

UNIVERSITY OF NEVADA RENO  
School of Public Health  
KIN 391 Exercise Physiology Spring 2024

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***Mission of the School of Public Health***

The School of Community Health Sciences is committed to the exploration, understanding, and promotion of health and wellness across the life span through education, research, and community outreach to assist with the improvement of the health of our university, our community, our state, our nation, and our world.

**Course requirements:** BIOL 223, BIOL 224 Co-requisite

**Course Objectives:**

1. To understand the human body as an engine.
2. To apply the basic principles of physiology to various exercise conditions.

**Student Learning Outcomes:**

1. The student will be able to define fitness for themselves and the broader public as evidenced by the completion of all of the laboratories in total.
2. The student will be able to demonstrate knowledge of the effects of exercise on the cardiopulmonary system as evidenced by the laboratory experience and the laboratory write-ups over the labs.
3. The student will be able to rank different measures of fitness as evidenced by the completion of all the laboratories in total.
4. The student will be able to consider different methodologies of training after completion of the course as evidenced by exams and laboratories.

**Students Responsibilities**

Read, sign and submit: Memorandum of Understanding (***Appendix A***)

As a professional, attend all class sessions

Be prepared for class (readings, written assignments, etc.)

Participate and be engaged in class

Provide and consider feedback

Submit all assignments on time

Cooperate with classmates

Demonstrate ethical behavior

Honor and respect others (which include giving your peers, the instructor and guests, your full attention. I.e., turn off your phone and use the restroom before class. This is part of professionalism, respect, and being an engaged learner.)

### Faculty's Responsibilities

- Be on time and prepared for all classes
- Provide consultation, advisement and/or problem-solving time for students
- Provide clear instructions regarding assignments and expectations
- Be prepared to provide and consider feedback
- Honor and respect students
- Be engaged in class
- Try to be engaging!
- Return assignments within a timely manner (usually one week)
- Demonstrate ethical behavior

**Professionalism & Communication:** The development of professional skills that will prepare students for graduate school or the workforce is a key to your own success. Students will be expected to maintain a high standard of professionalism throughout the semester and are encouraged to engage meaningfully with the mission, values, and pillars of professionalism upheld by the School of Community Health Sciences. This includes (but is not limited to):

- Meeting deadlines
- Arriving on time and not leaving early
- Minimizing distractions during class
- Communicating appropriately with instructor, other faculty, TAs, staff, and peers (this includes both oral and written communication, especially email communication)
- Upholding the goals and values of the School of Community Health Sciences (Self-awareness, Integrity & Honesty, Reliability & Responsibility, and Communication & Collaboration), and working to develop and practice the skills and behaviors that manifest from those values.

Students are expected to be respectful and appropriate in their communication with peers, the TA, the instructor, and any guests about these topics. Disrespectful, demeaning, or otherwise inappropriate or unprofessional communication will not be tolerated and students violating this standard will be dismissed for the day. Students who persistently violate this standard will be referred to the Office of Student Conduct.

### Course Requirements

- 1) **Text:** McArdle, Katch, & Katch, *Exercise Physiology*, Lippincott, Williams and Wilkins, 2014 (8<sup>th</sup> edition). **Required!**  
Tiidus PM, Tupling AR, Houston ME, *Biochemistry for Exercise Science Human Kinetics*, 4<sup>th</sup> Edition, 2012  
Adams, *Exercise Physiology Laboratory Manual*, McGraw Hill, 2018 – This is the **ebook** via McGraw-Hill Connect in WebCampus – you have purchased this, do not pay again when you enter the portal  
Supplement (available to purchase as a packet in the bookstore)

2) **Memorandum of Understanding (Appendix A):** You must read and sign the Memorandum of Understanding. It is due at the time specified.

