

## BSC 1010C – General Biology I – Spring 2024



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**URL:** <http://frontdoor.valenciacollege.edu/>

**Class Website:** As this is a fully online course, all of your course materials are accessible through Canvas at <https://online.valenciacollege.edu/login/canvas>  
If this is your first time taking an online course go to: <http://valenciacollege.edu/oit/learning-technology-services/student-resources/getting-started-online/> to help you logon and familiarize you with the system.

**Course Description:** Welcome to the BSC1010C General Biology I course! This hands-on, online course, and the accompanying online laboratory, provides a 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 unifying concepts of 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.

### Learning Objectives:

By the end of the course you will be able to:

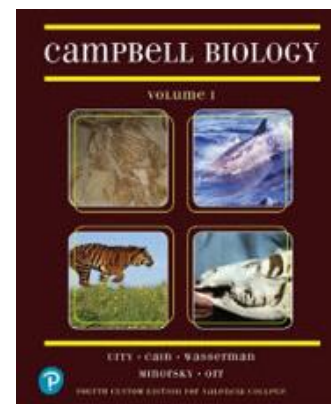
1. apply scientific reasoning to solve problems.
2. explain Darwinian evolution.
3. describe the chemical basis of life.
4. describe cellular structures and functions.
5. examine the structures and functions of cell membranes.
6. explain the processes of energy transformation as they relate to cellular metabolism.
7. evaluate the effects of cellular reproduction.
8. examine eukaryotic inheritance.
9. describe the molecular mechanism of gene expression and DNA replication.
10. apply the scientific method to biological investigations.

**Text:** You're required to obtain an eText or hardcopy version of:

1. Campbell's Biology, 4<sup>th</sup> Custom Edition for Valencia College, Volume 1 with MasteringBiology. (2021) Taken from Campbell's Biology, 12<sup>th</sup> edition. Pearson Learning Solutions. (includes MasteringBiology Access Code in package). ISBN: 9780137351824 / 9780137351916

For the online labs for this course, you will need the following:

2. Connect Access Code Biology Virtual Labs, First edition (2021). McGraw-Hill. ISBN: 9781264349739



## Expectations

### Teacher Expectations

I believe that anyone can succeed in the class if the right learning environment and strategies are used. I have structured this course to provide a variety of learning assessments with diverse learners in mind. I value your uniqueness and experience and want you to value your classmates as well. We are all learning together so please reach out to me if you have any questions or need extra assistance. I am here to help you learn. ☺

- I will follow the course outline as closely as possible and will notify you of modifications in the outline if they happen.
- I will attempt to create and maintain an online atmosphere in which you feel free to both read others' views and express your own views and ask questions to increase your learning.
- Please email me about anything which you are unclear. I tend to respond quickly and I want to be supportive of your learning and growth.

### Student Expectations

Set goals for yourself for this course and plan/work to meet them. Meet all course deadlines and you will receive feedback within a week on the submitted assignment. Value your classmate's opinions and be open to learn new ways of thinking. Complete all assignments, quizzes, and exams without sharing/copying other's work or answers and be proud of your work.

- Please inform me by phone or e-mail if you will be unable to complete work.
- You are expected to complete assignments thoroughly and on time and contribute to class discussions.
- You are expected to check your Atlas email and Canvas inbox on a regular basis throughout the week.
- Since this is an online class, all of it is spent at the comfort of a computer; you can expect to devote **20-25 hours** each week to this course. I recommend scheduling a couple of days a week working on the assignments. Start them early so you can ask questions.
- Feel free to share feedback regarding how well the class is meeting your needs or if material is unclear. I make changes to the class based on feedback.
- It is also expected that you will treat classmates online with respect and observe the rules of netiquette and confidentiality regarding personal information shared in class.

