

Course Syllabus
Geography 362-01 (1564)
Maps and Map Interpretation
3 credit hours
Spring Semester - 2008

Class Meeting Room: LDB 321

Class Time: Tuesdays & Thursdays 9:30-10:50

Instructor Information: Name: Dr. Marcus Gillespie
Office Number: Lee Drain Building - 300 B
Office Hours: M,W 1:00-3:00; TTh 11-12 and 2-3
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* I always try to have an "open-door" policy as regards office hours, so please feel free to call or come by any time that you have a question.

Course Description/Rationale: The purpose of this course is to teach students how to use and interpret maps and to develop an appreciation of their many uses. It also familiarizes students with map projections, map limitations, and the basic principles of air photo interpretation. This course is necessary for professional geographers because maps and aerial photographs are the basic tools by which geographers analyze and interpret spatial information. It is also useful for anyone who will use maps either as part of their career responsibilities, or for general purpose uses--such as hiking and trip planning.

Course Objectives: Upon completion of this course, the student should achieve:

- a) a working knowledge of the basic elements of maps;
 - b) an understanding of map projections and corresponding map distortion and map limitations;
 - c) an understanding of the basic construction and interpretation of topographic maps;
 - d) the ability to interpret map feature locations using a variety of coordinate systems (Latitude/longitude, UTM; State-Plane)
 - e) the ability to make distance and area measurements, determine hill slope/gradient, and draw cross-sectional profiles
 - f) the ability to perform unit conversions and determine Great Circle Routes
 - g) the ability to use the United States Public Land Survey System and the Metes and Bounds system
 - h) the ability to construct a map using a compass and knowledge of map scale;
 - i) an understanding of the principles upon which GPS is based
 - j) a basic knowledge of the principles used to interpret aerial photographs;
 - k) a general appreciation for the need for maps in all aspects of daily life;
- * By learning to interpret maps, you are also learning a great deal about how to construct them and this will be useful for those students that take computer cartography and GIS.

Methods of Instruction: The course is geared toward a lecture and exercise format. Many of the exercises are done during class, but students should be aware that some work is required outside of class. All lectures are on Power Point and are available on the Black Board site for the course under "Course Documents". Students must print these presentations and bring them to class. **Please note that key words and phrases are deleted from the student version of the presentations; so, students must come to class in order to add the missing information.**

Textbook Information: Map Use and Analysis-4e; by John Campbell. In addition to the textbook, you will be required to use a workbook containing homework exercises and supplemental material. Please **bring it to every class.**

Supplies: Calculator (with sine, cosine and tangent functions), ruler, protractor (for measuring angles), pencil, stapler

Supplementary Readings: There will be no supplementary readings for this course.

Attendance and Tardy Policy: To encourage attendance, **I give each student 30 free points at the beginning of the semester.** However, I will deduct 10 points for each and every *unexcused* absence. No points will be deducted if the absence is excused. In order for an absence to be excused, **some form of documentation MUST be provided.** Although 30 points does not sound like much, it amounts to almost 4% of the course grade. For those students that are borderline with the next highest grade, the extra 4% for attendance can make all the difference. Note that although the *Student Handbook* states that students may not be penalized for missing 3 or fewer classes, in this class students are *given* points for attendance, and so points can be deducted for absences. Also note that a student would have to miss more than three classes (30 points deducted) before academic points (that are unrelated to attendance) would be deducted. **Attendance matters; so, please take advantage of the opportunity to learn by coming to all classes.**