### **Attendance/Participation Policies (Appendix B)**

- 1) This course focuses on both content and process. You **must** be present to learn and actively participate in class. It is imperative that you make an effort to attend every class. There is no such thing as an excused absence. Emergencies may arise, such as sickness, family issues, hospitalization, etc. When any emergency occurs, you are expected to inform the instructor as soon as possible. Emergency absences shall amount to no more than 10% of the total class sessions or two classes (which is a full week during summer session). Students missing more than two classes may receive an “F” for the course. To avoid this consequence, you **must** discuss any attendance problems with the instructor before this becomes an issue.
- 2) If you exceed the number of absences and have not spoken with the instructor regarding problems, or decide not to return to class, it is your responsibility to withdraw from the course. If your name appears on the final grade roster, a grade of “F” will be recorded.
- 3) The third week of class we will break into learning groups. Spend the first two weeks getting to know your fellow classmates so that when it is time to pick a group you have some level of comfort with your group. If you are not in class, your group misses out on your knowledge and insight.
- 4) While the wearing of scent may be part of your daily routine, please be aware that some are severely allergic to scents, in the interest of our health; please refrain from wearing scent to class.
- 5) Coming to class prepared is part of participation. Read **Appendix B** to understand what is meant by participation. You must complete the readings prior to coming to class. You are also expected to stay for the entire class unless there is some compelling reason to leave early and you have discussed this with the instructor.
- 6) A cell phone, while a great convenience, does not belong in the classroom or lab.
- 7) Please take care of bodily functions before you come to class. Getting up and leaving to use the restroom (or answer your phone because you think we don’t know what you’re doing) is disruptive to the class. If you have a medical problem, please discuss this with the faculty so it is not considered rude if you have to leave.

### **Laboratory**

This class has a laboratory section included as part of the course. This is an exciting opportunity for you to apply the theory that we discuss in class. You cannot learn from the laboratory if you do not participate. Therefore, attendance to labs is mandatory. There may be some labs that you may not be able to participate in due to an illness or injury. If this is the case, you notify the lab instructor in advance. However, you will still have much to gain by attending lab and must complete the lab report. You will turn in nine written labs. The labs will include analysis of data collected in the laboratories. Please refer to the section on this syllabus regarding plagiarism. You will have readings with quizzes on the lab topic. This is the electronic lab book. With the

exception of the first three quizzes, the quizzes related to the readings will be open at least two weeks prior to the lab. The lab quizzes are due on Monday at 8 am the week of the lab topic. They are due at this time as to ensure that students attending the first lab of the week are prepared. The laboratory section of the course will be graded separately from the exams. Your laboratory grade is calculated as part of your overall course grade.

### Course Policies

- 1) **Make-up Policy:** Instructors must be notified **in advance** if you are unable to take an exam. Make-up exams will only be given with instructor approval.
- 2) **Ethical Behavior: (Appendix C)** all writing assignments and examinations must be **your** original work. This department enforces the university policy on acts of academic dishonesty (ranging from failure in the course to suspension from the University).
- 3) This Department does not post grades. Grades will not be given by phone or email. You must check MyNevada for your grades. While you may check the grade book in Canvas, it does not give me room to move grades up, you must calculate those on your own.
- 4) If you have a disability and will be requiring assistance, please contact me or the Disability Resource Center (Pennington Student Achievement Center, Suite 230) as soon as possible to arrange for appropriate accommodations. I encourage any student needing to request accommodations for a specific disability to please meet with me at your earliest convenience to ensure timely and appropriate accommodations. The School of Community Health Sciences supports providing equal access for students with disabilities. I am available to discuss appropriate academic accommodations that students may require.
- 5) It is the policy in the School of Public Health that all written assignments be graded on content, clarity, and synthesis of ideas, as well as writing style, including organization, works cited, grammar, punctuation, and spelling. A percentage of your laboratory grade in this class will be writing style, including organization, works cited, grammar, punctuation, and spelling.
- 6) **Late work:** see the laboratory handout for the policy on late work.
- 7) Per NSHE: Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. *This class may be videotaped or audio recorded only with the written permission of the instructor.* In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class might be recorded.
- 8) **Email:** when you send an email please put KIN 391 in the subject line. I will respond to emails received M – Th within 24 – 46 hours. If you send an email F – Sun do not expect a response before Monday. I may respond earlier, but do not count on it. This leads to contacting me before something becomes an emergency. Communication is a two – way street. If you are having challenges I cannot help you if I do not know anything.
- 9) **Exams:** will be online in the classroom, using Respondus Lockdown – download the program BEFORE the exam. You will have 80 minutes in which to take the exam. You may not open and close it, once it is open it must be completed.