**Tentative Course Schedule\*: All exam and assignment due dates are also found in Canvas**

<b>Course Schedule</b>		
<b><u>Week</u></b>	<b><u>Topic &amp; Assignments</u></b>	<b><u>Due Dates</u></b>
1 Jan 8-Jan 14	<ul style="list-style-type: none"> <li>• Orientation Module: Orientation Quiz, Be in the Know Assignment</li> <li>• Introduction Discussion – Let’s Break Ice! and 2 replies</li> <li>• Register into MasteringBiology and Connect Virtual Labs</li> <li>• Take the Honorlock survey</li> </ul>	Sun, Jan 14
2 Jan 15-Jan 21	<ul style="list-style-type: none"> <li>• Readings: Chapter 1: Evolution, the Themes of Biology, and Scientific Inquiry and Chapter 2: The Chemical Context of Life</li> <li>• Discussions: Intro to Biology &amp; Chemistry</li> <li>• Connect Lab Activities: Lab 1 The Scientific Method</li> <li>• MasteringBiology Quizzes: Ch. 1 Intro to Biology &amp; Ch. 2 Chemistry</li> </ul>	Sun, Jan 21
3 Jan 22-Jan 28	<ul style="list-style-type: none"> <li>• Read Chapter 3: Water and Life</li> <li>• Discussion: Water</li> <li>• Connect Lab Activities: Lab 2 Chemistry &amp; pH and Lab 3 The Microscope</li> <li>• MasteringBiology Quiz: Ch 3 Water</li> </ul>	Sun, Jan 28
4 Jan 29-Feb 4	<ul style="list-style-type: none"> <li>• Read Chapter 4: Carbon and the Molecular Diversity of Life</li> <li>• Discussion: Carbon</li> <li>• Connect Lab Activities: None</li> <li>• MasteringBiology Quiz: Ch 4 Carbon</li> <li>• <b>Assessment: Exam 1 (Chapters 1-4)</b></li> </ul>	Sun, Feb 4
5 Feb 5-Feb 11	<ul style="list-style-type: none"> <li>• Readings: Chapter 5 The Structure and Function of Large Biological Molecules and Chapter 6 A Tour of the Cell</li> <li>• Discussions: Macromolecules and The Cell</li> <li>• Connect Lab Activities: Lab 4 The Cell</li> <li>• MasteringBiology Quizzes: Ch 5 Macromolecules and Ch 6 The Cell</li> </ul>	Sun, Feb 11
6 Feb 12-Feb 18	<ul style="list-style-type: none"> <li>• Read Chapter 7: Membrane Structure and Function</li> <li>• Discussion: The Cellular Membrane</li> <li>• Connect Lab Activities: Lab 5 Diffusion I and Lab 6 Diffusion II</li> <li>• MasteringBiology Quiz: Ch 7 Cell Diffusion</li> <li>• <b>Assessment: Exam 2 (Chapters 5-7)</b></li> </ul>	Sun, Feb 18
7 Feb 19-Feb 25	<ul style="list-style-type: none"> <li>• Readings: Chapter 8 An Introduction to Metabolism and Chapter 9 Cellular Respiration and Fermentation</li> <li>• Discussions: Metabolism and Cellular Respiration</li> <li>• Connect Lab Activities: Lab 7 Enzymes and Lab 8 Cell Respiration</li> <li>• MasteringBiology Quizzes: Ch 8 Metabolism and Ch 9 Cell Respiration</li> </ul>	Sun, Feb 25
8 Feb 26-Mar 3	<ul style="list-style-type: none"> <li>• Read Chapter 10: Photosynthesis</li> <li>• Discussion: Photosynthesis</li> <li>• Connect Lab Activities: Lab 9 Photosynthesis</li> <li>• MasteringBiology Quiz: Ch 10 Photosynthesis</li> <li>• <b>Assessment: Exam 3 (Chapters 8-10)</b></li> </ul>	Sun, Mar 3

Course Schedule		
<u>Week</u>	<u>Topic &amp; Assignments</u>	<u>Due Dates</u>
9 Mar 4-Mar 10	<ul style="list-style-type: none"> <li>Readings: Chapter 12 The Cell Cycle and Chapter 13 Meiosis and Sexual Life Cycles</li> <li>Discussions: Mitosis and Meiosis</li> <li>Connect Lab Activities: Lab 10 Mitosis &amp; Meiosis</li> <li>MasteringBiology Quizzes: Ch 12 Mitosis and Ch 13 Meiosis</li> </ul>	Sun, Mar 10
10 Mar 11-Mar 17	<ul style="list-style-type: none"> <li>Read Chapter 14: Mendel and the Gene Idea</li> <li>Discussion: Mendel Genetics</li> <li>Connect Lab Activities: Lab 11 Mendel Genetics</li> <li>MasteringBiology Quiz: Ch 14 Mendel Genetics</li> <li><b>Assessment: Exam 4 (Chapters 12-14)</b></li> </ul>	Sun, Mar 17
11 Mar 18-Mar 24	<ul style="list-style-type: none"> <li>Spring Break</li> </ul>	
12 Mar 25-Mar 31	<ul style="list-style-type: none"> <li>Read Chapter 15: The Chromosomal Basis of Inheritance</li> <li>Discussion: The Chromosomal Basis of Inheritance</li> <li>Connect Lab Activities: None</li> <li>MasteringBiology Quiz: Ch 15 The Chromosomal Basis of Inheritance</li> </ul>	Sun, Mar 31
13 Apr 1-Apr 7	<ul style="list-style-type: none"> <li>Read Chapter 16: The Molecular Basis of Inheritance</li> <li>Discussion: The Molecular Basis of Inheritance</li> <li>Connect Lab Activities: None</li> <li>MasteringBiology Quiz: Ch 16 The Molecular Basis of Inheritance</li> </ul>	Sun, Apr 7
14 Apr 8-Apr 14	<ul style="list-style-type: none"> <li>Read Chapter 17: Gene Expression: From Gene to Protein</li> <li>Discussion: Gene Expression: From Gene to Protein</li> <li>Connect Lab Activities: None</li> <li>MasteringBiology Quizzes: Gene Expression: From Gene to Protein and Final Exam Review</li> </ul>	Sun, Apr 14
15 Apr 15-Apr 21	<ul style="list-style-type: none"> <li><b>Comprehensive Final Exam (Chapters 1-10 and 12-17)</b></li> </ul>	Sun, Apr 21
16 Apr 22-Apr 24	<ul style="list-style-type: none"> <li>Late submission of Final Exam</li> </ul>	Wed, Apr 24