1. In addition to the required attendance policy, it is necessary that you please come to class on time. **Also, if you leave early, without having cleared this with the instructor, you will be counted absent.**
2. **Late Work:** **If an assignment is not submitted on time, it must be turned in by the beginning of the next class period; however, 10% of the value of the exercise will be deducted for each day it is late. The weekend counts as one day.** (So, if it is due on Thursday, and is not turned in until the following Tuesday, then 30% will be deducted (10% for Friday, 10% for weekend, and 10% for Monday). Please understand that students do not have to wait until the next class to turn in the late assignment; in other words, students can turn in *late* assignments on non-class days, such as Wednesdays, Fridays or Mondays in order to reduce the amount of points that will be deducted. It must be emphasized that, **after one class period beyond the due date, you cannot turn in the assignment** and will, therefore, receive a zero for it. So, please get those assignments in on time!
3. **Missed Exams:** If you miss an exam, you must get permission from the instructor to make it up. If you have a documented excuse for missing the exam, you should make it up as soon as possible. **If you *do not* have a documented excuse for missing the exam, you will be required to take the make-up exam during the last week of scheduled classes; i.e., the week before finals.**
4. **Missed Exams or Late for Exams:** If you miss an exam, you must get permission from the instructor to make it up. If you have a documented excuse for missing the exam, you should make it up as soon as possible. **If you *do not* have a documented, acceptable excuse for missing the exam, or if you are very late for the exam, you will be required to take the make-up exam during the last week of the semester; i.e., during the week before finals begin.**

Course Assignments and Grade Determination: Grading will be based on three (3) lecture exams, seven (7) homework assignments, and a final exam. Each lecture exam will be worth 100 points, and the final will be worth 150 points. Tests may consist of multiple choice, true/false, and short answer/essay questions, as well as math problems and diagrams. The exercises will be worth a total of 275 points. Attendance is worth 30 points. Therefore, the total number of points that can be earned in the course is 755 points, with the **homework** comprising **36.4%** of the course grade.

Tests 1, 2 and 3: These will consist of multiple choice, matching, math, and essay-type questions and will each be worth 100 points.

Final exam: The final exam will be comprehensive and will be worth 150 points.

Homework assignments: Three of the assignments will each be worth 25 points, and four will be worth 50 points each. The assignments will consist of a possible combination of matching exercises, math problems, true/false questions and short answer questions.

Your grade for the semester (or at any point in the semester) is based on the percentage of points that you have earned. To determine your grade, sum the total number of points you have earned, divide by the total number of points that the completed assignments and tests are worth, and multiply by 100. (See example below.)

** It is possible that the number of assignments for the course may be changed. If so, you will be notified and the grading procedure will be adjusted accordingly in such a way as to maintain approximately the same weighting for homework assignments and tests.*

Minimum Requirements: You must pass at least one of the four tests in order to pass the course--regardless of the total number of points you have earned!!! You must also pass a problem test (no points) consisting of four problems: distance, area, slope, and latitude-longitude determination. If you do not pass this four-problem test, you cannot pass the course. This is because the ability to do these four problems is essential to be able to work with maps (i.e., to do map *interpretation*). If you cannot do them by the end of the semester, then you have not yet developed essential skills that would enable you to use a map. You will be given several opportunities to pass this problem-set. The faculty members in the Geography Department want our students to develop the skills necessary to do well in the workforce, and to be able to compete with students from other universities. That is the reason for the requirement regarding the problems-test. It is not intended as a flunk-out exam; rather, it is a standard to be met on the road to excellence. As the instructor, I want each and every student to pass the course--and with high grades! If you need help at any time, please ask for it. Your success is my success.

Please note that I WILL NOT GIVE CURVES ON TESTS; however, I will provide bonus questions on exams (worth 4 points per exam) and I will also give short, extra credit quizzes during the semester (worth a total of 12 points). The extra points you earn on these questions and quizzes will be added to your grade. The quiz questions can cover both lecture material and material from chapters that should have been read to prepare for lecture. (Because the quizzes are for *extra* credit, you will not have points deducted from your grade if you miss any of the questions on the quizzes.) In addition, one homework assignment has a 4-point bonus question on it. Thus, it is possible to earn an extra 32 points during the course, which is equal to 4% of the total points in the course.

For students that are within 1% point of the next higher grade at the end of the semester, I will consider raising their grade if they meet all of the following criteria:

- a) they did not have more than 2 absences
- b) they came to class on time and paid attention in class
- c) they made at least one test grade equal to the desired final grade and/or they showed significant improvement
- d) they completed all assignments and submitted them on time

Example of Grade Determination

	<u>Earned</u>	<u>Possible</u>	
HW 1	20	25	
HW 2	22	25	
HW 3	18	25	
HW 4	38	50	
HW 5	48	50	
HW 6	41	50	
HW 7	45	50	
Test 1:	85	100	
Test 2:	95	100	
Test 3:	90	100	
Final:	135	150	
Attendance	30	30	
Quiz Points:	<u>16</u>	<u>---</u>	
	683	755	

Grade = $683/755 = 90\% = A$

- If the student in this example had not earned any bonus points, he or she would have received only 667 points (88.3%), i.e., a B instead of an A. Or, if they had skipped one class, they would have had only 673 points, which equals 89.1% As you can see by this example, the extra credit quizzes and attendance are very important, which means it is important to read the chapters and review your notes in order to prepare for the quizzes – and to come to class!

