Geography 301K - Weather and Climate (Unique #84190)
First Summer Semester 2010

LOCATION AND TIME: GRG 102, M-F 11:30am to 12:45pm (Unique #84190)

INSTRUCTOR: Troy Kimmel, Senior Lecturer CV BIO (Email: tkimmel@mail.utexas.edu)
TEACHING ASSISTANT: Shari Adams Wilcox (Email: SEWilcox@mail.utexas.edu)
OFFICE: Geography Building (Northeast corner of 24th Street and Whitis Avenue), Room 340
OFFICE HOURS: M-Th 10:45am -11:30am and 12:45pm - 1:00pm / other times by appointment
PHONES: Home Office 335-6472 (At times other than office hours)
UT Office 232-1590 (Office hours only), UT Geography Switchboard 471-5116

CLASS OBJECTIVES:
Our study of weather and climate is intended for Geography majors and all others interested in a broad brush examination of the atmospheric and climatic sciences. This study will be introductory in nature with only a very basic use of mathematics. We will start with a study of meteorology. From this foundation, we will go into the different aspects of the atmosphere and then, later, into climatological matters and discuss the various climatic regimes including that of Texas and the local area.

ATTENDANCE:
While this is probably not going to be the hardest course you've ever taken (or will take) in your college career, it is intensive. This is due, primarily, to the amount of material to be covered during the semester. It is, therefore, my philosophy that your success in this course will vary directly with your class attendance. Be aware of the fact that attendance will be taken on a daily basis and this information will be used in the computation of your final class grade. Excessive absences will work against you while perfect attendance can help you to the next highest letter grade in borderline situations at the end of the semester.
Our class time is 11:30 a.m. to 12:45 p.m. Monday through Friday. Promptness is expected; you should make every effort to be in the classroom by 11:30 a.m. Late arrivals are an interruption to the class material being presented and are unfair to your fellow students that have made the effort to be on time.

GRADING PROCEDURE:
Your final grade will be determined by your numerical performance on the examinations as noted (ALL dates, as indicated on outline, are TENTATIVE and are SUBJECT TO CHANGE):

Examination #1	200 points
Examination #2	200 points
Examination #3	200 points
Place Name Examination	50 points
Examination #4	200 points
Attendance Pop Quizzes/Exercises	50 points
Final Cumulative Exam	300 points

Only three of the regular examination scores will count; the lowest of the four grades will be dropped (see MAKE-UP EXAMINATIONS). All numerical scores will be added together to arrive at a possible 1000 points at the end of the semester, where, when utilizing the UT “Plus” / “Minus” Final Grade Grading System and applying it to our 1000 point grading system...
900-933 = A- (GPA earned 3.67), 934-1000 = A (GPA earned 4.0)
800-833 = B- (GPA earned 2.67), 834-866 = B (GPA earned 3.0), 867-899 = B+ (GPA earned 3.33)
700-733 = C- (GPA earned 1.67), 734-766 = C (GPA earned 2.0), 767-799 = C+ (GPA earned 2.33)
600-633 = D- (GPA earned 0.67), 634-666 = D (GPA earned 1.0), 767-799 = D+ (GPA earned 1.33)
0-599 = F (GPA earned 0.00)

All examinations will be objective (multiple choice). If you have a question regarding your exams, it is your responsibility to visit during office hours when we will access your copy of the exam. Any questions regarding exams will be brought forth within one week of the exam return date otherwise the grade is considered final.

AMERICANS WITH DISABILITIES ACT (ADA):
The University of Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Division of Diversity and Community Engagement, Services for Students with Disabilities at 471-6259, 471-6441 TTY, 866-329-3986 video phone.
If you have documentation regarding accommodations from the Dean of Students office, you must meet with me, in person and during office hours, as early as possible in the semester to discuss exact accommodations. When you come to this meeting, you will be required to provide written documentation from the Services for Students with Disabilities.