\*The dates of these topics serve as a guideline and are subject to change.

**Other important dates:**

- Jan 16 (@ 11:59pm) – Drop/Refund Deadline
- Mar 15 (@ 11:59pm) – Withdrawal deadline
- Mar 13 through Apr 17 – Student Feedback on Instruction period
- Mar 18-24 – Spring Break (college closed)
- Apr 28 – Term ends
- Apr 30 – Final grades viewable in ATLAS

## 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:

1. **Think** – think clearly, and creatively, analyze, synthesize, integrate and evaluate in the many domains of human inquiry
2. **Value** – make reasoned judgments and responsible commitments
3. **Act** – act purposefully, effectively and responsibly
4. **Communicate** – communicate with different audiences using varied means

## Technology Requirements:

The college uses the Canvas learning management system (LMS). The following link provides answers to common questions students may have about Canvas: <https://valenciacollege.edu/faculty/canvas-resources/student-faqs.php>

The following link lists the minimum computer requirements to successfully run Canvas:

<https://community.canvaslms.com/docs/DOC-10721-67952720328>

If you have any concern about whether your computer system is sufficient to support Canvas, please read this document. Please note – while Safari can be used for Canvas, Pearson has announced that Safari is not compatible with MasteringBiology. If you own an Apple-based system and use Safari, you will need to install a second browser to use to complete the required MasteringBiology assignments. The recommended browsers are Chrome and Firefox.

**Due to the COVID-19 situation and shift to online learning, Valencia is currently loaning laptops to students in need. You can request a laptop by completing the request form at**

**<https://valenciacollege.edu/laptop> This link will take you to the Atlas log-in screen, and then to the form. Laptops are distributed on a first come-first served basis, so if you are in need, request a laptop early!**

## Class Policies:

1. **Attendance:** The College and I believe that regular engagement and class participation are significant factors which promote success in college. Canvas logs your online activities and this record will be used to monitor your attendance. **You're expected to participate in the weekly activities of the class, beginning during the first week of the semester and for the remainder of the semester, to remain in good standing in the class. Failure to submit the Orientation Quiz during the first week of class will identify you as a "no show" for attendance purposes and will result in an administrative withdrawal from class.** If you are unable to participate in the course due to illness, family emergency, etc., please communicate with me as soon as possible in order to create a plan to complete any missed assignments so that your learning can progress in your course. In the case of a prolonged online absence, please communicate with me as soon as possible in order to create a plan for the best course of action.
2. **Laboratories:** The labs are an integral part of the course and you are required to complete all laboratory sessions. Labs are conducted through Connect Virtual Labs by McGraw-Hill. You will need to register through Canvas and create a Connect account, if you don't already have one. Here's a YouTube link for instructions on registration - <https://www.youtube.com/watch?v=xgwc6-0y8tA> If you have trouble registering, contact the Connect support team. Following is the support team contact link and number- <https://mhedu.force.com/CXG/s/ContactUs> USA & Canada: (800) 331-5094

Connect Lab: Virtual lab assessments are through McGraw-Hill Connect.

- Virtual lab activities – Labs will have unlimited attempts to complete the work. Each attempt will start a new submission. There is no time limit for the assessment. Each exercise is 5 points. No late work is allowed.