Point Range for Each Letter Grade:

- A = 90%-100% = 680-755
- B = 80%-89% = 604-679
- C = 70%-79% = 529-603
- D = 60%-69% = 453-528
- F = less than 60% = less than 453

Important fact to remember: A 25-point homework assignment is worth 3.3% of the final letter grade in the course, and a 50-point assignment is worth 6.6% of a letter grade. Failure to do a single assignment can be very costly; so, please do each and every assignment. Every one of them matters.

Use the form below to calculate your grade. Do not lose this -- it is your check against the final grade that I give you! (Grades will also be posted on the Blackboard course website; however, **Black Board will not keep a running course average – it will only indicate how many points that you have. To keep track of your average, you must use the form below.**) To use this chart, first record the score that you earned in the “Score” column. Then, add the points in this column together and place this value in the “Total Points Earned to Date” column adjacent to your last grade. Finally, divide the “total points earned” value by the number to the right in the “Cumulative Possible” column and multiply by 100 to determine your percentage. For example, if you made a 23 and 22 on Homeworks 1 and 2, your total points would be 45. Divide 45 by 50 and multiply by 100 to obtain 90%. This is your “running average”.

$$* \text{Percentage} = (\text{Total Points}/\text{Cumulative Possible}) \times 100$$

	<u>Score</u>	<u>Total Points Earned to Date</u>	<u>Cumulative Possible</u>	<u>Percentage</u>
HW1:	_____	_____	25	_____
HW2:	_____	_____	50	_____
Test 1:	_____	_____	150	_____
HW3:	_____	_____	175	_____
HW4:	_____	_____	225	_____
Test 2:	_____	_____	325	_____
HW5:	_____	_____	375	_____
Test 3:	_____	_____	475	_____
HW6:	_____	_____	525	_____
HW7:	_____	_____	575	_____
Final:	_____	_____	725	_____
Attendance	_____	_____	755	_____
Quiz Points	_____	_____	755	_____

The number of points that must be earned on the final exam to obtain the grade that you desire can be derived using the following equation:

$$\text{Number of points needed on final} = (755 \times \text{desired grade percentage}) - \text{Total points earned to date.}$$

Example: If you have earned 495 points prior to taking the final exam, and desire a B (80% or 0.8), the number of points you need on the final to obtain a B in the course is 109:

$$(755 \times 0.8) - 495 = \\ 604 - 495 = \mathbf{109} \text{ (out of 150 possible on the final)}$$

Homework Policies: In addition to having a mastery of their subject area, any student that graduates from a university should be able to communicate effectively. As regards writing assignments, this means that an individual should be able to **write grammatically correct** sentences that clearly and succinctly express an idea. In addition, their work should be of high quality and should be **neatly organized** and **readily comprehensible** by anyone who reads it. These are the hallmarks of a responsible, educated individual and are considered to be essential skills by employers in professional fields. Because Sam Houston State University is committed to providing you with a quality education, it is my policy to require the following on all assignments:

1. Use a **pencil** when completing an assignment. Ink cannot be erased and scratch-outs look bad on papers. (5% deducted on first assignment--others after the first will not be accepted if done in pen)
2. Write **ALL** short-answer and essay responses in complete, grammatically correct sentences. Also, **PRINT** your answers--do not use cursive. If I cannot read the answer, or if I must struggle to read it, it will be counted wrong.
3. Be sure to clearly and completely express your thoughts in a succinct fashion. This teaches you to organize your thoughts, and this helps you to better learn the material and to communicate more effectively. In addition, **if long blanks are provided for an answer, this means that I want an in-depth discussion for an answer--not short, general, vague comments**. Again, your goal is to demonstrate to me that you genuinely understand the material.
4. Words should be **spelled correctly**, and **correct punctuation** should be used. The use of a text messaging format is not acceptable.
5. If you are doing a math problem, write it down in an **easy-to-follow, step-by-step fashion**. If you made a mistake, this enables me to see where you made your error and to give you partial credit for your work. Most importantly, it helps you to learn the material because it requires you to think through the problem and it permits you to easily review it prior to taking the test. **If no work is shown, or if it is done sloppily, I cannot give partial credit for your work.** In addition, you will probably not remember how you worked the problem when you review your homework.
6. Homework assignments **must be stapled when submitted**. This is the student's responsibility--not the instructor's. This should be done BEFORE COMING TO CLASS!!!! (3 points deducted if not stapled)
7. Please note that **I will reject work that is not neatly done**. If this happens, the assignment will be considered late. If diagrams are required, **use a ruler to draw straight lines and a template to draw circles**. In other words, draw the diagram in such a way that it looks as though a professional drew it.

Study Tips

1. **Always come to class**. You will not do well in the course if you skip class--this is virtually guaranteed.
2. **Take good notes** – Note that you can add information to the power point presentations
3. **Read the book!**
4. **Review the notes from the previous lecture at least once a week**.
5. When it comes time to **review for an exam**, first read the highlighted portions of the text, then concentrate on the presentations. You might also want to follow the procedures below:

- a. The first time you review your notes, concentrate on absorbing the key ideas and understanding the organization of the material - why certain ideas followed others in the class and how they are related.
 - b. Once this is done, review the material again to learn the details - the “whys.” Bear in mind that **tests in this course are absolutely not based on the mere memorization of definitions or on the recognition of verbatim statements from lecture**; rather, the test questions are based on the application of concepts.
 - c) **Pretend that you are teaching the material to someone else or that you must write essay responses to every question on the test.** If you can present an imaginary lecture in an organized, comprehensive manner, or prepare an essay response, then you understand it. If you cannot, then you need to review some more. **THIS IS THE MOST IMPORTANT STUDY TECHNIQUE FOR ANY CLASS.**
- 6. ASK QUESTIONS! IF YOU ASK THEM, IT SHOWS ME THAT YOU CARE ABOUT DOING WELL. QUESTIONS ARE NOT A SIGN OF IGNORANCE--THEY ARE A SIGN OF CURIOSITY AND COMMITMENT TO ONE’S EDUCATION.** (Caveat: If a student should have unusual difficulty in understanding the answers given in class, I may have to *move on* in order to ensure that course content is covered and that other students do not become disengaged from the lecture. However, if this becomes necessary, I will gladly meet with student to discuss the student’s questions.

Additional Course/University Policies

Academic Dishonesty:

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Students are encouraged to study in groups to prepare for tests. However, “group effort” is definitely not permitted when taking exams! This will result in an automatic zero on a test. Two such occurrences will result in an F in the course.

Proper Course Behavior: As stated above, students should:

- 1) *Refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating or drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.*
- 2) Come to class on time—there is no reason to be late to class on a frequent basis. **Habitual tardiness is unacceptable.**
- 3) Remain in class until it finished. **Leaving early will count as an absence unless you have cleared it with me or unless it is an emergency.**
- 4) Again, do not bring food or drink into the class

- 5) **You cannot leave the class during an exam** unless there is a medical emergency. If you think you will need a Kleenex during the test, then bring it with you to class.
- 6) Hats must be removed and put away during exams.
- 7) During tests, cell phones and any other equipment capable of receiving, recording and/or transmitting information, must be put away in a book bag or purse. (In short, it must not be readily accessible or accessed during an exam.)
- 8) Students are encouraged to study in groups to prepare for tests. However, “group effort” is definitely not permitted when taking exams! This will result in an automatic zero on a test. Two such occurrences will result in an F in the course.

VISITORS IN THE CLASSROOM: *Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.*

This policy is not intended to discourage the occasional visiting of classes by responsible persons. Obviously, however, the visiting of a particular class should be occasional and not regular, and it should in no way constitute interference with registered members of the class or the educational process.

