

APPENDIX.
Supplementary Information to selected Proposals
CLAS Committee on Curricula and Courses
April 12, 2005

2005-53 GEOC forms for Information Literacy and Writing in the Major

Appendix 2: GEOC Program Plan For Information Literacy.

THIS PROPOSAL REVISES THE ORIGINAL ENGLISH PLAN FOR THE “INFORMATION LITERACY” REQUIREMENT by adding one course to those previously approved.

Major Program: **ENGLISH**

Briefly describe how Information Literacy will be taught within your major program. List courses in which these skills will be embedded.

To fulfill the Information Literacy requirement, English majors will be trained in advanced research methods in literary study, including the use of a variety of print and electronic sources such as the MLA bibliography and other field-specific databases. Student research will typically culminate in the writing of a 10-15 page research paper, or may be represented by a series of shorter research assignments, including an annotated bibliography, survey of an archive, or analysis of a research website. Students will satisfy their Information Literacy requirement by taking one of the following junior/senior capstone courses called “Advanced Study”: English 279: Advanced Study: Drama; English 280: Advanced Study: Poetry; English 281: Advanced Study: Prose; English 282: Advanced Study: Literary Criticism and Theory; English 283: Advanced Study: British Literature; English 284: Advanced Study: American Literature; English 287: Advanced Study: Ethnic Literature; English 288: Advanced Study: Anglophone Literature; **ENGL 289: Advanced Study: Literature of Australia, Canada, Ireland, and New Zealand**; and English 290: Advanced Study: Lesbian, Gay, Bisexual, and Transgendered Literature. In addition, students may also satisfy their Information Literacy requirement by taking English 268W.

Are all these courses required of your students? If not, how will you assure that all students attain the exit expectations for Information Literacy.

Students will be required to take at least one of the courses listed above.

Date of Approval by Faculty or Appropriate Faculty Committee_9/15/04

Date of Approval by School/College C&C Committee_Pending
Major Program contact person: A. Harris Fairbanks. 486-2376.
albert.fairbanks@uconn.edu

Appendix 3: GEOC Program Plan for the “Writing in the Major” General Education Requirement.

THIS PROPOSAL REVISES THE ORIGINAL ENGLISH PLAN FOR THE “WRITING IN THE MAJOR” REQUIREMENT BY DROPPING THE ORIGINAL SET OF COURSES THAT WOULD SATISFY THE REQUIREMENT AND SUBSTITUTING A DIFFERENT SET.

Major Program: **English**

1. List the 200-level W courses or their equivalents (See Instruction Sheet) which students in the major program may use to satisfy the university general education requirement of a 200-level writing intensive course in the major (or related) field of study. (The options listed here must be approved by GEOC and the University Senate. See instruction sheet.)

268W, 279W, 280W, 281W, 282W, 283W, 284W, 287W, 288W, 289W, 290W.

2. Briefly explain how the writing components of the courses listed above are central to the major program, particularly for courses offered by related programs. (For example, a course offered by MCB might teach writing of a form and content that is also central to the major in PNB. Explain the relevance.)

The English Department wishes to replace our original set of courses that satisfy the Writing in the Major requirement with these “Advanced Study” courses, which are (with one addition) those that now satisfy the Information Literacy requirement. These courses will now become “capstone courses” that will combine the information literacy function--training students to find appropriate information--with the function of the Writing in the Major requirement--training them to incorporate that information into their writing in forms and with a system of documentation specific to the discipline.

3. If any courses listed above are offered by an academic unit that does not normally provide resources for the major program, attach a letter of agreement from the appropriate Dean, Director, or Department Head. N/A

4. Estimated number of majors currently in their senior year: 150

5. How does the program intend to meet the demand for 200-level W courses in the major? [Provide information on staffing, reallocation of resources, creation of additional class sections, or any other information that may be useful for planning purposes.]

Some staff within the department will be assigned to these courses rather than others,

but there should be no net increase in staff required since the increased number of students taking these W courses will be offset by a corresponding decrease in the W courses that made up our original Writing in the Major Plan.

6. Will any courses listed above be open to students outside the major program? If “yes”, roughly estimate the number of seats available to students outside the major.