- Prelab concept check read- Each exercise will include a short reading and QA to focus on key concepts covered in the lab. There is no time limit for the assessment. Each exercise is 5 points. No late work is allowed.
  - Virtual lab interactive concept check exercise – Each exercise will have three attempts to complete the work. Each attempt will start a new submission. There is no time limit for the assessment. Each exercise is 5 points. Late work will have a 10% penalty per day.
  - Post-lab quiz – Each exercise will have 3 attempts to complete the work. Each attempt will start a new submission. This assessment is timed, ~1 minute per question (20-30 total questions per quiz). Late work will have a 10% penalty per day.
3. **MasteringBiology:** Assignments have been created using the custom version of Pearson’s online adaptive learning software known as MasteringBiology. If you have purchased a new copy of the textbook you will find an access code for MasteringBiology bundled with the book.

**There is a graded quiz for each of the sixteen chapters we will cover this semester as well as a graded final exam review assignment.** Take advantage of this online resource as there are guided tutorials, videos, etc. that could be of benefit.

4. **Chapter Summary Discussions:** You are required to post 1 chapter summary discussion, and reply to at least 1 of your peer’s post for each chapter covered in the semester. Your post should contain substantive comments, in your own wording, which contribute to the discussion board. Your replies should expand and contribute new information to your peer’s original post. Discussion postings should be:
- Substantial – Thoughtful, original, relevant and contributes to the overall learning of the group.
  - Thought-provoking – Stimulates thinking and reasoning.
  - Timely – Post early to give your peers time to respond, this contributes to a rich discussion.
  - Logical, concise, and grammatical.
  - Convey “your presence” – Reinforce your conclusions with real life and professional experiences.

Additionally, all discussion criteria will be reflected in the rubrics for discussion posts.

Students are expected to follow the core rules of Netiquette, or network etiquette, which is concerned with the "proper" way to communicate in an online environment.

5. **Exams:** All exams will be based on both the lecture material and assigned reading. There will be four, 50 question multiple choice lecture exams. There will also be a 2 and a ½ hour, 100 question comprehensive multiple choice final examination at the end of the semester. Your lowest lecture exam score will be dropped. The majority of the lecture portion of your semester grade will be based on your score for the three best lecture exams plus your score on the final exam.

The college has adopted the Honorlock application as the remote proctoring application for online examinations. This is an extension for the Chrome browser and is required to access the exams in Canvas, along with a webcam and microphone. **You will be remotely monitored and recorded while taking the exam, including your internet activity, attempted use of other devices and interactions with other people at your location. Canvas will also keep a record of your internet activity, including during the exam.** Any clearly identified evidence of cheating on an exam will result in a zero for the exam. A second incidence will result in you being administratively dropped from the class.

**Please Note: If, for any reason, HonorLock is not available for an exam, report it immediately to HonorLock tech support and your instructor. Any exam taken without HonorLock will receive a zero.**

Learn more about Honorlock by clicking on the following link: <https://honorlock.com/students/>

**NOTE: Students must use a computer with reliable internet access because excuses or failure to complete assessments due to computer error will not be permitted.**

**To do well on the exams, be able to understand each topic on your learning outcomes. This is your study guide! A copy of all the learning outcomes for the course can be found in Canvas. It may be of benefit to print a hardcopy of this to keep at all times as roughly 90% of all exam questions are derived from the expected outcomes.**

6. **Performance Evaluation:** Your assignments are categorized into weighted groups below. Refer to the “Grades” webpage in Canvas for your completed assignment grades and your current semester grade.

<b>Group</b>	<b>Weight</b>
Exams	60%
MasteringBiology Quizzes	10%
Discussions	10%
Connect Labs	20%
Total	100%

Your grade will be based on the following scale: 90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; 0-60 = F

**Extra Credit:** Students have the opportunity to earn 10 points of extra credit towards their overall exam grade by completing the Student Feedback at the end of the semester.

### **Late Work/Makeup Policy**

There is a two-week grace period after “Canvas assignments (discussions and exams)” and “MasteringBiology Quizzes” assignments are due before they close permanently. The late penalty on Canvas assignments and MasteringBiology Quizzes is 5% per day (up to 50%).

There is a 9 day grace period after some Connect Lab assignments are due before they close permanently. The late work penalty for Connect Labs, specifically the “Virtual lab interactive concept check exercises” and the “Post-lab quizzes”, is 10% per day (up to 100%).

For Connect Labs, specifically the “Virtual lab activities” and the “Prelab concept check read”, there is no grace period after the due date, no late work is allowed, and the assignments will close.