CLASSROOM / CAMPUS EMERGENCY ACTION PLANS:
The status of University of Texas campus activities in times of emergency (i.e., severe/inclement weather) along with some important procedures in case of emergencies on our campus as well as in our classrooms can always be found on the University of Texas Emergency Web Page.
The University of Texas maintains Emergency Action Plans that addresses emergencies that could potentially affect the our community. You can reference the various plans here.
Our UT Siren System is used in times of emergencies when it is necessary for you to "shelter in place" in campus buildings (remain in or go to the nearest building on campus when the siren is activated and remain there until the "all clear" is given). The UT Siren System, as part of policy, is tested monthly on the first Wednesday of every month between 11:50 am and 12:00 noon. Please don't take the siren system tests for granted; be ready to take action if the siren system is activated!
We will discuss, during the first class day of the session, our emergency plan for our specific classroom in case of fire, severe/inclement weather and other different situations. Please take this discussion seriously and ask any questions that you may have!!

UT POLICY ON EMAIL NOTIFICATION
Instructor to student email is a recognized and accepted form of official communication here at the University of Texas. For the University policy, read this. It is critically important that (1) you make sure to have your current and most frequently checked email address on file in UT Direct and (2) you check it on a daily basis. I will send class email frequently during the semester and you'll be given updates and change notices in references to lectures as well as exams.

TEXTBOOK MATERIAL:
We will utilize the following textbook during the semester:
Essentials of Meteorology (5th Edition) - C. Donald Ahrens - Required (Thomson Learning)
Goode's World Atlas (22nd Edition) - Recommended (Rand McNally)

These books are available at the University Coop and other campus bookstores as well through on-line textbook web sites. Please shop around for the best price.

Here are some additional on line links that will be useful in class:

- METARS / Surface Weather Observations Tutorial (METAR Decoding Exercise)
- NCAR / World Wide Location Identifier List (NWS Location ID Query System)
- Kimmel's Cloud /Precipitation Types Tutorial (On Line Learning Module)
- Kimmel's Severe and Unusual Weather Tutorial (On Line Learning Module)
- Koppen Climate Classification Flow Chart

NCDC / Local Annual LCD Documents in PDF Texas Climate Normals 1971-2000

Austin Bergstrom Intl Airport (ID: KAUS):
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Austin City (Camp Mabry) (ID: KATT):
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

MAKE-UP EXAMINATIONS:
There will be NO make-up "weekly" examinations under ANY CIRCUMSTANCES. It's precisely for the reasons of sickness and other unplanned absences as well as for the occasional "bad" test day that I allow your lowest "weekly" examination score to be dropped. Please note that you are required to take the final exam on the date and time as specified by the University (no excused absences).

EXAMINATION DAYS:
In order to ensure honesty in the classroom (and given the class size for this particular class and section), please note that I have set guidelines in reference to examination days:
Beginning with the handout of the examinations, I expect silence
All material that you bring with you on examination day will be placed on the floor under your seat
No headwear (caps, hats) will be worn while in our classroom on examination days
Once the examination is distributed, there will be no leaving the classroom for any reason.

UNIVERSITY OF TEXAS / POLICY ON SCHOLASTIC DISHONESTY:
In this class, there is zero tolerance for students who violate university rules on scholastic dishonesty with all suspected cases turned over to the University's Dean of Students office. Penalties for scholastic including possibility of failure of course and dismissal from the University. Since dishonesty harms the individual, fellow students and the integrity of the University, policies on scholastic dishonesty will be STRICTLY ENFORCED in this class.

GEOGRAPHY 301K (FIRST SUMMER SESSION 2010) TENTATIVE CLASS MATERIAL OUTLINE
Please note that all dates on the syllabus are very tentative and can and will change during the semester. The first three test dates are not specifically listed on the syllabus; exact dates will be announced in class a week (or more) ahead of time.

