REPORT OF THE GRADUATE COUNCIL
September 2, 2004

Departmental Request for a New Course:

A654  BICH 628 Computational Biology. (3-0) Credit 3. Introduction to computational biology; formulations of biology problems as computational problems; computational approaches to solve problems in genomics and proteomics. Prerequisite(s): Graduate classification or approval of instructor. Cross-listed with CPSC 628.

A655  BIPH 655 Molecular Biophysics: Macromolecular Interactions. (3-0) Credit 3. Macromolecular interactions, i.e. binding from a perspective strongly rooted in statistical thermodynamics; understanding of the rates and equilibria of macromolecular interactions involving proteins, nucleic acids, and biological membranes; emphasize quantitative analysis and evaluation of different binding models relevant to biological regulation and signal transduction. Prerequisite(s): BICH 603, CHEM 601, Comprehensive Biochemistry.

A657  CPSC 628 Computational Biology. (3-0) Credit 3. Introduction to computational biology; formulations of biology problems as computational problems; computational approaches to solve problems in genomics and proteomics. Prerequisite(s): Graduate classification or approval of instructor. Cross-listed with BICH 628.

A656  HLTH 635 Race, Ethnicity and Health. (3-0) Credit 3. Explore in-depth the racial, ethnic, and cultural dimensions that underlie health and health disparities; special attention will be paid to culture, social economic status, and governmental policies as they influence the adaptations of health practices. Prerequisite(s): Graduate classification.

A652  MKTG 660 Marketing Consulting. (1-4) Credit 3) Application of marketing knowledge through the planning and execution of marketing projects for businesses. Prerequisite(s): MKTG 621 or equivalent.

A653  OCNG 657 Data Methods and Graphical Representation in Oceanography. (3-0) Credit 3. Provide the basic tools and techniques to process, analyze, and visualize oceanographic data sets; multi-disciplinary approach; real-world applications to physical, biological, chemical and geological oceanographic data; basic instruction in the MATLAB programming language. Prerequisite(s): Knowledge of vector calculus and basic statistics.
REPORT OF THE GRADUATE COUNCIL
September 2, 2004

Departmental Request for a Change in Course:

Course Hour Change:

C627  PHYS 615 Methods of Theoretical Physics I

From: (3-0) Credit 3

To:    (4-0) Credit 4

Course Hour and Description Change:

C626  PHYS 601 Analytical Mechanics

From: Lagrange and Hamilton approaches to dynamics; canonical transformation and variational techniques; central force and rigid body motions; the mechanics of small oscillations and continuous systems.

To:    Hamilton approaches to dynamics; canonical transformation and variational techniques; central force and rigid body motions; the mechanics of small oscillations and continuous systems.

From: (4-0) Credit 4

To:    (3-0) Credit 3

Course Title, Hour, and Description Change:

C628  OCNG 604 Biological Ocean Cruise

From: Biological Ocean Cruise

BIOLOGICAL OCN CRUISE

To:    Ocean Observing Systems

OCEAN OBSERVING SYSTEMS

From: (2-0) Credit 2

To:    (3-0) Credit 3
REPORT OF THE GRADUATE COUNCIL
September 2, 2004

From: Biological Ocean Cruise. Specialized experience in research methods and analysis in biological oceanography via preparation for and participation in a research cruise of at least two weeks duration under the supervision of a Texas A&M oceanography faculty member. May be taken up to two times for MS candidates and four times for PhD candidates.

To: Ocean Observing Systems. Investigate the rationale behind ocean observing systems; familiarize students with the relevant social, scientific design, technology, and policy issues associated with observing systems.
New Course Requests
August 27, 2004

MEMORANDUM

TO: Dr. Rick Giardino, Dean
Office of Graduate Studies

THROUGH: Dr. Fuller W. Bazer, Executive Associate Dean
College of Agriculture and Life Sciences

FROM: Dr. David Wm. Reed, Chair
COALS Graduate Program Council

SUBJECT: Approved Courses or Course Changes

On August 25, 2004 the Graduate Program Council approved the following courses:

a. BIPH 655, Molecular Biophysics: Macromolecular Interactions, Department of Biochemistry and Biophysics
b. BICH 628, Computational Biology, Department of Biochemistry and Biophysics, Cross-listed with CPSC 628

DWR: ejr
Attachments
xc: Dr. Gregory Reinhart
Dr. Jim Hu
Texas A&M University
Departmental Request for a New Course
Undergraduate  Graduate  Professional
Submit original form and 25 copies. Attach a course syllabus to each.*

1. This request is submitted by the Department of Biochemistry & Biophysics

2. Course prefix, number and complete title  BICH 628 Computational Biology

3. Course description (not more than 50 words) Introduction to computational biology; formulations of biology problems as computational problems; computational approaches to solve problems in genomics and proteomics.

4. Prerequisite(s) Graduate classification or approval of instructor Cross-listed with CPSC 628
   Cross-listed courses require the signatures of both department heads.

5. Is this a variable credit course? ☐ Yes ☑ No If yes, from _____ to _____.

6. Is this a repeatable course? ☐ Yes ☑ No If yes, this course may be taken _____ times. Will the course be repeated within the same semester/term? ☐ Yes ☑ No

7. Has this course been taught as a 489/689? ☐ Yes ☑ No If yes, how many times? __2__ Indicate the number of students enrolled for each academic period it was taught. Fa'2002 (29); Fa'2003 (14)

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      No
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      M.S., Ph.D. in biochemistry & biophysics, computer science

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix  Course #  Title (exclude punctuation)
    BICH 628  COMPUTATIONAL BIOLOGY

    Lect.  Lab  SCH  Subject Matter Content Code  Admin. Unit  Acad. Year  FICE Code
    0 3 0 0 0 3 1 0 1 0 3 0 0 1 9 0 7 2 0 0 5 4 6 0 1 0 3 6 6

    Approval recommended by: 
    Head of Department  Date  Chair, College Review Committee  Date
    Donald K. Juvik  8/20/04  Julie P. Baker  8/27/04
    Head of Department (if cross-listed course)  Date  Dean of College  Date
    Donald K. Juvik  8/20/04  John N. Redd  9/20/04

    Submitted to Coordinating Board by: 
    Dean of College  Date
    John N. Redd  9/20/04

    Director of Academic Support Services  Date  Effective Date
    ______________________________  ______________________________

* Attach a syllabus according to the guidelines on the Internet site www.tamu.edu/admissions/caras. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.
CPSC/BICH 628 Computational Biology

Instructor: Sing-Hoi Sze
Email: shsze@cs.tamu.edu

What is Computational Biology

Computational Biology is the application of computational techniques to solve problems in biology, which involves DNA and protein sequences. Traditionally, people from various disciplines, such as computer science, mathematics and statistics, formulate and address these biology problems within their own disciplines. More recently, multi-disciplinary collaborations become the norm, which include participations of biologists and biochemists.