Date of Approval by Faculty or Appropriate Faculty Committee: 9/15/04

Date of Approval by School/College C&C Committee: Pending

Major Program contact person: A. Harris Fairbanks. 486-2376.

albert.fairbanks@uconn.edu

2005-74

**University of Connecticut
Department of Modern and Classical Languages
Italian Section
2XX BUSINESS ITALIAN
MWF**

Instructor:

Office: Office hrs:

E-mail:

I. Course Description and Objectives:

* Thus course examines issues that are central to the world of business, economy, and finance in Italy and introduces students to the behavioral patterns of Italians in the workforce. Besides examining socio-cultural issues, this course also facilitates students' acquisition of essential business vocabulary and terminology and develops the ability to communicate in those forms of written and oral expression that are typical of the Italian business world. Written practice will have as its main objective the composition of a “dossier” of verbal typologies: formal and informal letters, fax, e-mail, curriculum vitae and cover letters, letters of complaints, request for additional information, advertising, and so on. Oral practice will be founded upon highly context-specific comprehension and communication, such as answering the phone, receiving and taking messages, formal introduction of oneself and one's product, presentation of oral reports, negotiation, job interview, and so on.

III. Criteria for evaluation

- Quizzes 10%
- Presentations 25%

- Written drills 25%
- Mid-term Exam 15%
- Final Exam 15%
- Participation 10%

A = 100-94 B - = 83-80 D+ = 69-67
 A- = 93-90 C+ = 79-77 D = 66-64
 B+ = 89-87 C = 76-74 D- = 63-60
 B = 86-84 C- = 73-70 F = 59-0

III. Textbook

Giovanna Pellizza e Marco Mezzadri, *L'italiano in azienda* (Perugia: Guerra edizioni, 2002)

LECTURE SCHEDULE

Week 1: In Cerca di Lavoro

In Ufficio: Annunci, colloqui

Al Telefono: convocazione per il colloquio

Corrispondenza Commerciale: lettera di accompagnamento, c.v.,

(Unità 1: pp. 10-20)

Week 2: In Azienda

In Ufficio: Presentazioni e titoli

Al Telefono: Appuntamenti e messaggi

Corrispondenza Commerciale: lettera formale e circolare

(Unità 2: pp. 21-36)

Week 3: Facciamo Pubblicità

In Ufficio: capire e discutere

Al Telefono: teleformare, lasciare messaggi

Corrispondenza Commerciale: richieste di informazioni per posta e fax

(Unità 3; pp. 37-52)

Week 4: Preparare un viaggio

In Ufficio: prenotazioni, memo, informazioni generali

Al Telefono: telefonare all'agenzia e all'albergo

Corrispondenza Commerciale: fax di conferma

Unità 4: pp. 53-68)

Week 5: Il viaggio d'Affari

In Ufficio: cercare informazioni

Al Telefono: telefonare al cellulare, chiedere informazioni
Corrispondenza Commerciale: usare il mail
(Unità 5: pp. 69-84)

Week 6: Visita a una Ditta

In Ufficio: discussione formale e informale, l'accordo
Al Telefono: trattare con la segretaria
Corrispondenza Commerciale: richiesta di informazioni con il mail
(Unità 6: pp. 85-102)

Week 7: Preparazione per esame di Mid-term

Week 8: Confrontare l'offerta

In Ufficio: Discutere coi colleghi, stabilire accordi
Al Telefono: prednere un messaggio, iniziare una telefonata
Corrispondenza Commerciale: la risposta all'ordine
(Unità 7: 103-116)

Week 9: Questioni di denaro

In Ufficio: settori di attività, metodi di pagamento
Al Telefono: Richiamare e concludere la telefonata
Corrispondenza Commerciale: pagamenti e rapporti con le banche
(Unità 8: 117-130)

Week 10: Merci in viaggio

In Ufficio: ordini per il trasporto e controllo qualità
Al Telefono: richiamare e verificare
Corrispondenza Commerciale: trattare con uffici di spedizione e trasporti
(Unità 9: 131-146)

Week 11: Affrontare problemi

In Ufficio: Reclami e soluzioni
Al Telefono: telefonata di lamentele
Corrispondenza Commerciale: risposta al reclamo e soluzioni
(Unità 10: 147-158)

Week 12: Ancora denaro

In Ufficio: sollecitare pagamenti, fatturare
Al Telefono: telefonata di scuse e di ringraziamento
Corrispondenza Commerciale : lettera di reclamo e risposta
(Unità 11: 159-174)