GRG301K Class Notes - Outline

DATE	SUBJECT MATTER	TEXT CHAPTERS
3-4 Jun	Introduction to Weather, Climate and the Atmosphere	Ch 1
7 Jun	Earth-Sun Relationship; Heat Transfer & Balance; Greenhouse Effect, Energy Balance	Ch 2, 3
8 Jun	Latent Heat, Latitudinal Heat Balance; Heat and Temperature; Temperature Scales, Data, Uses	Ch 3
9 Jun	Moisture, Moisture Measurements; Atmospheric Stability; Dew/Frost; Cloud Formation; Fogs Types and Formation	Ch 4, 5
10 Jun	Cloud Classification, Types/Features; Precipitation Formation/Types	Ch 5

EXAMINATION #1 (Covers in class lecture material roughly pertaining to chapters 1 through 6)

14-15 Jun	Atmospheric Pressure; Pressure Readings; The "Standard" Atmosphere; Global Scale/Upper Level Winds; Forces at Work; Wind Measurement	Ch 6
16 Jun	General Air Circulation; Jet Streams, El Nino/La Nina/ENSO; Local Scale Winds; Airmasses; Weather Patterns; Cyclogenesis	Ch 7, 8
17 Jun	High and Low Pressure Areas; Fronts and Associated Weather	Ch 8
18 Jun	Weather Forecasting	Ch 9

EXAMINATION #2 (Covers in class lecture material roughly pertaining to chapters 6 through 9)

22-23 Jun	Introduction to Thunderstorms; Thunderstorm Hazards - Lightning, Hail, Flash Floods	Ch 10
24-25 Jun	Severe Thunderstorms	Ch 10
28 Jun	Tornadoes	Ch 10
29 Jun	Tropical Meteorology	Ch 11

EXAMINATION #3 (Covers in class lecture material roughly pertaining to chapters 10 and 11)

1 Jul	Introduction to Climatology and Climate Classification	Ch 13
2 Jul	Koppen Climate Types A (Tropical) and B (Arid)	Ch 13
5 Jul	Koppen Climate Types C (Subtropical) and D (Temperate)	Ch 13
6 Jul	Koppen Climate Types E (Polar) and H (Highland)	Ch 13
7 Jul	US/Texas/Austin Climate Classification & Climate Change	Ch 14

EXAMINATION #4 (Covers in class lecture material roughly pertaining to chapters 13 and 14)

Sat / 10 July	**FINAL GRG301K CUMULATIVE EXAMINATION (2 - 5 pm) - REQUIRED**

GRG301K / PLACE NAME LOCATION LIST

About Geography - Blank Base Map Web Site
On Line Geography Knowledge Quiz

This is a list of geographic locations of which all graduating high school and college students should be aware. Put your atlas skills to work by using your Goode's World Atlas (strongly recommended), get to know the actual locations of each place listed here.

GLOBAL SCALE FEATURES

* Equator
* Tropic of Cancer
* Tropic of Capricorn
* Arctic Circle
* Antarctic Circle
* North Pole
* South Pole
* Prime Meridian
* International Date Line

CONTINENTS

* Europe
* Africa
* North America
* South America
* Asia
* Antarctica
* Australia

OCEANS

* Atlantic
* Pacific
* Indian
* Arctic

SEAS, BAYS, GULFS, STRAITS, CHANNELS, PASSAGES, CANALS

* Mediterranean Sea
* Strait of Gibraltar
* Dardanelles
* Black Sea
* Suez Canal
* Red Sea
* Arabian Sea
* Persian/arabian Gulf
* Bay of Bengal
* South China Sea
* Gulf of Alaska
* Hudson Bay
* Gulf of Mexico
* Caribbean Sea
* Panama Canal
* Strait of Florida
* Windward Passage
* Strait of Magellan
* Drake Passage
* Cape of Good Hope
* Cape Horn
* North Sea
* Yucatan Channel
* Bering Sea
* Strait of Hormuz
* Prince William Sound