Goal

The main purpose of the course is to expose students to various active research areas in computational biology. Everyone who is interested in computational biology is encouraged to take the course. For most topics, considerable time will be spent on presenting latest research ideas, mostly from the computer science point of view. Emphasis will be placed on problem formulation, where many problems in genomics and proteomics will be seen as graph-theoretic or optimization problems. The focus of the lectures is on presenting the newest computational approaches from research papers after briefly describing classical approaches in each area.

Topics

- Approaches for DNA and EST sequence assembly, its formulation as the shortest common superstring problem or the Eulerian path problem, and other heuristic approaches.
- Computational formulations and algorithms for biological sequence comparison problems, including the longest common subsequence formulation, pairwise and multiple sequence alignment approaches, and techniques for biological database search.
- Combinatorial and statistical approaches to motif finding and its application to find regulatory sites, including statistical optimization techniques, clique-based graph-theoretic formulations, tree-based branch-and-bound
techniques, and the random projection technique.
- Computational approaches to gene finding and gene structure prediction, including *ab-initio* and similarity-based approaches.
- Scalable algorithms for comparative genomics and whole genome comparisons.
- Study of genome rearrangements as mathematical operations on permutations and inferring evolutionary relationships as phylogenetic trees.
- RNA and protein structure prediction and techniques for studying protein folding pathways with or without known native state.
- Probe selection problem for microarray design and approaches for clustering microarray expression data.
- Computational proteomics and finding similar substructures in biological networks by graph-based methods.

**Prerequisites**

Graduate classification or approval of instructor.

**Grading**

Homework assignments (40%)

- Consists of short written assignments handed out every one or two weeks. These exercises will emphasize creativity in problem solving.

Presentation (40%)

- Towards the end of the semester, each student will give a short presentation either on a paper of interest or on a survey of a research area.

Final Exam (20%)

**References**

Computational Biology books


**Computer Science books**


**Biology books**


**Americans with Disabilities Act**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.

**Academic Integrity**

The Aggie Honor Code: An Aggie does not lie, cheat, or steal or tolerate those who do.

Honor Council Rules and Procedures can be found at [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor).
Americans with Disabilities Act (ADA) Policy Statement
The following ADA Policy Statement (part of the Policy on Individual Disabling Conditions) was submitted to the University Curriculum Committee by the Department of Student Life. The policy statement was forwarded to the Faculty Senate for information.

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Room 126 of the Koldus Building or call 845-1637.

Academic Integrity Statement
All syllabi shall contain a section that states the Aggie Honor Code and refers the student to the Honor Council Rules and Procedures on the web.

Aggie Honor Code
"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: www.tamu.edu/aggiehonor/

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student:

"On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and 25 copies. Attach a course syllabus to each.*

1. This request is submitted by the Department of Biochemistry and Biophysics

2. Course prefix, number and complete title **BIPH 655, Molecular Biophysics: Macromolecular Interactions**

3. Course description (not more than 50 words). Macromolecular interactions, i.e. binding from a perspective strongly rooted in statistical thermodynamics; understanding of the rates and equilibria of macromolecular interactions involving proteins, nucleic acids, and biological membranes; emphasize quantitative analysis and evaluation of different binding models relevant to biological regulation and signal transduction.

4. Prerequisite(s) **BICH 603, CHEM 601, Comprehensive Biochem** Add prerequisite courses Cross-listed with _Cross-listed courses require the signatures of both department heads._

5. Is this a variable credit course? ☐ Yes ☐ No If yes, from _______ to _______.

6. Is this a repeatable course? ☐ Yes ☐ No If yes, this course may be taken _______ times. Will the course be repeated within the same semester/term? ☐ Yes ☐ No

7. Has this course been taught as a 489/689? ☐ Yes ☐ No If yes, how many times? 2 Indicate the number of students enrolled for each academic period it was taught. 2003A - 6 students 2004A - 5 students

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)

   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

   M.S., Ph.D. in biochemistry and biophysics, chemistry.

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix | Course # | Title (exclude punctuation)
      | BIPH 655 | Molecular Biophysics |

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<th>Admin. Unit</th>
<th>Acad. Year</th>
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Do not complete shaded area.

Approval recommended by:

[Signatures and dates]

Submitted to Coordinating Board by:

[Signatures and dates]

* Attach a syllabus according to the guidelines on the Internet site www.tamu.edu/admissions/oaras. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.

OARAS-1099
BIOPHYSICS 655 (3 credits)
Special Topics in Molecular Biophysics: Macromolecular Interactions

Instructor: David P. Giedroc
419A Bio/Bio
giedroc@tamucc.edu
845-4231
Course Administrator: Vonnie Kladde, 434 Bio/Bio (5-6252)
Office hours: There are no regularly scheduled office hours for the course. Meetings
with Dr. Giedroc can be arranged by appointment.

Optional Texts: Thermodynamic Theory of Site-Specific Binding Processes in Biological
Macromolecules, DiCera (Cambridge University Press, 1995); Molecular Driving
Forces: Statistical Thermodynamics in Chemistry and Biology, Dill and Bromberg (Garland
Sciences, 2003); Kinetics for the Life Sciences, Gutfreund (ISBN: 0521480272; Cambridge
University Press, 1995) Periodic use of the Biophysics Textbook on-line
(http://www.biophysics.org/btol/) may also occur. Other texts and reading assignments from the current literature will be
arranged as required by the instructor.
Prerequisites: BICH 603, Comprehensive Biochemistry, CHEM 601, Biological
Chemistry or equivalent. Approval can also be sought from the instructor.

Grading:
Examinations: There are two mid-term examinations, each worth 100 points, and a
noncomprehensive final examination to be held during the final exam period, also worth 100 points.
Examinations will be held during the indicated class period.
Exam 1: February 19, 2004
Exam 2: March 30, 2004
Final Exam: To be announced (May sometime)
Problem Sets: Problem sets (15) will be distributed throughout the course of the semester and
all questions will be graded. Students will receive one week to work on them and are encouraged to work together; however, each student must hand in his/her own work.
Each problem set counts 40 points toward the final grade. No late problem sets will be accepted.
Grading summary: 500 points (300 on examinations and 200 points from problem sets).