If you cannot complete the work due to a documented absence, contact me immediately. **Late work after the grace period will not be accepted!**

7. **Communication:** You may contact me in various ways during this semester.
- You may contact me through the Canvas Inbox. This is probably the best and quickest method of communication. I will respond to your message within 48 hours, often much sooner, with the exception of days and times when the college is closed.
  - You may email me at [jcastro22@valenciacollege.edu](mailto:jcastro22@valenciacollege.edu). In your messages (if not using the Canvas Inbox), please indicate your course number so that I may better assist you.
8. **Withdrawal:** You are responsible for initiating a voluntary withdrawal from the class prior to the published withdrawal date. **You must withdraw prior to the withdrawal date in order to avoid being given an “F” grade. After the official withdrawal date, you cannot withdraw from the course and your grade will be what you have earned.** Any student who withdraws from a class during a third or subsequent attempt in the same course will be assigned a grade of “F”. For a complete policy and procedure overview on Valencia policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals) please go to:  
<http://valenciacollege.edu/generalcounsel/policy/ValenciaCollegePolicy.cfm?policyID=75>
9. **Academic Dishonesty:** All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes, but is not limited to, plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a test situation, and misuse of identification with intent to defraud or deceive.

All work submitted by students is expected to be the result of the student’s individual thoughts, research and self-expression. Whenever a student uses ideas, wording or organization from another source, the source shall be appropriately acknowledged.

Students shall take special notice that the assignment of course grades is the responsibility of the student’s individual professor. When the professor has reason to believe that an act of academic dishonesty has occurred, and before sanctions are imposed, the student shall be given informal notice and an opportunity to be heard by the professor. Any student determined by the professor to have been guilty of engaging in an act of academic dishonesty shall be liable to a range of academic penalties as determined by the professor which will include, but not be limited to, one or more of the following: loss of credit for an assignment, examination or project; a reduction in the course grade; or a grade of “F” in the course. At the option of the professor, the campus president may be furnished with written notification of the occurrence and the action taken. If such written notice is given, a copy shall be provided to the student.

Students guilty of engaging in a gross or flagrant act of academic dishonesty or repeated instances of academic dishonesty shall also be subject to administrative and/or disciplinary penalties which may include warning, probation, suspension and/or expulsion from the college.

10. **Netiquette:** The term "netiquette" refers to the awareness of the need for a certain code of behavior (etiquette) in electronic environments (the net) ... Net + Etiquette = netiquette. Netiquette, while a general term, is complex at specific levels because there are so many different kinds of electronic environments, and so many different situations in which we may find ourselves in those environments.

Classes focusing on areas where electronic communication play a key, if as yet undefined, role in technical and professional communication, and it is our responsibility to be aware of our textual presence as it reflects upon our professional responsibilities, to ourselves and to our parents and students.



In order to maintain a positive online environment, we all need to follow the netiquette guidelines summarized below.

*All students are expected to:*

- show respect for the instructor and for other students in the class
- respect the privacy of other students
- express differences of opinion in a polite and rational way
- maintain an environment of constructive criticism when commenting on the work of other students
- avoid bringing up irrelevant topics when involved in group discussions or other collaborative activities

The following list summarizes the kind of behavior that is not acceptable. Each item listed below is grounds for removal from the class.

*Students should not:*

- Show disrespect for the instructor or for other students in the class
- Send messages or comments that are threatening, harassing, or offensive
- Use inappropriate or offensive language
- Convey a hostile or confrontational tone when communicating or working collaboratively with other students
- USE ALL UPPERCASE IN THEIR MESSAGES -- THIS IS THE EQUIVALENT OF SHOUTING!!!

You may view the core rules of netiquette here: <https://coursedesign.colostate.edu/obj/corerulesnet.html>

11. **Distance Tutoring & Technology Support at Valencia:** *Ask for help if you need it! Do not wait until the end of the semester to ask for help. The sooner you ask, the more beneficial it will be.* You can easily access Valencia's *free* distance tutoring and tech support from a computer, laptop or mobile device. Distance tutoring services are provided fully online via Zoom. Through this service, you will receive real-time assistance via a Valencia tutor. Online tutoring is offered in: mathematics, sciences, accounting & economics, computer programming, EAP and foreign languages, and writing.

Online Learning Technology Support services are also available. Students can receive assistance with navigating: Canvas, OneDrive, Zoom, YouTube, and Microsoft Office (Word, Excel, & PowerPoint). Support is also provided for video editing (via iMovie and MovieMaker) and converting documents from a Mac to PC. Tech support is available live (on-demand) via Zoom, by appointment, or via email. Students are encouraged to use the 24/7 Canvas Help located inside Canvas by clicking on the "Help" icon.