MAJOR ISLANDS AND ISLAND GROUPS

* Greenland
* Iceland
* Greater Antilles
* Lesser Antilles
* British Isles
* Madagascar
* Cyprus
* Sicily
* Borneo
* New Guinea
* Taiwan
* Japan
* Aleutian Islands
* Hawaiian Islands
* New Zealand
* Azores
* Canary Islands
* Bahama Islands
* Bermuda
* Trinidad
* Windward Islands
* Philippines
* Seychelles

OCEAN CURRENTS

* North Equatorial Current
* Equatorial Counter Current
* South Equatorial Current
* Gulf Stream
* Labrador Current
* Canary Current
* East Brazil Current
* Japan (Kuroshio) Current
* California Current
* Alaska Current
* Peru (Humboldt) Current
* East Australian Current

MAJOR MOUNTAIN RANGES, PLATEAUS AND BASINS

* Alps
* Andes Mountains
* Atlas Mountains
* Brazilian Highlands
* Arabian Plateau
* Himalayas
* Hindu Kush Mountains
* Rocky Mountains
* Ural Mountains
* Congo Basin
* Great Basin
* Amazon Basin
* Iranian Plateau

DESERTS

* Atacama
* Australian
* Gobi
* Kalahari
* Patagonian
* Sahara
* Mojave
* Sonora
* Chihuahua

PENINSULAS

* Arabian
* Balkan
* Crimean
* Florida
* Iberian
* Korean
* Italian
* Indochina
* Indian
* Scandinavian
* Yucatan
* Baja California
* Labrador
* Palmer (Antarctic)

NORTH AMERICAN PHYSICAL FEATURES

* Sierra Nevada
* Sierra Madre Oriental
* Sierra Madre Occidental
* Appalachian Mountains
* Alaska Range Brooks Range
* Ozark Plateau
* Baffin Island
* Vancouver Island
* Long Island
* Newfoundland
* Gulf of St. Lawrence
* Puget Sound
* James Bay
* Cape Hatteras
* San Francisco Bay
* Tampa Bay
* Chesapeake Bay
* Delaware Bay
* Long Island Sound
* Grand Canyon
* Lake Winnepeg
* Lake Superior
* Lake Michigan
* Lake Huron
* Lake Erie
* Lake Ontario
* Great Salt Lake
* Lake Okeechobee
* Columbia-Snake River
* Yukon River
* Fraser River
* Colorado River (Southwest US)
* Colorado River (Texas)
* Mississippi River
* Missouri River
* Arkansas River
* Ohio River
* Tennessee River
* James River
* Potomac River
* Rio Grande River
* Red River (of the North)
* Red River (Texas/Oklahoma)
* Brazos River

CANADIAN PROVINCES

* Price Edward Island
* Nova Scotia
* New Brunswick
* Newfoundland
* Quebec
* Ontario
* Manitoba
* Saskatchewan
* Alberta
* British Columbia

CANADIAN TERRITORIES

* Northwest Territories
* Yukon

UNITED STATES

* Know All Fifty States and the State Capital of Each
* District of Columbia
* Major Cities:
    - O New York City
    - O Chicago
    - O Los Angeles
    - O San Francisco
    - O Seattle
    - O Dallas/Fort Worth
    - O Miami
    - O Boston
    - O Washington DC
    - O Houston
    - O St Louis
    - O New Orleans
    - O Minneapolis/St. Paul
    - O Denver
    - O Memphis
    - O Atlanta
    - O Miami
    - O Detroit

MEXICO

* Know That it Consists of 31 States and Federal District of Mexico City
* Know Locations of the U.S./ Mexico Border States:
    - O Sonora
    - O Chihuahua
    - O Coahuila
    - O Nuevo Leon
    - O Tamaulipas