- 10) **Make-up Policy:** Instructors must be notified **in advance** if you are unable to take an exam. Make-up exams will only be given with instructor approval.
- Ethical Behavior: (Appendix C)** all writing assignments and examinations must be **your** original work. This department enforces the university policy on acts of academic dishonesty (ranging from failure in the course to suspension from the University). The University Academic Standards Policy defines academic dishonesty, and mandates specific sanctions for violations. See the University Academic Standards policy: UAM 6,502.
- 11) Academic Success Services: Your student fees cover usage of the Math Center (784-4433 or [www.unr.edu/mathcenter/](http://www.unr.edu/mathcenter/)), Tutoring Center (784-6801 or [www.unr.edu/tutoring/](http://www.unr.edu/tutoring/)), and University Writing Center (784-6030 or [http://www.unr.edu/writing\\_center/](http://www.unr.edu/writing_center/)). These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.
- 12) Pack Provisions provides access to perishable and non-perishable foods, meals on campus, school supplies, hygiene items and more to help ensure student success. ASUN Center for Student Engagement (JCSU 3rd floor). Please visit their website for hours and more information: <https://www.unr.edu/student-engagement/engagement-support-services/pack-provisions>.
- 13) **Late work:** see the laboratory handout for the policy on late work.
- 14) According to NSHE: Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may be given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.
- 15) By NSHE policy in Title 4 Chapter 20 A, Section 3, paragraph 1, <http://system.nevada.edu/tasks/sites/Nshe/assets/File/BoardOfRegents/Handbook/T4-CH20%20-%20General%20Policies%20Regulating%20Students%20and%20Student%20Government.pdf>, there are no official absences from any university class. It is the personal responsibility of the student to consult with the instructor regarding absence from class. In the event that a student misses a class because of an official university function or event or because of serious personal issues, the Office of the Vice President for Student Services may, at its discretion, send an explanation to affected faculty. The instructor shall make the final determination on whether the missed work can be done at a time other than during the regularly scheduled class period. You are professionals. Go to class, you paid for it!
- 16) It is the policy of NSHE (Title 4 Chapter 20 A, Section 3, paragraph 2, <http://system.nevada.edu/tasks/sites/Nshe/assets/File/BoardOfRegents/Handbook/T4-CH20%20-%20General%20Policies%20Regulating%20Students%20and%20Student%20Government.pdf> to be sensitive to the religious obligations of its students. Any student missing classes, quizzes, examinations, or any other class or lab work because of observance of

religious holy days should, whenever possible, be given an opportunity during that semester to make up the missed work. The make-up will apply to the religious holy day absence only. It shall be the responsibility of the student to notify the instructor in advance in writing, if the student intends to participate in a religious holy day, which does not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the assignment at an alternate time would impose an undue hardship on the instructor or the institution, which could not reasonably have been avoided.

17) Diversity, Equity and Inclusion Statement:

“A university is a place where the universality of the human experience manifests itself.” -Albert Einstein

Class Diversity Statement: As a human being and your professor, we value human diversity in all its richly complex and multi-faceted forms, whether expressed through race and ethnicity, culture, political and social views, religious and spiritual beliefs, language and geographic characteristics, gender expression, gender identity and sexual identity, learning and physical abilities, age, and social or economic classes. Enrich yourself by *practicing* respect.

Statement on Diversity: We at the School of Public Health value human diversity in all its richly complex and multi-faceted forms, whether expressed through race and ethnicity, culture, political and social views, religious and spiritual beliefs, language and geographic characteristics, gender expression, gender identity, and sexual identity, learning and physical abilities, age, and social or economic classes. We respect the value of every member of this class, and everyone in the class is encouraged to share their unique perspective as an individual, not necessarily as a representative of any category. Multicultural and intercultural awareness and competencies are key leadership skills, and we intend to present material and classroom activities that respect and celebrate diversity of thought, background, and experience.

College is supposed to challenge assumptions and to provide new and sometimes uncomfortable ways of looking at issues, and your discomfort regarding content or perspectives that are presented or discussed by professors, guest speakers, or other students may surface, we encourage you to contact one of your instructors immediately so that we can openly discuss the content and perspectives.

We would like to use your personal language when addressing you, so please let us know if your name (or the pronunciation of your name) differs from what we are using and we ask that each of you let us know your gender pronouns. Your suggestions on how to incorporate diversity in this course in a meaningful way are appreciated and encouraged.

18) Office hours: I find that I spend my office hours all by myself. Therefore, I am happy to set up a meeting with you, either in person or via Zoom to discuss whatever is on your mind.

19) Netiquette: All of your communications with faculty and your peers should be appropriate. I suggest you read your post/email OUT LOUD before you post. This will catch things that may not be appropriate. If I see inappropriate comments I will discuss them with you before I seek further action. I do not anticipate this to be a problem as I

know that you are professionals.