Week 13: A una fiera

In Ufficio: presentare un prodotto

Al Telefono: telefonata informale

Corrispondenza Commerciale: dare informazioni

Unità 12: 175-187)

Week 14: Preparazione per esame finale

2005-75

**University of Connecticut
Department of Modern and Classical Languages
Italian Section
2XX ITALIAN CAPSTONE
MWF**

Instructor:

Office: Office hrs:

E-mail:

I. Course Description and Objectives:

* The purpose of this course is to bring together your previous studies in Italian Language, Literature, and Culture at the University of Connecticut into one capstone course that focuses on refining the reading, writing, listening, and speaking skills that you have acquired in Italian language, while allowing you to apply those skills in a semester long project that synthesizes at least two areas of your undergraduate education.

Italian faculty will give weekly presentations in Italian on many of the areas of study covered in the program's offerings. You will be asked to keep a written journal and engage in meaningful class-discussions. By the end of the first month of class you will begin to work on a project of your choice and will consult regularly with the Instructor in charge. At the end of the semester you will present your work to the rest of the class.

III. Criteria for evaluation

- Journal 25%
- Participation 25%
- Written Project 35%
- Presentation 15%

A = 100-94 B - = 83-80 D+ = 69-67
A- = 93-90 C+ = 79-77 D = 66-64
B+ = 89-87 C = 76-74 D- = 63-60
B = 86-84 C- = 73-70 F = 59-0

Lecture Schedule:

Week 1: *Cultural and Historical Context of Italian Middle Ages*

Class discussion

Journal entries due

Week 2: *Dante, Boccaccio, and Petrarch*

Class discussion

Journal entries due

Week 3: *Renaissance Italy*

Class discussion

Journal entries due

Week 4: *18th century Culture*

Class discussion

Journal entries due

Abstract of Project Due

Week 5: *19th century Culture*

Class discussion

Journal entries due

Week 6: *20th century Culture*

Class discussion

Journal entries due

Week 7: *From Fascist Italy to the fall of the First Republic*

Class Discussion

Journal entries due

Week 8: *Italian Cinema*

Class Discussion

Journal entries due

Week 9: *Italian Theatre*

Class Discussion

Journal entries due

Week 10: *Italian Poetry*

Class Discussion

Journal entries due

Week 11: *Italian American Experience*

Class Discussion

Journal entries due

Week 12: Presentation of Students' Projects

Week 13: Presentation of Students' Projects

Week 14: Presentation of Students' Projects

2005-76

**University of Connecticut
Department of Modern and Classical Languages
Italian Section
Spring 2003
240 ITALIAN COMPOSITION & CONVERSATION II
MWF 9:00-9:50
JHA 109**

Instructor:

Office: Office hrs:

E-mail:

I. Descrizione e obiettivi del corso

* Questo corso continua a sviluppare la capacità a comunicare in Italiano scritto e orale e ad esplorare elementi di cultura Italiana contemporanea. La pratica scritta avrà come obiettivo la composizione di un "dossier" costituito da vari generi di scrittura: dalla lettera di protesta alla lettera di scuse, dalla domanda di lavoro alla domanda di ammissione e curriculum vitae. La pratica orale si fonderà sull'elaborazione di testi argomentativi su temi controversi della società italiana contemporanea quali "l'ecologia," "la politica," "gli extra-comunitari," "il servizio militare femminile," "la pubblicità e il buon costume," "il mondo dei mass-media," ecc. ecc. Inoltre, l'insegnante integrerà il materiale del libro PRO E CONTRO con vari testi tratti da siti

italiani quali www.repubblica.it, www.espressoonline.it, www.lastampa.it, www.rai.it, e altri.

* Per facilitare la pratica orale, gli studenti dovranno leggere gli articoli di **PRO E CONTRO** **prima** della lezione e preparare una relazione scritta su un articolo(assegnato dall'insegnante) seguendo la GUIDA: Il Testo. Nel corso della lezione successiva, gli studenti dovranno prendere una posizione di **PRO O CONTRO** rispetto alle letture, facendo valere le proprie opinioni in maniera argomentativa. Gli studenti saranno anche responsabili per la preparazione di **un minimo di due presentazioni** su argomenti suggeriti dall'insegnante e la cui ricerca verrà effettuata attraverso l'internet.