CENTRAL AMERICAN REGION

* Belize
* Guatemala
* El Salvador
* Honduras
* Nicaragua
* Costa Rica
* Panama

CARIBBEAN REGION

* Puerto Rico
* U. S. Virgin Islands
* Cuba
* Haiti
* Dominican Republic
* Jamaica

SOUTH AMERICAN REGION

* Colombia
* Venezuela
* Guyana
* Suriname
* French Guiana
* Ecuador
* Peru
* Brazil
* Bolivia
* Chile
* Paraguay
* Argentina
* Uruguay

UNITED KINGDOM

* England
* Wales
* Scotland
* Northern Ireland

EUROPE

* Finland
* Sweden
* Norway
* Denmark
* Iceland
* Republic of Ireland
* France
* Germany
* Belgium
* the Netherlands
* Luxembourg
* Switzerland
* Austria
* Spain
* Portugal
* Italy
* Greece
* Malta
* European Turkey
* Poland
* Hungary
* Czech Republic
* Romania
* Bulgaria
* Republic of Macedonia
* Croatia
* Serbia
* Montenegro
* Bosnia
* Herzegovina
* Albania
* Slovakia

SOUTHWESTERN ASIA

* Turkey
* Syria
* Lebanon
* Jordan
* Saudi Arabia
* Yemen
* Oman
* United Arab Emirates
* Qatar
* Bahrain
* Kuwait
* Iraq
* Israel
* Iran
* Afghanistan

SOUTHERN ASIA

* Pakistan
* India
* Bangladesh
* Sri Lanka
* Myanmar / Burma
* Nepal
* Bhutan

SOUTHEASTERN ASIA

* Thailand
* Laos
* Vietnam
* Cambodia
* Malaysia
* Brunei
* Indonesia
* Philippines

EAST AND INTERIOR ASIA

* People's Republic of China (Mainland)
* People's Republic of Mongolia
* Democratic People's Republic of Korea (North Korea)
* Republic of Korea (South Korea)

NORTHERN AFRICA

* Morocco
* Algeria
* Tunisia
* Libya
* Egypt

SAHARAN AFRICA

* Mauritania
* Mali
* Niger
* Chad
* Sudan

WESTERN AFRICA

* Gambia
* Senegal
* Guinea
* Guinea-Bissau
* Liberia
* Ivory Coast (Cote D'ivoire)
* Ghana
* Burkina Faso
* Togo
* Benin
* Nigeria
* Cameroon
* Sierra Leone

EQUATORIAL / CENTRAL AFRICA

* Central African Republic
* Equatorial Guinea
* Gabon
* Congo Republic
* Democratic Republic of Congo (Zaire)

EASTERN AFRICA

* Ethiopia
* Somalia
* Kenya
* Uganda
* Rwanda
* Burundi
* Tanzania
* Djibouti
* Eritrea

SOUTHERN AFRICA

* Angola
* Zambia
* Malawi
* Botswana
* Zimbabwe
* Mozambique
* Swaziland
* Lesotho
* Republic of South Africa
* Namibia

RUSSIAN FEDERATION

* Russia
* Ukraine
* Armenia
* Azerbaijan
* Belarus
* Georgia
* Kazakhstan
* Kyrgyzstan
* Moldavia
* Tadzhikistan
* Turkmenistan
* Uzbekistan
* Estonia
* Latvia
* Lithuania

AUSTRALIA

* Australian Capital District
* Western Australia
* Northern Territory
* Queensland
* New South Wales
* Victoria
* South Australia
* Tasmania

OCEANIA

* Polynesia (Area Inside a Triangular Line That Connects Hawaiian Islands
* Easter Island and New Zealand - Means "Many Islands."
* Micronesia (North & West of Polynesia - Means "Small Islands."
* Melanesia (Narrow Area West of Polynesia - Means "Black Islands,"
  Which Mainly Refers to the Color of the Inhabitants of These Islands)

Last updated 05/31/2010 tmk