To get started using the Distance Tutoring and Learning Technology Support services, please visit [www.valenciacollege.edu/tutoring](http://www.valenciacollege.edu/tutoring). Through this site, you can view the schedule of tutors/tech support assistants, find available times, learn more about the services, and access a collection of supplemental resources that are available 24/7. Hours of Operation: Monday-Friday: 8 am – 10 pm Saturday & Sunday: 9 am – 7 pm

In addition to services offered by the college, Smarthinking is a free 3<sup>rd</sup> party online tutoring service, where you can receive live, online tutoring as well as submit your essays for comments. To access this resource, log into Atlas, click on the "Courses" tab, and click on "Tutoring (online) – Smart Thinking," located under "My Courses."

12. **BayCare Services:** BayCare is a private and confidential counseling service contracted by Valencia College that provides short-term assistance to credit students who need to resolve problems that are affecting their college performance. Examples might include stress, relationship/family issues, alcohol/drug problems, eating disorders, depression, and gender issues. If you are experiencing any of these issues, call 1-800-878-5470 to speak to a professional counselor. For more information, log into Atlas, click on the “Students” tab, and click on “BayCare Health System,” located under “Health and Wellness.”
13. **Students with Disabilities:** Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of the semester. The OSD (West Campus SSB 102, ext. 1523) determines accommodations based on appropriate documentation of disabilities.
14. **LifeMap:** LifeMap is the process of setting goals for your life, career, and education. It is something that you must define for yourself. To access this resource, log into Atlas, and click on the “LifeMap” tab.

## Guidelines for Effective Study and Exam Preparation

The most common barrier to success encountered by college students is a lack of effective techniques for study and exam preparation. If you are one of the vast majority of students whose answer to the question, "How do you study for your tests?" is, "I go over my notes," or "I read the text book", then you need to take a serious look at your study skills. Here are some suggestions to increase your effectiveness as a student.

### I. Day to Day

**A.** Take good notes. Very few students leave high school with this skill. The Student Success class can help you learn how to do this. Here are some suggestions and observations.

1. Always take the notes for a particular class in the same notebook. Spiral bound notebooks were invented because they solved the problem of keeping related information consolidated in one place. Take advantage of this.
2. Date each entry into your notebook.
3. It is usually best to keep the notes for different classes separate from each other. Spiral notebooks with built in dividers are excellent for this purpose.
4. Your notes should contain as complete a record of what the instructor said as possible. Of course, you should not try to write every word spoken, but don't leave out ideas. When you study, your notes should call back to your mind the entire sequence of ideas presented. Take care to spell all new words carefully.
5. Anything the instructor writes on the board should appear in your notes. If the instructor took the time to write it out, he or she considers it important. You should do the same.
6. If possible, try to take your notes in some kind of outline form. The organization of ideas is as important as the content of those ideas, especially when it comes to learning the material for an exam.
7. You might find it useful to have a second color of pen or pencil available for highlighting important ideas or indicating vocabulary.

**B.** Be involved in your classes. Don't simply pretend you are a sponge, ready to soak up whatever the instructor says. You are there to learn, not to be taught.

1. If the instructor is moving too rapidly for you, or if you don't understand what is being said, say something!
2. Ask questions if you are confused. Confusion is definitely your worst enemy.
3. If your class includes group activities, participate as fully as you can. Such exercises are done for your benefit, not to provide a break for the instructor.

**C.** Review your notes every day. This suggestion is one that we have all heard a thousand times. Unfortunately, most of us never really believe it until we actually try it. Spend 30 minutes or so each evening going over the notes from each class. There are at least two tremendous benefits to be gained from this discipline.

1. Research has shown that reviewing new material within 24 hours of hearing it increases your retention of that material by about 60%. This means that you will be 60% ahead of the game the next time you walk into class. If you want to significantly reduce the time necessary to prepare for exams, this is the way to do it.
2. Reviewing material before the next class period enables you to identify points of confusion or omission in your notes, which prepares you to ask the questions you need to ask before the next lecture. Again, confusion is your worst enemy.

**D.** It is excellent policy to give high priority to new vocabulary. Language is the most fundamental tool of any subject, and it can seriously handicap you to fall behind in this.

**E.** Keep up on your reading. Unlike most high school teachers, many college instructors don't give specific reading assignments. You are expected to go to your text for the reading related to the materials covered in class. Be independent enough to do this without being told.