Course Objectives: The objective of this course is to investigate the subject of
macromolecular interactions, i.e., binding, from a perspective strongly rooted in statistical
thermodynamics and probabilities. The student will gain an understanding of the rates and equilibria of
macromolecular interactions involving proteins, nucleic acids (DNA and RNA), and biological
membranes. The course will emphasize the quantitative analysis and evaluation of different
binding models, rather than the details of the biochemical or spectroscopic methods commonly used to investigate binding equilibria and kinetics. Students will learn practical aspects of nonlinear least squares analysis and the role that computer simulations play in enabling the analysis of equilibrium binding isotherms and kinetic progress curves. A physico-chemical appreciation of the rates and equilibria of macromolecular interactions and linked functions forms the basis for many drug discovery efforts and is integral to understanding the logic of biological regulation and signal transduction.

Course Outline:
1. Equilibrium Binding: Boltzmann distributions and energy levels. Ligand-protein interactions, protein-protein interactions. Binding polynomials and partition functions; linked functions; coupled equilibria. Phenomenological binding models vs. rigorous models of allosteric regulation and site-site cooperativity. Practical considerations of binding analysis; nonlinear least squares analysis.
2. Nucleic acids: Special properties of nucleic acids; counterion condensation theory; effect of salt concentration and type on nucleic acid structure and nucleic acid-protein interactions; preferential interaction coefficients. Large-ligand overlap cooperative binding model to linear lattices (protein-DNA and protein-oligosaccharide interactions). Diffusion control; diffusion and dimensionality reduction in protein-DNA interactions (binding-site search by gene regulatory proteins). RNA structure and folding.

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Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and 25 copies. Attach a course syllabus to each.*

1. This request is submitted by the Department of Computer Science

2. Course prefix, number and complete title: CPSC 628 Computational Biology

3. Course description (not more than 50 words): Introduction to computational biology; formulations of biology problems as computational problems; computational approaches to solve problems in genomics and proteomics.

4. Prerequisite(s): Graduate classification or approval of instructor

5. Is this a variable credit course? ☐ Yes ☑ No
   If yes, from _____ to _____.

6. Is this a repeatable course? ☐ Yes ☑ No
   If yes, this course may be taken _____ times. Will the course be repeated within the same semester/term? ☐ Yes ☑ No

7. Has this course been taught as a 489/689? ☐ Yes ☑ No
   If yes, how many times? _____ 2 __________ Indicate the number of students enrolled for each academic period it was taught. Fa 2002 (29); Fa 2003 (14)

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      No
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      M.S., Ph.D. in computer science, biochemistry & biophysics

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix | Course # | Title (exclude punctuation)
     CPSC | 628 | COMPUTATIONAL BIOLOGY

     Lect. | Lab | SCH | Subject Matter Content Code | Admin. Unit | Acad. Year | FICE Code
     0 | 3 | 0 | 0 | 3 | 1 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 9 | 0 | 4 | 2 | 0 | 0 | 5 | 0 | 6 | 0 | 1 | 0 | 3 | 6 | 6 | Level 6

Do not complete shaded area.

Approval recommended by:

[Signatures]

Head of Department Date

Chair, College Review Committee Date

Dean of College Date

Submitted to Coordinating Board by:

[Signatures]

Dean of College Date

Date Effective Date

* Attach a syllabus according to the guidelines on the Internet site www.tamu.edu/admissions/oaas. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.
Texas A&M University
Departmental Request for a New Course
Undergraduate  Graduate  Professional
Submit original form and 25 copies. Attach a course syllabus to each.*

1. This course is submitted by the Department of  Health and Kinesiology

2. Course prefix, number and complete title of course:  HLTH 635  Race, Ethnicity and Health

3. Course description (not more than 50 words):  Explore in-depth the racial, ethnic, and cultural dimensions that underlie health and health disparities; special attention will be paid to culture, social economic status, and governmental policies as they influence the adaptations of health practices.

4. Prerequisite(s)  Graduate Classification  Cross-listed with

5. Is this a variable credit course?  Yes  No  If yes, from  to

6. Is this a repeatable course?  Yes  No  If yes, this course may be taken  times.

Will the course be repeated within the same semester/term?

7. Has this course been taught as a 489/689?  Yes  No  If yes, how many times?  1

Indicate the number of students enrolled for each academic period it was taught. Being offered Fall 2004 – web based

8. This course will be:
   a. Required for students enrolled in the following degree program(s) (e.g., B.A. in history)

   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

    M.S. in Health Education; M.Ed in Health Education; Ph.D. and Ed.D. in Health Education

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with the departments. Attach approval letters.

10. Prefix  Course #  Title (exclude punctuation)

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<th>HLTH</th>
<th>635</th>
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Approval recommended by:

Head of Department  Date  Signature

Head of Department (if cross-listed course)  Date

Submitted to Coordinating Board by:

Director of Academic Support Services  Date  Effective Date

* Attach a syllabus according to the guidelines on the web site www.tamu.edu/courseforms. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.
RACE, ETHNICITY, and HEALTH

HLTH 635

Texas A&M University
College of Education and Human Development
Department of Health and Kinesiology

Dr. B. Lee Green, Ph.D.
Associate Professor and Director
Center for the Study of Health Disparities
Office: 112 Harrington Tower
Phone: 862-4403
E: lgreen@tamu.edu
Fax: 845-3502
Office Hrs – M, W, F – 10-12
Course Description

AIM: This course will explore racial, ethnic, and cultural dimensions that underlie health and health disparities. Special attention will be paid to culture, social economic status, and governmental policies as they influence the adaptation of health practices. The aim of this course is to introduce students to important health issues that face individuals of different racial/ethnic backgrounds. This course will address and explore a range of issues related to the health status of various racial and ethnic groups. In part, this course will review some of the significant writings/literature that captures key issues related to racial/ethnic health.

Course Objectives: Upon completion of this course, each student will have carefully examined the following:
1. Examine historical factors related to minority health
2. Overview of major health problems minority populations
3. Explain health disparities
4. Discuss the multiple factors that account for health disparities
5. Discuss governmental agencies and their role in eliminating disparities
6. Discuss the need for cultural competency
7. Discuss guidelines for planning programs for diverse populations

TEXTBOOK – Required

Structure: This will be a combined lecture/discussion course. Learning about key issues relative to the health of different racial/ethnic groups requires the absorption of important conceptual ideas. Therefore we will discuss the topics as described in the syllabus, and then we will discuss important writings/literature.