## 20) Laboratory

This class has a laboratory section included as part of the course. This is an exciting opportunity for you to apply the theory that we discuss in class. You cannot learn from the laboratory if you do not participate. Therefore, attendance to labs is mandatory. There may be some labs that you may not be able to participate in due to an illness or injury. If this is the case, you notify the lab instructor in advance. However, you will still have much to gain by attending lab and must complete the lab report.

You will turn in nine written labs. The labs will include analysis of data collected in the laboratories. Please refer to the section on this syllabus regarding plagiarism. With the exception of labs 5 and 9, all labs are due at the start of lecture on a Wednesday (see the lab and tentative schedules for due dates).

The laboratory section of the course will be graded separately from the exams. Your laboratory grade is calculated as part of your overall course grade.

You will have readings and quizzes on the lab topic. With the exception of the first three quizzes, the quizzes related to the readings will be open at least two weeks prior to the lab. The lab quizzes are due on **Monday at 8 am** the week of the lab topic.

### Grading:

50% Exams (n = 4)

10% Quizzes, Class Participation, and Exit Tickets

40% Laboratory

All exams will be a combination of true/false, multiple choice, calculations, and short essay. There will be 10 or more "pop" quizzes. All grading will be with the +/- system.

### Scale:

Percentage	Grade	Percentage	Grade
94 – 100	A	74 – 75	C
89 – 93	A-	69 – 73	C-
86 – 88	B+	66 – 68	D+
84 – 85	B	64 – 65	D
79 – 83	B-	59 – 63	D-
76 – 78	C+	< 59	F

### Tentative Schedule\*

Date	Topic/Due dates	Reading/Assignment
1/22	Introduction & Energy Requirement	MKK: 1 – 5 TTH: 2 - 3
1/24	ATP – PC & Glycolysis	MKK: 6 TTH: 3 & 5
1/29	TCA Cycle <b>Ebook (McGraw-Hill Connect): 1, 14 &amp; 15</b>	MKK: 7 TTH: 4
1/31	Beta Oxidation <b>Pick your group!</b>	MKK: 9 TTH: 6
2/5	Lactate	MKK: 7 TTH: 5
2/7	Protein Metabolism & Endocrine System and Exercise <b>(Through Aerobic &amp; Anaerobic Power)</b>	MKK: 8 & 20 TTH: 7

2/12	Training for Aerobic & Anaerobic Power <b>Ebook 20 &amp; 21</b>	MKK: 21
2/14	<b>Exam 1 Labs 1 &amp; 2 due</b>	
2/19	<b>No class – Presidents’ Day</b>	
2/21	Pulmonary Structure & Function	MKK: 12 – 14
2/26	Pulmonary Function	MKK: 14
2/28	Pulmonary Function	MKK: 15
3/4	Cardiovascular Structure & Function Introduction <b>Ebook 18 &amp; 19</b>	MKK: 15
3/6	Cardiovascular Function <b>Lab 3 due</b>	MKK: 16
3/11	Cardiovascular Function <b>Ebook 16 &amp; 17</b>	MKK: 17
3/13	Exam 2 review <b>Lab 4 due</b>	
3/18	<b>Exam 2 (Pulmonary &amp; Cardiovascular) Caloric Prelab due</b>	
3/20	Skeletal Muscle: Structure & Function <b>Lab 5 due</b>	MKK: 18
3/25 & 27	<b>Spring break!! Be active and relax</b>	
4/1	Fiber Types & Muscle Biopsy	MKK: 18
4/3	Neural Control of Human Movement & DOMS	MKK: 19
4/8	Strength Training <b>Ebook 24 – 26</b>	MKK: 22
4/10	Ergogenic Aids <b>Lab 6 Due</b>	MKK: 23
4/15	<b>Exam 3 (Skeletal Muscle through Ergogenic Aids) Ebook 4</b>	
4/17	Body Composition Assessment <b>Lab 7 due</b>	MKK: 28
4/22	Weight Management	MKK: 29
4/24	Exercise at Medium & High Altitude <b>Lab 8 Due</b>	MKK: 24
4/29	Sport Diving & Exercise <b>Lab 9 Due</b>	MKK: 26
5/1	Thermal Stress	MKK: 25
5/6	Thermal Stress	MKK: 25
5/8	<b>Prep Day, No Class</b>	
5/10	<b>Exam 4 (Body Comp. through Thermal Stress) 8:00 – 10:00 am</b>	

**MKK: McArdle, Katch, and Katch**

**TTH: Tiidus, Tupling, & Houston**

**Ebook: McGraw-Hill Connect – Beam and Adams: textbook for lab**

\* This schedule is tentative. We may finish a section earlier and have exams earlier. If an exam is rescheduled it will be for a Monday, allowing you the potential extra time on the weekend to study.

