeneration of ATP, enzyme structure and function, effects of local conditions on enzyme activity, regulation of enzyme activity, endergonic vs. exergonic reactions, energy of activation, cofactors, the models of enzyme activity
* The importance and purpose of cellular respiration, the location of and molecules involved with each stage of cellular respiration, redox reactions, the accounting of ATP production by cellular respiration, ATP synthase, fermentation and anaerobic respiration
* The importance and purpose of photosynthesis, the location of and molecules involved with each stage of photosynthesis, autotrophs vs. heterotrophs, the sites of photosynthesis in plants, redox reactions, the nature of sunlight, photosynthetic pigments, the light reactions, the Calvin cycle, cyclic and linear electron flow, photorespiration, the differences between C3, C4, and CAM plants
* Binary fission, the cell cycle and its phases, the functions of cell division, the cellular organization of genetic material, the distribution of chromosomes during eukaryotic cell division, the differences between plant and animal cell division, the mitotic spindle

CHAPTERS 13 through 17 - Genetics

* Evaluate sexual vs. asexual reproduction as they relate to genetic variation, fertilization, zygotes, the stages and purpose of meiosis, the law of independent assortment, crossing over, chromosome numbers gametes and somatic cells, haploid vs. diploid cells, homologous chromosomes, compare mitosis to meiosis,
* Inheritance in eukaryotic organisms, genetics concepts and problem solving to produce numerical predictions and/or pedigree patterns
* Mendel’s laws of heredity and patterns of inheritance, homozygous vs. heterozygous, alleles, genotype vs. phenotype, describe the contribution of environmental variation to phenotypic variation
* Dominant-recessive inheritance
* Sex-linked inheritance
* Incomplete dominance inheritance
* Codominant inheritance
* Polygenic inheritance
* Multifactorial traits
* Dihybrid crosses
* Multiple alleles
* Pleiotropy
* Epistasis
* The chromosomal basis of inheritance and the genetic code
* Genes, chromosomes, DNA, m-RNA, t-RNA, r-RNA structure and function, pre-RNA, codons, anticodons, stop and start codons, 5’ cap, poly A tail, initiation and termination codons, operons, promotors
* Know the structure of DNA and describe the process of DNA replication in eukaryotes, the roles of enzymes involved in DNA replication, DNA and RNA polymerase, primase, RNA primers, leading and lagging strands, the anti-parallel nature of DNA
* Protein synthesis – transcription vs. translation, the role of ribosomes in translation, introns, exons, wobble, be able to give the transcript sequence produced by the transcription of a coding sequence, 5’ vs. 3’ ends of DNA, the termination phase of translation
* Mutations: frameshift, differentiate the types of point mutations and the results of each, sickle cell anemia and other genetically inherited disorders

**Class Check List for: (name)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_**

* I have carefully noted the parts in the syllabus that are in bold and green (you can see the syllabus in color in The Home Page of my lab and mastering).
* I purchased a set of 8 colored pencils and a pack of 3X5 index cards
* I have identified the class group I belong to.
* I have bolded or highlighted the Lecture and lab Practical Exams found in the **course schedule** in my personal calendar.
* I am adept at using Canvas and my SSC college e mail
* I am enrolled in My lab and Mastering Biology
* **I have a clear understanding of the mechanics of preparation for the lectures and laboratory exercises as follows:**
* I will do my reading or recorded assignment the weekend prior to lecture; I will then complete my Mastering Biology Homework. This is my preparation for every Monday.
* Laboratory exercises will be every Wednesday. I have marked or highlighted every Wednesday in my Fall 2018 lab Exercise Calendar.
* Every Wednesday I will need to be strictly on time for the lab exercise. These exercises take every minute of the time allotted for it. During the first 5 minutes of the lab I will have a quiz based on the lab exercise assigned that day. This quiz is prepared directly from the lab manual text. I will fill in a pre-lab sheet that will be provided to me the week before the lab by the instructor.
* Every Monday I will have filled in the Post Lab Review Questions provided to me in the lab Manual at the end of each exercise. These will be graded.
* I have gone over and understand the study tips in my syllabus
* I know what a level 1 disruptive behavior is for a Seminole State student
* I have read and understood the class contract
* I have signed the last page (# 4) of the class contract and handed only this last page to the instructor
* I have asked all questions about this syllabus by Wednesday, Jan 10, 2018.
* I have signed and handed in the **last page of the Class Contract, Class Check List, and the Student Information Sheet** by Monday, Jan 15th.
* **I am taking the course with the responsibility of a personal job or business.**

**Class Contract:**

The classroom and the laboratory are an exclusive learning environment. You have enrolled in this class to be exposed to and obtain a core of knowledge that will be required in your later academic and/or professional development.