* Per facilitare la pratica scritta, gli studenti dovranno preparare gli esercizi di Strategie di scrittura secondo le indicazioni dell'insegnante. Mentre la correzione degli esercizi sarà verificata dagli studenti mediante una chiave (= "answer key"), i lavori di produzione testuale, contrassegnati con l'asterisco (=*), dovranno essere consegnati all'insegnante. I lavori consegnati in ritardo verranno penalizzati di **cinque punti**. Ogni lavoro di produzione testuale avrà due stesure: il voto finale sarà dato dalla media della I e della II stesura.

* La preparazione giornaliera degli studenti sarà verificata attraverso brevi quiz a sorpresa.

* Saranno accettate un massimo di **tre assenze**. In caso di ulteriori assenze, verrà richiesto un certificato medico.

III. Criteri di valutazione

- quiz 10%
- presentazioni, Pro e Contro 25%
- lavori scritti 25%
- esame di mid-term 15%
- esame finale 15%
- partecipazione 10%

A = 100-94 B - = 83-80 D+ = 69-67

A- = 93-90 C+ = 79-77 D = 66-64

B+ = 89-87 C = 76-74 D- = 63-60

B = 86-84 C- = 73-70 F = 59-0

III. Testo

Barki & Diadori. Pro e Contro. Bonacci, 1997. (=P e C)

Lucia Cini. Strategie di scrittura. Bonacci, 1998. (=S di S)*

(* Data la natura del materiale, si raccomanda l'uso di un dizionario della "Lingua Italiana.")

IV. Orario

W Jan 22 Introduzione, "Guida" e Ripasso
F Jan 24 P e C. Unità 13 pp. 57-59

M Jan 27 P e C: Unità 13 p. 60

W Jan 29 S di S: Unità 12 es: 1, 2, 3, 6, 7, DUE: * 8 (2 pagine)

F Jan 31 P e C: Unità 14 pp. 61-63

M Feb 3 P e C: Unità 14 p. 64

W Feb 5 S di S: Unità 13 es: 1, 2, 3, 7, DUE: * 8 (2 pagine)

F Feb 7 P e C: Unità 15 pp. 65-67

M Feb 10 P e C: Unità 15 p.68

W Feb 12 S di S: Unità 14 es: 1, 2, 5, 6, DUE: * 7 (2 pagine)

F Feb 14 **Presentazioni**

M Feb 17 P e C: Unità 16 pp. 69-71

W Feb 19 P e C: Unità 16 p.72

F Feb 21 **Presentazioni**

M Feb 24 S di S: Unità 15 es: 1, 2, 4, DUE: * 5

W Feb 26 P e C: Unità 17 pp. 73-75

F Feb 28 P e C: Unità 17 p.76

M Mar 3 S di S: Unità 16 es: 1, 2, DUE: * 5

W Mar 5 P e C: Unità 18 pp. 77-79

F Mar 7 P e C: Unità 18 p.80

M Mar 10 MIDTERM EXAM

W Mar 12 P e C: Unità 19 pp.81-83

F Mar 14 P e C: Unità 19 p. 84

SPRING RECESS

M Mar 24 S d S: Unità 17 es: 1,2, DUE *7 (2 pagine)

W Mar 26 P e C: Unità 20 pp. 85-87

F Mar 28 P e C: Unità 20 p. 88

M Mar 31 S di S Unità 18 es: 1, 2, 5, DUE: * 7 (2 pagine)

W Apr 2 P e C: Unità 21 pp.89-91

F Apr 4 P e C: Unità 21 p.92

M Apr 7 S di S: Unità 19 es: 1, 3, 4, 5, DUE: * 9 (2 pagine)

W Apr 9 P e C: Unità 22 pp.93-95

F Apr 11 P e C: Unità 22 p. 96

M Apr 14 **Presentazioni**

W Apr 16 P e C: Unità 23 pp.97-99

F Apr 18 P e C: Unità 23 p.100

M Apr 21 **Presentazioni**

W Apr 23 P e C: Unità 24 pp. 101-103

F Apr 25 P e C: Unità 24 p.104

M Apr 28 **Film**: "La vita è bella," di Roberto Benigni

W Apr 30 **Film**: "La vita è bella," di Roberto Benigni

F May 2 **Class-Discussion on Benigni's film**

M May 5 S d S: Unità 20 es. 1, 2, DUE: * 6 (2 pagine su "La vita è bella")

FINAL EXAM (Time and location to be announced)

2005-79 Plan of study: Individualized Major in Integrative Geosciences

[**Note from the chair**: The complete plan of study is in an Excel document not suited to posting on the Web. The following link will allow you to download this file:[Integrative Geoscience Plan of Study](#). The document below is an abridged version displaying an overview of course requirements.]