Instructor’s Idiosyncrasies:

I have certain attitudes towards learning. The most important is that YOU are active learners. It is up to you to learn the material and question when you do not understand. I am here to assist you, but not to learn for you. The field of exercise physiology has lots of people giving out lots of information. Some are worth listening to and others are not. I do not expect you to become an expert, but I do have the expectation that you will question what you hear



and attempt to understand the information from a scientific perspective rather than just “it’s popular.” We may not always agree on topics. I ask that you support your beliefs with scientific data, not hearsay or rumor. People will be looking to you for advice. Be informed!

I also have a very sarcastic sense of humor. If my teasing or humor offends you, **please let me know**, or if you want to remain anonymous, leave a note on a discussion. I also talk fast, especially when I’m excited about something. The field of exercise physiology is very exciting to me. Sometimes, my passion can overtake my tongue. Stop me and ask me to SLOW down. I won’t be offended.

Please ask questions when you don’t understand a concept. Often (usually) there are other students in the class who have the same questions and are too shy to speak out. The only stupid question is the one you don’t ask. If I don’t know the answer, I will tell you what I do know.

I have a few pet peeves. One pet peeve is students who pick for points. When I grade, I try to grade everything as blindly as I can. I do not have any idea whose test I am grading or whose papers I am grading. Therefore, I try to be as fair as I can.

Because we have so much to learn from each other, it is expected that you will attend class and actively participate.

## Appendix A

### Memorandum of Understanding CHS 370

I, \_\_\_\_\_ have read the course syllabus for CHS 370  
(Print name)  
and understand the contents.

I have been given the opportunity to ask for clarification on any questions I had about the assignments, the exams, or any of the expectations of this course.

I am satisfied that my questions have been answered.

I agree to abide by the standards and expectations as stated, which includes ethical standards.

I agree to abide by the definition of and the procedure for academic dishonesty as defined by the University of Nevada, Reno catalog.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

This memorandum of understanding must be signed and returned to the instructor no later than Feb 5, 2024.

## Appendix B

### Active Class Participation/Good Citizenship Self-Evaluation

**Class participation is often defined as students who are engaged in active learning, yet remain as good citizens of the overall classroom/learning experience. As adult learners, an important part of the process of evaluation is self-reflection. Here is an opportunity to self-reflect on this experience for you this semester.**

Self Evaluation Criteria	Frequently 3	Sometimes 2	Rarely 1	Never 0
I am on time to class.				
I have come prepared to class by reading material ahead of time, ready to learn and discuss the materials.				
I kept my conversations with others in the classroom to a minimum during lectures, presentations, or guest presenters. Therefore, I did not distract others from their learning experience.				
I am an active participant in all types of class discussions and activities that occur in class.				
I listen respectfully (eye contact and attention) to others in the class, both in presentations and discussions.				
I respectfully allow for others to participate in the discussions as well because I learn more from them as part of my adult learning experience.				
I build on and relate to points made by the instructor and others, either in class or by looking at the business world after leaving class.				
My thoughts and reflection often take me beyond the assignment, looking for meaning in my life/career experiences.				
I participated well in both group assignments by being available to work together by contributing content, research and ideas to the presentations.				
Whatever feedback I received from other students, or the Instructor, I learned from it—either positive feedback or negative feedback.				
Overall, I would say that I was an active participant in my own learning and a good citizen of the class.				

## Appendix C

### Encouraging Ethical Behavior in Class

We have been concerned about the ethical behavior of our students and thought we might be able to encourage more of it by making our standards high and our expectations explicitly clear. We share the following handout with our students the first day of class.

The following guidelines set the standards for students' ethical behavior in the class. They are adapted from a set of guidelines for faculty prepared by the American Association of University Professors (AAUP) in 1987. As your instructor I pledge to uphold these high faculty ethics.

Please read and study the guidelines below. I'd like you to make a similar pledge to me and your classmates.