Americans with Disabilities Act: *SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. Note: No accommodation can be made until you register with the Counseling Center. Therefore, any student seeking accommodations should go to the Counseling Center and Services for Students with Disabilities in a timely manner and complete a form that will grant permission to receive special accommodations. For this course, a student must be able to see the maps without any special equipment (other than glasses) or alteration of the maps (enlargement).*

Religious Holy Days: If a student desires to be excused from class, assignment, or a test to participate in activities associated with a religious holy day, then the student must notify the instructor of each scheduled class that he/she will miss for religious reasons. In such cases, the student will be required to take the test or submit the assignment early—unless there are good reasons for not being able to do so and the instructor has agreed to those reasons.

Special Circumstances: If unusual circumstances arise during the semester, such as a medical problem, death in the family, etc., that adversely affects your attendance PLEASE **discuss this with me immediately and provide documentation**. Under these conditions, I will gladly do my best to accommodate your situation by excusing absences, allowing late work to be turned in within a reasonable, agreed upon, time period, and so on. However, if you wait until after-the-fact, at the end of the semester, to let me know that you were experiencing these adverse circumstances, there is *nothing* I can do about it at that time. **I will not retroactively make accommodations and I never give extra credit assignments to make up for grade deficiencies of any type.**

Schedule: This schedule is subject to revision at any time based on class progress.

Thursday 1/17	Intro to Maps and Map Types (Chapter 1)

Tuesday 1/22	Complete Intro and begin Map Types, Rectangular Grids, Latitude-Longitude, Geodesy (Chapter 2)
Thursday 1/24	Continue Grids and Lat/Long

Tuesday 1/29 Geodesy
Thursday 1/31 Geodesy and Scale
Begin HW 1 (due 2/7)

Tuesday 2/5 Video on the Survey of India, and Sun time and standard time
Thursday 2/7 **HW 1 Due at beginning of class**
Seasons and Geodesy and Begin Scale and Generalization (Chapter 5)
Begin HW 2 (due 2/19)

Tuesday 2/12 Scale and Generalization
Thursday 2/14 Map Projections (Chapter 3)

Tuesday 2/19 Map Projections
HW 2 due
Thursday 2/21 Map Projections and Begin Topographic Maps (Chapters 8, 9, 6)

Tuesday 2/26 *Test 1 (HW 1 & 2, Chapters 1, 2, 5)*
Thursday 2/28 Review Test and continue topographic map interpretation
Begin HW 3 (due 3/6)

Tuesday 3/4 Continue topo map measurements
Thursday 3/6 **Begin HW 4** in class (due 3/20)
HW 3 Due at beginning of class

Tuesday 3/11 *Spring Break*
Thursday 3/13 *Spring Break*

Tuesday 3/18 HW 4 in class
Thursday 3/20 Complete HW 4 – due at end of period

Tuesday 3/25 Begin Locational and Land Partitioning Systems (Metes and Bounds, UTM, State Plane
Coordinate System, USPLS (Chapter 4)
Thursday 3/27 **Test 2 (HWs 3 and 4, Chapters 3, 8, 9, 6)**

Tuesday 4/1 Review Test
Continue Locational and Land partitioning Systems
Thursday 4/3 Continue Locational and Land Partitioning Systems and **Begin HW 5 in class (due 4/10)**

Tuesday 4/8 **Continue HW 5 in class (due 4/7)**
Thursday 4/10 **HW 5 Due at beginning of class**
Begin Route Selection & Navigation (Directions, Compass use, GPS) (Chapter 7)

Tuesday 4/15 Continue Route Selection and Navigation
Thursday 4/17 **Test 3 (Chapter 4/HW 5)**

Tuesday 4/22 Outdoor Mapping Exercise (**HW 6**) – **due 4/29**
Thursday 4/24 **Four- Problem Test at beginning of period**
Begin Air Photo Interpretation

Tuesday 4/29 Air Photo Interpretation (Chapter 17)
Begin HW 7 (due 5/6)
HW 6 due at beginning of period

Thursday 5/1 Continue Air photo interpretation

Tuesday 5/6

Complete HW 7 and submit

The Final Exam will be given on **Tuesday, May 13 from 8:00-10:00**. Approximately 60% of the final will cover new material (HWs 6&7/Chapters 7 and 17) and 40% will be comprehensive. Please see the last page/s of your workbook for a list of the topics that will be covered in the comprehensive section of the exam.