Scholastic Dishonesty: Scholastic dishonesty will not be tolerated. See the TAMU Student Rules and Regulations (#20 – Scholastic Dishonesty) for a complete list. As commonly defined, plagiarism is passing off as one’s the ideas, words, work, writing, etc which belong to another person. You are committing plagiarism if you copy the work of another person and turn it in as your own, even if the other person has given you permission. To avoid plagiarism – Cite your sources.

Statement Regarding Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protections for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Room 126 of the Koldus Building. The phone number is 845-1637.
Evaluation: Grades will be based on the following activities:

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<td>Final Exam</td>
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<td>Article Reviews (2 @ 50 points)</td>
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<td>Paper</td>
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A = 100% – 90%
B = 89% – 80%
C = 79% – 70%
D = 69% – 60%
F = 59% and below

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**Tentative Schedule of Topics**

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Course Introduction/Syllabus/WebCT Orientation</th>
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<tbody>
<tr>
<td>Session 2</td>
<td><strong>Overview of the course – Why study race, ethnicity and health</strong></td>
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<tr>
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<td><strong>Readings:</strong></td>
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<tr>
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<td>Race, Ethnicity, and Health: A Public Health Reader - Chapter 1</td>
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<tr>
<td>Session 3</td>
<td><strong>General Health of the US population</strong></td>
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<tr>
<td>Session 4</td>
<td><strong>Theoretical underpinnings of Black-White health differences in the United States</strong></td>
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<td>Race, Ethnicity, and Health: A Public Health Reader - Chapter 2</td>
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| Session 5 | **Framework for Understanding Health Disparities**  
|           | *Readings:*  
| Session 6 | **National Center for Minority Health and Health Disparities**  |
| Session 7 | **Health issues of African Americans**  
|           | *Readings:*  
|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 5  |
| Session 8 | **Health issues of African Americans**  
|           | *Readings:*  
|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 14  |
| Session 9 | **Health issues of Hispanic/Latino populations**  
|           | *Readings:*  
|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 4  
|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 9  |
| Session 10| **Health issues of Hispanic/Latino populations**  
|           | *Readings:*  
|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 16  |
| Session 11| **Health issues of Asian/Pacific Islanders**  
|           | *Readings:*  
<p>|           | Race, Ethnicity, and Health: A Public Health Reader - Chapter 13  |
| Session 12| <strong>Health issues of Asian/Pacific Islanders</strong>  |
| Session 13| <strong>Health issues of American Indian/Native Americans</strong>  |</p>
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| Session 15 | **Biological Concept of Race – Race, the Power of an illusion**  
Episode 1 – The Difference Between Us  
Readings:  
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| Session 16 | **Biological Concept of Race – Race, the Power of an illusion**  
Episode 3 – The House We Live In  
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Race, Ethnicity, and Health: A Public Health Reader - Chapter 8 |
| Session 17 | **Biological Concept of Race**  
Readings  
Race, Ethnicity, and Health: A Public Health Reader - Chapter 6  
| Session 18 | **Racism and Health**  
Readings:  
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Race, Ethnicity, and Health: A Public Health Reader - Chapter 18  
| Session 19 | **Socioeconomic Status and Health**  
Readings:  
Race, Ethnicity, and Health: A Public Health Reader - Chapter 22  
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<th>Session 20</th>
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| Session 28 | **Cancer in Minority Populations**  
Readings: |
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<th>Session 29</th>
<th><strong>“How We Know What Isn’t So” Discussion</strong></th>
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<th>Session 30</th>
<th><strong>The “Why and How” of Health Education and Health Promotion with minority populations</strong></th>
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| Session 31 | **Critical Thinking in minority health and health disparities:  
Examples of minority health and health disparities research** |
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<th>Session 32</th>
<th><strong>Article Critique 1 Discussions</strong></th>
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<th>Session 33</th>
<th><strong>Article Critique 1 Discussions</strong></th>
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| Session 34 | **Population-Based and Community-Focused Approaches to Minority Health Issues**  
Readings: |
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| Session 35 | **Population-Based and Community-Focused Approaches to Minority Health Issues**  
Readings: |
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<th>Session 36</th>
<th><strong>Critical Thinking: Examination of Community-based participatory research with minority populations</strong></th>
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<td>Session 39</td>
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<td>Session 43</td>
<td>Student Presentations and Discussions</td>
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<tr>
<td>Session 44</td>
<td>Critical Thinking: Development of a health disparities research agenda</td>
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<td>Session 45</td>
<td>Final Examination</td>
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**Assignments**

1. **Article Reviews:** Students will be required to review 2 articles related to health disparities issues. The article reviews gives students an opportunity to examine the current literature and to share this information with other students. The article reviews should be informative as well as critical in nature.

2. **Research Paper:** Students will be required to complete a research paper on a topic related to health disparities. Students will be allowed to select their own topics. However topics should be narrow in scope and include areas that are not discussed in class (for example - do not select a topic of HIV/AIDS community. Instead the topic might be African American faith community attitudes and perceptions regarding HIV/AIDS education). The paper should reflect a careful review of existing literature and must be thoroughly referenced. The paper is to be typed, double-spaced and no longer than 15 pages. Papers will be evaluated on the basis of accuracy, thoroughness, and professionalism of the presentation. You are required to include how concepts presented during lectures relate to the paper.

3. **Outline for Research Paper** – Students will be required to complete an outline for their research paper. The outline should include a summary of your interests (about a paragraph). You need to list which 4-5 studies you selected for your paper and give a brief (1-3 sentences) description of each article (particularly the purpose of study, methods, and results). Lastly the outline should include 2-3 sentences on how the articles all tie together.
PAPER OUTLINE

a. **Introduction (2-3 pages)**
The introduction should frame the area of interest. If you are researching HIV, the paper should discuss the general epidemiologic findings regarding descriptive stats (morbidity, mortality, prevalence, incidence, etc.). You should then discuss the basic risk factors related to the topic. Discuss specifically how this impacts the African American community or some controversy or questions that need to be answered. This sets the stage for you to discuss relevant studies that address the controversy or question.

b. **Study descriptions (3-4 pages)**
In the second section of the paper, you should select 4-5 relevant studies to the question that you have framed in the first section, and examine/describe those in detail.

c. **Study evaluations (3-4 pages)**
In this section you are to examine the strengths and weaknesses of each study. Which studies seem to be stronger in supporting their hypotheses. Are there threats to validity? Did the author address the threats? What are the limitations of the studies? Etc. This section should be a very careful examination of these studies. In addition you should discuss how the articles relate to concepts that were discussed in class.

d. **Conclusions (3-4 pages)**
At this point you are free to reflect in any way you care to about this area of study. Up until now, you have been describing what others have done, and you have been evaluating that work in such a way that you can support an argument through an appeal to logic/facts regarding the research process. In your overall conclusions, you are free to say just about anything you care to about this topic.
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional

Submit original form and 2 copies. Attach a course syllabus to each.