## II. Using Your Textbook

**A.** Don't expect your instructor to give you detailed, page by page textbook assignments. While some may do so, many do not. College teachers are much more likely to expect you to use your own initiative in making use of the text.

**B.** In most cases, it will be most useful for you to at least skim the relevant chapters before each lecture. You should receive a course outline/syllabus at the beginning of the semester, which will tell you the subject for each day. You may receive chapter references (or even page references), or your instructor may expect you to be perceptive enough to refer to the Table of Contents.

1. When you first approach a chapter, page through it fairly quickly, noting boldface headings and subheadings, examining figures, illustrations, charts, etc., and thinking about any highlighted vocabulary terms and concepts. Also take note of the pedagogical aids at the end of the chapter--study questions, summary, etc.
2. When you have finished surveying the chapter, return to the beginning and read in more detail. Remember to concentrate upon understanding. Don't simply read through the words. Any words that you don't understand you should look up. If you own the book and intend to keep it, you may want to write definitions of such words in the margins. You may also find it helpful to make observations and other useful notes in the margins. If you don't intend to keep the book yourself, you should carry out similar activities on a page in your class notebook.
3. On this first trip through the chapter, you should concentrate upon catching the major subjects and points of the material. Also take note of those things that you don't understand. If the lecture on the material doesn't clarify those points, you should ask your instructor to explain.

**C.** Following coverage of the chapter's material in class, you should go back to the book and read it again. It will probably be helpful to skim through it first, as you did when you first looked at it. The tables and figures should be more readily read in detail. If you are a truly conscientious student, you will outline the chapter and prepare a vocabulary list of the terms that are pertinent.

**D.** At this time you should think seriously about the review and study questions at the end of the chapter. Do your best to answer all of them as if they were a take-home exam.

**E.** You may also want to develop a system of cross-referencing symbols to use when comparing your class notes to your notes from the text.

**F.** Remember that your instructor will probably not use the same words that you find in the textbook. Nothing is more frustrating than to discover that what you hear in class is no more than a rehash of what you read in the book. However, if your instructor knows his/her subject, and the author of your text knows his/her subject, the meat of what they say should be the same. NOTE: Nobody is infallible. Your instructor may make mistakes. Don't expect him or her to be more than human.

## III. Preparing Assignments

**A.** Here's another thing we have all been told thousands of times: Don't leave assignments until the day before they are due! If you have a paper to write or a lab report to prepare, begin it as soon as possible. In most cases, instructors will be delighted to receive work early. Remember that many papers or projects require quite a bit of research before you can even begin writing. In most cases, it is impossible to accomplish the necessary preparation in one day or even one week. In some cases, instructors won't accept late work at all. They are perfectly justified.

**B.** Another sore point: Be aware of the appearance of the work you submit. You should want to be proud of every assignment you submit, and that includes being proud of its appearance. If possible, assignments should always be typed. Never turn in an assignment written in pencil. Pages torn out of notebooks are sloppy and unsightly. Think about this point every time you hand an instructor an assignment. That paper represents the quality of your work, and your instructor is perfectly justified in taking its appearance into consideration when assigning a grade.

**C.** An increasing number of instructors are requiring that all outside work be typed. If you don't type, you should consider learning how. If you don't want to do this, you should begin investigating ways and means of getting someone else to type your papers. This will often mean paying a professional typist. Costs vary, but be prepared to pay a considerable amount. A really good typist may be able to turn out 6-10 pages an hour. Think about what you consider an appropriate hourly wage when you consider how much you should expect to pay a typist. Another point you must consider is that it will add to the time necessary to prepare a paper if you have to go to someone else to type it. In planning the time necessary for typing, consider the following points:

1. Your typist may have other customers who are just as anxious as you are.

2. A paper takes time to type.
3. Even the best typist makes mistakes. Your paper must be carefully proofread by you.
4. After proofreading, the typist must have time to make the necessary corrections.

**D.** If you prepare your assignment using a word processor, make sure that you run the spell checker/grammar checker before printing the final copy of your assignment. There is no excuse for poor spelling and/or grammar if you are using a word processor.

**E.** If you have never written an assignment or class paper before, or if you are unsure of your writing skills, the Communications Support Center (located in building 5-261) can give you assistance.

#### **IV. Preparing for Exams**

**A.** Keep in mind that you want to be an active learner, not a passive one. The more you use and manipulate the information, the better you will understand it. Using and manipulating information in as many ways as possible also maximizes your ability to access your memory.