As a student in this class, your ethical obligations are to:

1. Engage in the free pursuit of learning by:
  - Seeking help and clarification when needed.
  - Respecting fellow students', the professors', and guests' opinions without disparaging and dismissing them.
  - Seeing beyond "personality issues" with others to appreciate their contributions to the learning environment.
2. Model ethical scholarly standards by:
  - Avoid plagiarizing and all other breaches of academic dishonesty.
  - Avoid any seeming approval, acceptance, or encouragement of fellow students' academic dishonesty and bringing any such offenses to the attention of the professor and/or university officials.
  - Engaging in discussions with other students and professors about ethical issues in academics.
3. Acknowledge, accept and expect just assessment of your learning by:
  - Understanding the professor's methods and rationale for your assessment and asking for clarification if you don't understand.
  - Engaging in accurate, just, objective self-assessments of your own work.
  - Engaging in constructive, value-neutral discussion with the professor about discrepancies between your self-assessment and the professor's assessment of your work.
  - Refraining from comparing assessments and grades with classmates' so as not to diminish classmates' self-esteem.
4. Avoid harassment, discrimination, and exploitation by:
  - Getting to know classmates and the professor as individuals rather than applying prejudices and stereotypes.
  - Contributing your full effort in team and collaborative projects.
  - Respectfully voicing your expectations of full participation in team and collaborative projects to fellow students.
  - Not discouraging, in any way, a member's full participation in a collaborative project.
  - Being careful not to make racist, sexist, and other types of discriminatory remarks during class.
  - Being careful not to monopolize class discussion time so that others do not have a chance to participate or are intimidated about participating.

## Appendix D

### Behavioral Dimensions of Grades

John H. Williams of Pepperdine University described a profile of characteristic attitudes and behaviors of typical students and how these characteristics may predict grades. We present the following not to predict your grade, but to help you understand how your performance may influence your grade. Instructors do not give grades; students earn grades. See if you agree with Dr. Williams' thesis.

The following information is designed to explain what behaviors are likely to earn you an A versus a C. Treat the nine dimensions as guidelines for earning these grades rather than rigid conditions for or guarantees of success. In particular classes, for example, an A student can earn C while a C student can earn an A. Likewise, and A student may earn an A without satisfying the characteristics of an A student on all nine dimensions. It is very difficult for anyone, no matter how exceptional, to consistently exhibit every quality associated with that of an A student.

<b>"A" or Outstanding Students</b>	<b>"C" or Average Students</b>
<b>1. Ability (Talent)</b>	
..have special aptitude, motivation, or a combination of both. This talent may include either or both creativity and organizational skills.	...very greatly in aptitude. Some are quite talented but their success is limited by a lack of organizational skills or motivation. Others are motivated but lack special aptitude.
<b>2. Attendance (Commitment)</b>	
..never miss class. Their commitment to the class resembles that of their professor. Attending class is their highest priority.	..periodically miss class and/or are often late. They either place other priorities, such as a job, ahead of class or have illness/family problems that limit their success.
<b>3. Attitude (Dedication)</b>	
...show initiative. Their desire to excel makes them do more work than is required.	...seldom show initiative. They never do more than required and sometimes do less.
<b>4. Communication Skills</b>	
...write well and speak confidently and clearly. Their communication work is well-organized, covers all relevant points, and is easy to listen to/read.	...do not write or speak particularly well. Their thought processes lack organization and clarity. Their written work may require a second reading by the professor to comprehend its meaning.
<b>5. Curiosity</b>	

...are visibly interested during class and display interest in the subject matter through their questions.	...participate in class without enthusiasm, with indifference, or even boredom. They show little, if any, interest in the subject matter.
6. Performance	
...obtain the highest scores in the class. They exhibit test-taking skills such as an ability to budget their time and to deal with test anxiety. They often volunteer thoughtful comments and ask interesting questions.	...obtain mediocre or inconsistent scores. They often do not budget their time well on exams and may not deal well with test anxiety. They rarely say much during class discussion and their answers indicate a cursory understanding rather than mastery of material.

Note: Performance is a joint function of a student's native ability and motivation. Punctuality, attendance, attitude, curiosity, effort or time commitment, and preparation all indicate motivation.

7. Preparation	
...are always prepared for class. They always respond when called on. Their attention to detail sometimes results in catching text or instructor errors.	...are not always prepared for class. They may not have fully completed the assignments, have completed it in a careless manner, or hand in their assignments late.
8. Retention	
...learn concepts rather than memorize details to they are better able to connect past learning with present material.	...memorize details rather than concepts. Since they usually cram for tests, they perform relatively better on short quizzes than on more comprehensive tests such as the final exam.
9. Time Commitment (Effort)	
...maintain a fixed study schedule. They regularly prepare for each class no matter what the assignment. They average 3-4 hours of study for every hour in class.	...study only under pressure. When no assignment is due, they do not review or study ahead. They average not more than 2 hours of study for every hour in class. They tend to cram for exams.