1. This request is submitted by the Department of ___MARKETING___

2. Course prefix, number and complete title ___MKTG 660 MARKETING CONSULTING___

3. Course description (not more than 50 words) Application of marketing knowledge through the planning and execution of marketing projects for businesses.

4. Prerequisite(s) ___MKTG 621 OR equivalent___ Cross-listed with ___Cross-listed courses require the signatures of both department heads.___

5. Is this a variable credit course? ☑ Yes ☐ No If yes, from ___0___ to ___0___.

6. Is this a repeatable course? ☑ Yes ☐ No If yes, this course may be taken ___2___ times. Will the course be repeated within the same semester/term? ☑ Yes ☐ No

7. Has this course been taught as a 489/689? ☑ Yes ☐ No If yes, how many times? ___2___ Indicate the number of students enrolled for each academic period it was taught. Summer '03: 9, Summer '04: 10

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)

   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

   MS-Marketing, MBA, others with approval

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix Course # Title (exclude punctuation)
    ___MKTG 660 MARKETING CONSULTING___

    Lect. Lab SCH Subject Matter Content Code Admin. Unit Acad. Year FICE Code
    0 1 0 4 0 3 5 2 1 4 0 1 0 0 1 6 1 8 3 0 0 5 - 0 6 0 0 3 6 3 2

Approval recommended by:

Head of Department ___Varadanga___ 2/16/04

Chair, College Review Committee 8/5/04

Dean of College 2/20/04

Submitted to Coordinating Board by:

Dean of College 2/20/04

Director of Academic Support Services 8/5/04

To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.

OAR/AS-504
MKTG 689 (proposed 660) – Marketing Consulting

Semester: Summer 2004
Prerequisite: MKTG 621 or equivalent
Duration: 10 weeks; June 1st to August 11th
Instructor: Dr. Stephen McDaniel, Professor of Marketing
Email: s-mcdaniel@tamu.edu
Tel: (979) 845-5801
Graduate Assistant: Gautham Gopal. V,
Email: gautharn@neo.tamu.edu
Tel: (979) 255-7228

Course Description
Application of marketing knowledge through the planning and execution of marketing projects for businesses.

Course Objectives
1. For students to gain “real world” experience in solving complex and unstructured problems.
2. For students to develop competencies in applying knowledge and skills in marketing consulting.
3. For students to enhance their communication skills by working with clients and colleagues in a team-based situation.
4. To provide companies with perspectives, solutions and/or recommendations to strategic or operational problems/issues.
5. To foster relationships with companies for possible future collaborations.

Procedure & Datelines
1. Companies are to provide project description to faculty committee for review by 2nd April 2004. The project description should include incentives and/or benefits. It is recommended that compensation for the student at least covers the cost of tuition for the course (approximately $1000) Please post or email document to:
   Dr. Stephen W. McDaniel
   Department of Marketing
   Mays Business School
   222J Wehner Building, 4112 TAMU
   College Station, TX 77843-4112
   Email: s-mcdaniel@tamu.edu

2. Projects that meet course requirements, as deemed by the faculty committee, will be posted for students to review by 9th April 2004.

3. Interested students are to submit their resumes to the student course coordinator, Gautham Gopal, by 16th April 2004. The resumes will be posted or emailed to the company contact person immediately.

4. Companies would have two weeks to review the resumes and to conduct interviews. Companies should contact the students directly. Companies are to provide two lists of
2. Projects that meet course requirements, as deemed by the faculty committee, will be posted for students to review by 9th April 2004.

3. Interested students are to submit their resumes to the student course coordinator, Gautham Gopal, by 16th April 2004. The resumes will be posted or emailed to the company contact person immediately.

4. Companies would have two weeks to review the resumes and to conduct interviews. Companies should contact the students directly. Companies are to provide two lists of students ranked in order of preference; one list for MBA candidates, and one list for MS candidates. Please ensure that both lists reach the address above by 30th April 2004.

5. The faculty committee will assemble the teams, and notify both companies and students by 7th May 2004. Every team will have at least three students, and will be composed of both MBA and MS students.

6. The first official class day is June 1st 2004. However, teams may contact their companies and begin the project earlier if they wish to. Students enrolled in this course may not use their Q-drop. Any student who fails to complete this course, except for medical reasons or other emergencies approved by the faculty committee, will receive an “F” letter grade.

7. The frequency of communication and meeting between a team and the company is left to the two parties. Project deliverables and deadlines are also at the discretion of the team and company.

8. Teams are to submit their project proposal report to the faculty committee and to give their presentation to the class during the week of 11th June 2004.

9. Teams are to submit their technical report to the faculty committee and to give their presentation to the class during the week of 23rd July 2004.

10. Teams are to submit their final report and give their presentation to the faculty committee no later 30th July 2004.

11. Teams are to submit their final report and give their presentation to the clients the following week, no later than 6th August 2004.

12. Companies are to provide their evaluation to the faculty committee by 11th August 2004.

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<tr>
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<th>Day</th>
<th>Event</th>
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<tr>
<td>2nd April 2004</td>
<td>Friday</td>
<td>Project description due to faculty committee</td>
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<tr>
<td>9th April 2004</td>
<td>Friday</td>
<td>Project posted for student review</td>
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<tr>
<td>16th April 2004</td>
<td>Tuesday</td>
<td>Students submit their resumes</td>
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<tr>
<td>30th April 2004</td>
<td>Monday</td>
<td>Both candidate preference lists due to faculty</td>
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<td>7th May 2004</td>
<td>Friday</td>
<td>Students and companies notified of team assignment</td>
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<td>1st June 2004</td>
<td>Tuesday</td>
<td>Class officially begins</td>
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<td>7th June - 11th June 2004</td>
<td>Tuesday</td>
<td>In-class project proposal report and presentation</td>
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<td>June 28th – July 2nd 2004</td>
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<td>Mid-Term in-class technical report and presentation</td>
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<td>30th July 2004</td>
<td>Friday</td>
<td>In-class final report and presentation completed</td>
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<td>6th August</td>
<td>Friday</td>
<td>Client final report and presentation completed</td>
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<tr>
<td>11th August</td>
<td>Wednesday</td>
<td>Client’s evaluation due to faculty committee</td>
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**Teaching Methods**

There are no set class times except for when presentations are scheduled. However, teams are expected to meet with the Instructor or their assigned faculty resource frequently to provide updates. Team members are also strongly encouraged to seek the opinion and advice of other students outside their team. During the three in-class presentations, all students are expected to participate actively in discussions and to provide constructive suggestions or comments. The success of this course depends on the ability of students to organize and utilize the resources available from the library, Internet, classmates, previous courses, and faculty advisors.