The following rules are designed to assure that the learning environment is maintained throughout the semester. This will optimize the instructor’s ability to maximize your learning experience in the allotted time as well as assure all of the students the needed setting to capture and retain the information and or techniques being exposed.

You are required to attend every lecture and every laboratory (every lecture will be on Monday and every lab will be on the Wednesday of the designated week). Attendance will be taken at every encounter in the form of a **sign in sheet**. This will be located for **the first 5 minutes** at the first table of the classroom or at the front workbench of the lab (where the instructor computer is located). College attendance rules express that after 3 absences you will be dropped from the class. Please discuss any absences with the instructor**. All administrative concerns need to be addressed before or after class not during the lecture**. **You will need to provide me the discussed information in writing using my Valencia College email.**

Each student will have a number associated with his or her name. The number will be found before your name on the sign in sheet. It will be fixed and final at week number 2 after the beginning of the semester (after late registration). This number will be required with your name and date to be able to grade any paper. The number will be written on the upper right hand corner of any item that you hand in. All collected assignments or papers will be handed in the blue bin where the sign sheet is located at the **beginning** of the class. The bin will be removed prior to lecture and no further items will be collected.

Any graded paper or assignment that is accepted late will be at the instructor’s discretion. There will be an automatic 15% deduction from the assignment’s total points if late. **The classroom is not the place to complete your assignments**. **YOU WILL BE ASKED TO LEAVE THE ROOM IF CAUGHT DOING SO.** If you are handing the assignment late please use the instructor’s desk in the lab or the classroom. You will also be required to sign a laboratory Regulation Sheet. Please remember that each laboratory experience is a one-time event. That means that there is no way to duplicate it. An absence in the laboratory seriously hampers your ability to pass the practical examination (see the syllabus).

Each lecture period will be approximately 3 hours. You will usually have two 5-15 minute breaks during lecture. Please use the time to perform or answer any calls or text messages. **There will be absolutely no tolerance for the use of cell phones and/or other electronic or smart devices for personal use during lecture!**

**You will be asked to leave the room for the full session** if the rule for electronic devices is broken. If you are expecting a crucial call, notify the instructor and quietly stand up and leave the classroom when received. Walk back in quietly.

**This is the most important rule of all**. The most detrimental change of the learning environment is caused by distracting the attention of the instructor and fellow students.

No personal conversations or sleeping is allowed during lecture. The breaks are designed to allow conversation between students. Take notes and discuss any relevant points at the breaks. **If I note any personal conversation or you are caught sleeping, you will be asked to leave for the full session. You will be responsible for the instructed material.**

The written tests will comprise the bulk of the **Textbook Chapters** being instructed. **Any of the questions may be derived from the lectures specifically** and will not be found in the text. The tests will be taken within the classroom or at the Oviedo Testing Center. **All make up examinations will be taken at the West Campus Testing Center. You will have only up to the Friday of the week the test is offered to take it at the Testing Center (72 hours after the test is given in the classroom). Any other make-up examinations will be 72 hours prior to the final day of class (and will be an essay test).**

**All laboratory exams will begin on time. The lab will be closed after the test begins. There are no make ups for these tests. If there is a legitimate reason for an absence, the student needs to make arrangements with me to take the test during the finals week if possible. Please note the enormous resources needed to generate a practical examination by the lab manager.**  **No exceptions will be made to these rules. The laboratory manuals will be completely filled and graded (both lab exercises results and the review questions at the end of each exercise); the lab manuals will be handed in before each lab practical examination.**

**Finally, you need to be competent in using Blackboard for this course. Read your VC e mail no less than once every day (preferably twice)! Check announcements and messages in blackboard on a daily basis preferably before class.**

**THE COMPLIANCE WITH THESE RULES WILL ASSURE A SMOOTH, CLEAR AND FAIR EDUCATIONAL CULTURE FOR ALL STUDENTS. I WILL DO EVERYTHING WITHIN MY POWER TO PROVIDE YOU WITH AN OPTIMAL LEARNING EXPERIENCE THAT WILL LEAD YOU TO SUCCEED IN ANY FUTURE ACADEMIC AND OR PROFESSIONAL ENDEAVOR. PLEASE NOTE MY OFFICE HOURS in the Syllabus.**

**Dr. Richard Gonzalez Diaz**

*BY COLLEGE RULES, ANY COMPLAINTS NEED TO BE DIRECTED TO THE INSTRUCTOR FIRST***!**

**Signing this contract states that you have thoroughly read, clearly understand and abide by all the information provided by this document *and the class Syllabus*:**

**I have completed and handed in to my instructor a copy of the Class Check List, and this last page of the Contract (signed).**

**I have directed all my questions about this syllabus, Class Check List, and Class Contract to the instructor and they have been answered to my satisfaction.**

Printed Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_