**THE UNIVERSITY OF CONNECTICUT
STRUCTURED INDIVIDUALIZED MAJOR
MAJOR TITLE: SCHOOL OR COLLEGE:**

Integrative Geosciences College of Liberal Arts and Sciences

PREREQUISITE COURSES:

see attached

RUN

ELEMENTS OF IMJR PLAN OF STUDY	NING TOT AL (CRE DITS)
<p>CORE COURSES: Number of credits: <i>19 cr (min); 21cr (max)</i> (at least 9 credits) List of core courses: <i>GEOL 250, GEOL 251, GEOL 252, GEOL 253</i> <i>One of GEOL 228, GEOL 229, GEOL 234</i> <i>One of GEOG 246, NRME 219, NRME 277</i></p> <hr/> <p><i>In most cases, the core courses will be drawn from two or more departments. If the core courses are drawn from a single department, then a minimum of 12 credits of the other courses that complete the Structured IMJR must come from at least one other department.</i></p>	19 cr (min); 21 cr (max)
<p>WRITING IN THE MAJOR REQUIREMENT: Number of credits: <i>6 cr</i> (at least 6 credits) List of relevant courses to satisfy the capstone writing requirement: <i>INTD 295W, GEOL 297W</i></p> <hr/> <p>List of relevant courses to satisfy the additional writing in the major requirement: <i>EEB 209W, EEB 244W, EEB 245W, EEB 293W, or other 200-level course in relevant academic discipline</i></p> <hr/> <p><i>According to the IMJR Writing in the Major requirement, students must take INTD 295W (the IMJR capstone course), INTD 296W (the IMJR honors thesis writing course), or an equivalent departmental course. In addition, all students must nominate one other 200-level course in which they will write in a relevant academic discipline (where feasible, this course should be a W course). Therefore, a structured IMJR may specify a list to satisfy the (Double majors and additional degree students may choose to satisfy the exit level Writing in the Major competency outside the Individualized Major.)</i></p>	22 cr (min); 24 cr (max)
<p>INFORMATION LITERACY REQUIREMENT: Number of credits: <i>6 cr</i> (at least 3 credits) List of relevant courses to satisfy the information literacy requirement: <i>INTD 295W or GEOL 297W and CE 271, EEB 293W, GEOG 232, GEOL 213, GEOL 257, MARN 212, or GEOL 212 (see Part 3 Option 1 Group 1 and Option 2)</i></p> <hr/> <p><i>To satisfy the Information Literacy competency, all IMJRs must take INTD 295W (the IMJR capstone course), INTD 296W (the IMJR honors thesis writing course), or an equivalent departmental course. In addition, all majors must include one research methods or research course in their plans of study. (Double majors and additional degree students may choose to satisfy the Information Literacy competency outside the Individualized Major.)</i></p>	25 cr (min); 27 cr (max)
APPLIED COURSE REQUIREMENT:	28 cr

Number of credits: 3 cr (at least 3 credits) List of relevant courses/experience to satisfy the applied course requirement: <i>GEOL 293/GEOL 294, GEOL 296, or GEOL 299 (see Part 3 Option 1 Group 2 and Option 2)</i>	(min); 30 cr (max)
<hr/> <i>All IMJRs are encouraged to complete an internship, research project, foreign language study, and/or Study Abroad. Each Structured IMJR would incorporate (an) appropriate element(s) of applied courses.</i>	
ADDITIONAL COURSES TO COMPLETE PLAN OF STUDY: <i>see attached (Part 2)</i>	37 cr (min) 42 cr (max)
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
<i>The IMJR Program requires students to complete a plan of study that has academic coherence. This may be expressed as a focus or area of concentration. In a structured IMJR, students might be given a choice of foci or areas of concentration, as well as a menu of courses from which to choose.</i>	
PLAN OF STUDY CREDITS <i>The IMJR requires a 36 credit field of concentration. A minimum of 18 credits must come from courses offered by the School or College that would grant the Individualized Major degree.</i>	37 cr (min); 42 cr (max)

Please attach a statement of purpose that defines the academic focus and coherence of the proposed major.