**Course Requirements**

1. *Project Proposal & Presentation.* Within the first few weeks of the course, teams shall have ready two copies of their project proposal, one copy each for the client and the faculty advisors. The project proposal should cover issues such as scope, timeline, responsibilities, and deliverables. Each teams will be assigned a time to present their proposal to the rest of the class.

2. *Mid-Project Report & Presentation.* Towards the middle of the course, teams will demonstrate their marketing knowledge proficiency through application of relevant principles and concepts to their projects. In both the report and presentation, each team will break down the project into its component problems/Issues, and show how the marketing principles and concepts have helped in their understanding of the problems/issues.

3. *Final Report & Presentation.* At the end of the course, teams will share their research and findings. Ideally, the report should contain clear solution(s) to the problems/issues faced by the client. If a solution is not available, the team must explain why and propose steps towards resolving the problems/issues. In either situation, teams are expected to provide suggestion for implementing their recommendation(s).

4. *Client Report & Presentation.* A copy of the final report must be provided to the client along with a presentation of the team’s solution(s) and/or recommendation(s).
Grading
Class Discussion & Participation 10 percent
Project Proposal & Presentation 20 percent
Technical Report & Presentation 20 percent
Final Report & Presentation 30 percent
Evaluation by Client Total 100 percent

To ensure that all team members actively participate in the internal group activities, each student will be asked to privately evaluate and assign a grade for every other student in the team at the end of the course. These grades will be considered in assigning individual grades.

Americans with Disabilities Act (ADA) Policy Statement
The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Room 126 of the Koldus Building or call 845-1637.

Aggie Honor Code
Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on all work in this course. For additional information please visit: www.tamu.edu/aggiehonor. Since students will be working with businesses on real-world projects, the highest ethical standards, including the non-disclosure of proprietary information, will be upheld.
Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and 25 copies. Attach a course syllabus to each.

1. This request is submitted by the Department of Oceanography

2. Course prefix, number and complete title: OCNG 657 - Data Methods and Graphical Representation in Oceanography

3. Course description (not more than 50 words): Provide the basic tools and techniques to process, analyze, and visualize oceanographic data sets; multi-disciplinary approach; real-world applications to physical, biological, chemical and geological oceanographic data; basic instruction in the MATLAB programming language.

4. Prerequisite(s): Knowledge of vector calculus and basic statistics. Cross-listed with ___________.

5. Is this a variable credit course? ☐ Yes ☐ No If yes, from ________ to ________.

6. Is this a repeatable course? ☐ Yes ☐ No If yes, this course may be taken ________ times. Will the course be repeated within the same semester/term? ☐ Yes ☐ No

7. Has this course been taught as a 489/689? ☐ Yes ☐ No If yes, how many times? ____________ Indicate the number of students enrolled for each academic period it was taught. 928 - 15 students, 048 - 9 students

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
M.S., Ph.D. programs in Oceanography

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix Course # Title (exclude punctuation)

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<th>DATA METHODS GRAPH REP</th>
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Do not complete shaded area.

Approval recommended by:

Head of Department Date

Head of Department (if cross-listed course) Date

Submitted to Coordinating Board by:

Director of Academic Support Services Date Effective Date

* Attach a syllabus according to the guidelines on the Internet site www.tamu.edu/admissions/ocars. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.

OARAS-10999
COURSE SYLLABUS

OCNG 657: DATA METHODS AND GRAPHICAL REPRESENTATION IN OCEANOGRAPHY

Spring 2006 Semester
MWF, Room: O&M Room 205, Time: TBA
TTVN to Galveston Campus (GAL) (if interest allows)

Instructor:
Dr. Steven F. DiMarco, Associate Professor
Department of Oceanography
3146 TAMU
Office: 614B Eller O&M Building
Phone: 979-862-4168
FAX: 979-847-8879
Email: sdimarco@tamu.edu
Office Hours: Tuesday 3:00-5:00
            Wednesday 10:00-12:00

Objective:
To provide the basic tools and techniques to collect, process, analyze, and visualize oceanographic data sets (both temporal and spatial).

Course description:
The course is logically divided into segments that parallel the stages a student is likely to encounter while performing oceanographic research. The student will be taken from conceptualization of a scientific problem, to instrumentation, data collection and processing, to appropriate analysis techniques, and finally to data archiving and management. The approach is multi-disciplinary, i.e., with emphasis on real-world applications to physical, biological, chemical, and geological oceanographic datasets, and includes basic instruction in the MATLAB programming language.

Prerequisites:
Graduate level. (STAT 601 or STAT 610 or equivalent strongly recommended).

Grading:
60% homework problem sets (3), 20% midterm exam, and 20% final exam. Grades will be based on the following grading system: 90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, <60=F.
Course Topics/Calendar:

Collection
Week 1. Introduction to Oceanographic instrumentation
Week 2. Introduction to MATLAB programming and mathematical review
Week 3. Sampling and measurement theory basics.
Week 4. Graphical visualization of oceanographic data

Processing
Week 5. Oceanographic data processing: outlier removal and gap filling
Week 6. Basic metrics of oceanographic data analysis: quality control and assurance
Weeks 7-8. Data reduction, filtering, and smoothing of oceanographic data
Midterm

Analysis
Week 9. Temporal and spatial scales analysis: oceanographic field design
Week 10. Tidal analysis
Week 11. Spectral analysis of oceanographic data
Weeks 12-13. Spatial representation and analysis of oceanographic data fields
Week 14. Objective analysis and contouring

Database management
Week 15. Database management and Ocean-related methods resources
Final

Students are encouraged to bring and use their own data sets for class projects.

List of assignments:
Weekly reading assignments.
Homework Problems 1. Problem set due (approximately) end of week 6.
Homework Problems 2. Problem set due (approximately) end of week 11.
Homework Problems 3. Problem set due (approximately) end of week 15.
Midterm Exam (written)
Final Test. (written)

Textbook:

Resources:
Access to University/Department computing resources. MATLAB access through Department and University site license.

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Cain Hall, or call 845-1637.
Copyright and Plagiarism Policy

All materials generated for this class are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.