**B.** Do not wait until the night before an exam to study! Of course, you should be regularly reviewing your notes, but the preparation still takes time.

**C.** If your instructor hasn't explained to you how he or she designs exams, ask. This is a perfectly legitimate concern. However, keep in mind that an instructor has the right to design exams in whatever fashion he or she sees fit, and in most cases you have no business asking for changes in that design. You need to learn to handle all testing styles--including the dreaded essay exam!

**D.** A good first step in preparation is to read through your notes a couple of times. While you are doing this, you might also:

1. Highlight major topics and subtopics, with the goal of generating an outline of your notes. Even if you take your notes in outline form, this is a good practice. Major topics often extend through more than one day's lecture, and it is easy to lose track of the overall picture from day to day.
2. With a second color, highlight all vocabulary terms.

**E.** Outline the entire set of notes. When you study a large body of information, you should study from concept to detail, not the other way around. It will, in fact, be much easier to learn the details if you take the time to learn the concept and theory first. The least efficient approach to studying is to attempt to memorize your notes from beginning to end. It's not the words that are important--it's the ideas.

**F.** Consider ways of dealing with the information other than those used in class. The more ways you can manipulate and experience the material you are trying to learn, the more secure your understanding and memory will be. Some suggestions:

1. Make charts, diagrams and graphs.
2. Make lists.
3. If the subject matter includes structures, practice drawing those structures. Remember that a drawing is useless unless the important structures are labeled.

**G.** There are almost always types of information that you will have to memorize (e.g. vocabulary). No one has ever invented a better device for memorizing than flash cards.

**H.** One of the most universally effective ways to polish off your study activities is to prepare a self-test.

1. Challenge yourself as severely as you can.
2. As you are studying, keep a running collection of "exam questions." If you seriously attempt to write difficult and meaningful questions, by the time you finish you will have created a formidable exam. When you begin to feel you're ready for your instructor's exam, take out your questions and see if you can answer them. If you can't, you may need to go back and reinforce some of the things you are trying to learn.

**I.** Never, ever pull an "All-Nighter" on the night before an exam. This is a "freshman trick," meaning that good students learn very quickly that it is futile. What you may gain from extra study time won't compensate for the loss of alertness and ability to concentrate due to lack of sleep.

**J.** On exam day:

1. Try not to "cram" during every spare moment before an exam. This only increases the feeling of desperation which leads to panic, and then to test anxiety. You may find it useful, on the night before an exam, to jot down a few ideas or facts which you wish to have fresh in your mind when you begin the exam. Read through your list a couple of times when you get up in the morning and/or just before you take the exam then put it away. This kind of memory reinforcement not only improves your performance on the test, it also improves your long-term memory of the material.
2. Be physically prepared.
  - a. Get a good night's sleep.
  - b. Bring necessary writing materials to the test--at least 2 writing tools, erasers, Scantrons, calculators if appropriate and allowed. Be aware of what the instructor has specified as permitted for use. Some instructors object to exams written pencil; some prohibit use of tools like calculators. It is your responsibility to know these requirements; you should be prepared to take the consequences if you don't.
  - c. This may seem silly, but go to the bathroom just before the exam. Don't expect your teacher to let you leave to do this during the test! The tension which generally goes along with taking an exam may increase the need to perform this physical activity, so you may need to go, even though you don't particularly feel like it.

## **V. Some Final Suggestions**

**A.** You should receive a syllabus for each class. This is the Rule Book for that. Know everything on that syllabus! Your teacher has the right to expect you to know and abide by any rules and stipulations on that document, and it is perfectly within his/her rights to penalize you for failing to do so. Respect dates and deadlines, and expect to lose points if you turn things in late.

**B.** Never miss an exam if you can help it. You will rarely be more ready for the exam in two or three days than you are on the scheduled date, and the annoyance the teacher will feel about having to arrange a special exam time for you can actually hurt your grade in the end. Miss exams only if you absolutely have to.

**C.** Save everything. Never throw away a handout or a returned assignment or exam. With this in mind, equip yourself with a pouched folder for each class.

**D.** Develop systematic behavior patterns associated with your schoolwork.

1. Keep your class materials together and neat.
2. Never allow yourself to be caught at school without the necessary notebooks and materials. If you develop systematic habits with respect to attending classes, etc., this will be no problem.

**E.** It is excellent practice to set aside a study area at home, and to designate a particular span of time each day as study time. However, don't fall into the trap of feeling that study should never exceed the preordained time limits. You put in as much study time as is necessary to master the material for your classes.