As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without with research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Students Rules, student-rules.tamu.edu, under the section “Scholastic Dishonesty.”

Know the Code. Aggie Code of Honor:
http://www.tamu.edu/aggiehonor/
20 August 2004

MEMORANDUM

To: Dr. Michael T. Longnecker, Interim Head Department of Statistics

From: Dr. Wilford Gardner, Head Department of Oceanography

Subject: OCNG 657, Data Methods and Graphical Representation in Oceanography

The Department of Oceanography has developed a new course called “Data Methods and Graphical Representation in Oceanography”. The proposed syllabus is attached. The Department would like to submit the course for approval and inclusion in the 2005-2006 graduate catalog. Prior to submission of the new course request to the University Curriculum Committee, I would like to inform you of this course and ask that you review the proposed request for possible overlap with any course the Department of Statistics already offers. We have worked hard to eliminate overlap and have stated on the syllabus that STAT 601 and 610 are strongly encouraged as prerequisites. Please note that this course is proposed as one of the required courses for the proposed Ocean Observing Systems track for a Master of Geosciences degree; a track in which the Department of Statistics is also involved (STAT 610(required) and STAT 626(elective)).

Please sign below if this request meets with your approval. If you have any questions, please call me or Dr. Steven DiMarco at 862-4168 or by email at wgardner@ocean.tamu.edu or sdimarco@tamu.edu. Thank you for your time.

Approved by: ___________________________ Date: 8/20/04

Xc: S. DiMarco, Department of Oceanography
Course Change Requests
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

1. This request is submitted by the Department of ____________

2. Course prefix, number and complete title of course: PHYS 615, Methods of Theoretical Physics I

3. Change requested:
   a) Prerequisite(s): From __________________________ To __________________________
   b) Withdrawal (reason) __________________________
   c) Cross-list with __________________________
       Cross-listed courses require the signatures of both department heads.
   d) Change in course title and description. Enter complete current course title and current course description; complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.*

4. Complete current course title and current course description: PHYS 615, Methods of Theoretical Physics I; Orthogonal eigenfunctions with operator and matrix methods applied to solutions of the differential and integral equations of mathematical physics; contour integration, asymptotic expansions of Fourier transforms, the method of stationary phase and generalized functions applied to problems in quantum mechanics.

5. Complete proposed course title and proposed course description (not to exceed 50 words): PHYS 615, Methods of Theoretical Physics I; Orthogonal eigenfunctions with operator and matrix methods applied to solutions of the differential and integral equations of mathematical physics; contour integration, asymptotic expansions of Fourier transforms, the method of stationary phase and generalized functions applied to problems in quantum mechanics.

6. a) As currently in course inventory:

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Approval recommended by:
Head of Department __________________________ Date 2/1/03
Chair College Review Committee __________________________ Date 8/5/04

Head of Department (if cross-listed course) __________________________ Date 8/5/04
Dean of College __________________________ Date 12/19/04

Submitted to Coordinating Board by:

Deadline: __________________________

Director of Academic Support Services __________________________ Date
Effective Date __________________________

* Attach a syllabus according to the guidelines on the Internet site oar-as.tamu.edu. To have this form reviewed, please send to Linda F. Lacey, Director of Academic Support Services, 1265 TAMU or fax to 847-8737.
PHYSICS 615 Methods of Theoretical Physics I

Instructor: Dr. Chris Pope, ENPH 527, 845-7793
Prerequisites: PHYS 412 and PHYS 304 or equivalents; MATH 311 and 412 or equivalents
Text: Mathematical Methods for Physicists by Ajrken
Grading: Exam 1 - 25%
        Exam 2 - 25%
        Weekly Homework Assignments – 15%
        Final Exam (cumulative) – 35%

Course Description: Differential equations, Green functions, Sturm-Liouville theory; vector spaces and operators; complex variables, contour integration, calculus of residues, analytic continuation, asymptotic expansions, method of steepest descent.

Syllabus:

I. Differential Equations 6.0 weeks
differential equations of physics; separation of variables in second-order PDEs; series solutions; special functions: Legendre, spherical harmonics, Bessel; general properties of second-order ODEs; singular points; Wronskians; solution of inhomogenous equations, Green functions; Sturm Liouville theory

II. Vector spaces 3.0 weeks
linear vector spaces; linear operators; Hilbert space

III. Functions of a complex variable 5.0 weeks
Complex numbers, quaternions, octonions; analytic functions; contour integration; classification of singularities of a complex function; calculus of residues; evaluation of real integrals using complex methods; analytic continuation; gamma function; riemann zeta function; summation of series; asymptotic expansions; method of steepest descent

Exams 1.0 weeks
---------------------
15.0 weeks

ADA statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.

Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

1. This request is submitted by the Department of Physics

2. Course prefix, number and complete title of course: PHYS 601 Analytical Mechanics

3. Change requested:
   a) Prerequisite(s): From ___________________________ To ___________________________
   b) Withdrawal (reason) __________________________________________________________
   c) Cross-list with ___________________________ (Cross-listed courses require the signatures of both department heads.
   d) Change in course title and description. Enter complete current course title and current course description; complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.*

4. Complete current course title and current course description: PHYS 601, Analytical Mechanics; Lagrange and Hamilton approaches to dynamics; canonical transformation and variational techniques; central force and rigid body motions; the mechanics of small oscillations and continuous systems.

5. Complete proposed course title and proposed course description (not to exceed 50 words): PHYS 601, Analytical Mechanics; Hamilton approaches to dynamics; canonical transformation and variational techniques; central force and rigid body motions; the mechanics of small oscillations and continuous systems.

6. a) As currently in course inventory:

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Approval recommended by:

Head of Department: ___________________________ Date: 8/11/04

Chair, College Review Committee: ___________________________ Date: 8/3/04

Dean of College: ___________________________ Date: 2/3/04

Submitted to Coordinating Board by:

Director of Academic Support Services: ___________________________ Date: ___________________________ Effective Date: ___________________________

* Attach a syllabus according to the guidelines on the Internet site car-as.tamu.edu. To have this form reviewed, please send to Linda F. Lacey, Director of Academic Support Services, 1265 TAMU or fax to 847-8737.
PHYSICS 601 Analytical Mechanics

Instructor: Dr. Carl A. Gagliardi
Professor of Physics, Cyclotron Institute, 845-1411

Prerequisites: PHYS 302 and PHYS 311 or MATH 602, or equivalents

Text: Theoretical Mechanics of Particles and Continua
by Fetter and Walecka

Grading: Exam 1 - 25%
Exam 2 - 25%
Weekly Homework Assignments – 15%
Final Exam (cumulative) – 35%

Course Description: Basic principles; Lagrangian and Hamiltonian dynamics; small oscillations, including coupled oscillators and both linear and non-linear systems; central forces and scattering; accelerated and rotating coordinate systems and the application to rigid body motion.

Syllabus:
Chapter 1, Sects. 1&2 Basic Principles 1.0 week
Chapter 2 Accelerated (and Rotating) Coordinate Systems 2.0 weeks
Chapter 3 Lagrangian Dynamics 2.5 weeks
Chapter 4, Sects. 21-23+ Small Oscillations 2.0 weeks
Supplement text with discussion of anharmonic oscillators and how they lead to non-linear effects.

Chapter 1, Sects. 3-5+ Central Forces and Scattering 2.0 weeks
Text discussion will be supplemented.

Chapter 5 Rigid Bodies 2.5 weeks
Chapter 6, Sects. 32-34 Introduction to Hamiltonian Dynamics 2.0 weeks
Exams 1.0 weeks
----------
15.0 weeks

ADA statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.

Mark Zoran
Associate Dean for Graduate Studies

The attached course change forms request that PHYS 601 be changed from 4.0 credit hours to 3.0 credit hours and that PHYS 615 be changed from 3.0 credit hours to 4.0 credit hours. You had asked sometime ago for changes in the syllabi and unfortunately the paperwork got lost on my desk. Revised syllabi are now attached.

We have been teaching the courses with the revised credit and contact hours for the past two years, as PHYS 689. The revised formats have been working well. We cannot schedule the 689 sections for Fall 2004 until these forms reach OGS. I hope there is still time to do this.

Thanks,
Lewis Ford
Physics
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
Submit original form and 25 copies.

1. This request is submitted by the Department of Oceanography.

2. Course prefix, number and complete title of course: OCNG 604 - Biological Ocean Cruise.

3. Change requested:
   a) Prerequisite(s): From ____________________________ To ____________________________
   b) Withdrawal (reason) ____________________________
   c) Cross-list with ____________________________
   Cross-listed courses require the signatures of both department heads.
   d) Change in course title and description. Enter complete current course title and current course description; complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.*

4. Complete current course title and current course description: Biological Ocean Cruise
Specialized experience in research methods and analysis in biological oceanography via preparation for and participation in a research cruise of at least two weeks duration under the supervision of a Texas A&M oceanography faculty member. May be taken up to two times for MS candidates and four times for PhD candidates.

5. Complete proposed course title and proposed course description (not to exceed 50 words): Ocean Observing Systems
Investigate the rationale behind ocean observing systems; familiarize students with the relevant social, scientific design, technology, and policy issues associated with observing systems.

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   Approval recommended by:
   
   Head of Department 6/15/04
   Chair, College Review Committee 8/23/04
   Dean of College 8/23/04
   
   Submitted to Coordinating Board by:
   
   Dean of College 8/23/04

   Director of Academic Support Services Date Effective Date

   * Attach a syllabus according to the guidelines on the Internet site www.tamu.edu/admissions/oars. To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.

   DAR/AS-1699
COURSE SYLLABUS

OCNG 604 OCEAN OBSERVING SYSTEMS
FALL 2006

Monday/Wednesday/Friday, 10:00-11:00AM
O&M Room 205, TTVN

Instructor:
Dr. Steven F. DiMarco
Department of Oceanography
3146 TAMU
Office: 614B Eller O&M Building
Phone: 979-862-4168
FAX: 979-847-8879
Email: sdimarco@tamu.edu
Office Hours: Tuesday/Thursday 3:00-5:00

Objective: to train a new generation of ocean professionals about the motivation, technical
design and operation, and policy issues associated with Ocean Observing Systems.

Course Description: The recently published Preliminary Report of the U.S. Commission on
Ocean Policy has recommended that the United States implement the Integrated Ocean
Observing System to "substantially advance our ability to observe, monitor, and forecast
ocean conditions and to contribute significantly to global Earth observing capabilities". During
this class students will investigate the rationale behind ocean observing systems,
and familiarize them with the relevant social, scientific, design, technology, and policy
issues associated with observing systems. The class is logically divided into two
segments titled "Technical" and "Policy". During the "Technical" segment students will
learn technical aspects of designing, implementing, and the operation of ocean observing
systems. During the "Policy" segment, students will investigate policy issues associated
with ocean observing systems such as societal relevance and expectations, international
coordination and planning, and the roles of government, academic, and the private sector.

Prerequisites: Graduate level status.

Grading: 25% mid-term, 25% final exam, and 50% class project. Grades will be based on the
following grading system: 90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, <60=F.
Course Topics:
1. Rationale and motivation for coastal and global ocean observing systems
2. Sampling and instrumentation strategies and backbone system design
3. Interdisciplinary considerations
4. Regional enhancements: coastal versus global issues
5. Data: telemetry, quality assurance, archival, dissemination
6. Providers and users communities
7. Numerical model uses and misuses
8. Policy considerations and the politics of Ocean Observing

Class calendar:
Week 1. Introduction, Rationale and Motivation

Technical
Weeks 2-3. Observational Platforms and Instrumentation
Weeks 4-5. Backbone System Design Strategies and New/Advanced Technology
Week 6. Interdisciplinary and Regional Enhancements
Week 7. Data Issues
Week 8. Numerical Modeling: Analysis, prediction, and assimilation
Midterm

Policy
Week 11. Science and Observing Systems: the Role of Academia
Week 12. The Role of the Private Sector
Week 13. Existing Observing Systems
Weeks 14-15. Student presentations
Final

List of assignments:
Class project. Students will choose a topic related to ocean observing systems and submit a written report and make an oral presentation based on independent research.
Mid-term Exam (written)
Final Test (written)

Textbook:

Other required material:
Other material to be covered include seminal papers on ocean observing systems and the Global Ocean Observing System. For example: W. D. Nowlin, Jr., et al., 1996. An Ocean Observing System for Climate, Bull. Of the Amer. Met. Soc. 77(10), 2243-2273.

Resources:
The class will make use of the Texas Automated Buoy System (TABS), the ocean observing system designed, operated, and maintained by the Geochemical and Environmental Research Group at Texas A&M University.
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Copyright and Plagiarism Policy

All materials generated for this class are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.

As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without with research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Students Rules, student-rules.tamu.edu, under the section “Scholastic Dishonesty.”

http://www.tamu.edu/aggiehonor/