2005-102 Supplementary Information: EEB 202. Evolution and Human Diversity

Supplemental Material on applicability to General Education
 Carl Schlichting, EEB

A new course that documents and highlights *human diversity within a scientific context*.

Culture: the scientific community.

In addition to the underlying ‘rules’ of the scientific method, fundamental concepts of genetics and evolutionary biology will provide the framework underlying the course.

One key contrast that will be reiterated is that of the cultural conflict within biology

between the preeminence of genes vs. environment in the determination of the traits of individuals, groups etc.

Diversity is not only a social issue. It is increasingly recognized as an important scientific issue as well. Questions range from such fundamental ones as “*What are the genetic bases of human diversity?*” to applied investigations such as “*Can genetic diversity in the response to HIV lead to a cure?*”

The proposed course will investigate the richness of human diversity through scientific examination of such topics as:

The genetic bases for human variation

The lack of genetic support for racial designations

Adaptation within and among human populations

“Nature vs. nurture”: *What are the relative roles of genes and environments in producing human variability?*

Cultural diversity & Cultural evolution: *What is the role of non-genetic transmission of information across generations?*

Hypotheses on the origin and spread of “modern” humans

Discussion of the evolutionary future of humans, e.g., *What effect will future conditions have on promoting or reducing human diversity?*

The course will incorporate materials not just from biology, intentionally bringing in materials from allied disciplines such as psychology and anthropology, to illuminate them from a genetic and evolutionary perspective.

Relation of the course to the new general education requirements

The proposed course will be designed to meet GenEd *Diversity* criteria, specifically:

Criteria 1. Emphasize that there are varieties of human experiences, perceptions, thoughts, values, and/or modes of creativity;

We will examine the origins of some human inventions (e.g., language, tool use, domestication of plants and animals), and trace their paths of dispersion and the ways in which these inventions evolved as they passed from one culture to another.

Criteria 2. Emphasize that interpretive systems and/or social structures are cultural creations;

We will emphasize that differences among human cultures are largely not genetic in origin; much cultural variation is due to the differences in shared experiences that arise due to differences in the environments that populations occupy. The concept of cultural evolution details how traditions and innovations can be passed on non-genetically across generations.

Criteria 3. Consider the similarities that may exist among diverse groups

Human phenotypic and genetic variation will be explicitly examined. It will be shown that there is little genetic basis for the standard human racial divisions, and that there is usually more genetic variation within populations than between them. We will also examine variation among human groups that is related to adaptations to their local

environmental conditions.

The course will also meet the GenEd *Science* criteria (non-laboratory course):

Criteria 1. Explore an area of science or technology by introducing students to a broad, coherent body of knowledge and contemporary scientific or technical methods;

Students will learn general concepts of genetics and evolutionary biology.

Criteria 2. Promote an understanding of the nature of modern scientific inquiry, the process of investigation, and the interplay of data, hypotheses, and principles in the development and application of scientific knowledge;

Course will highlight the progress in our understanding of the evolution of some major human innovations, e.g., domestication, language. We will discuss how hypotheses about origins and causes of human variation are tested (e.g. IQ).

Criteria 3. Introduce students to unresolved questions in some area of science or technology and discuss how progress might be made in answering these questions;

As an example, we might explore the question "How has the human brain and intelligence evolved?"

Criteria 4. Promote interest, competence, and commitment to continued learning about contemporary science and its impact upon the world and human society.

Course will emphasize the genetic and cultural diversity of human populations and the ways that humans have adapted to diverse ecological habitats. We will also discuss the prospects for human evolution in the future.

EVOLUTION AND HUMAN DIVERSITY

SYLLABUS

I. EVOLUTIONARY PRINCIPLES (using human examples)

A. Variation

1. Phenotypes
2. Sources of phenotypic variation

B. Evolutionary Forces

1. Selection
2. Genetic Drift
3. Migration

C. Hierarchical variability: Species and Races

II. GENETICS AND HUMAN VARIATION

A. Mendelian traits

B. Quantitative traits

C. Human diseases

III. EVOLUTION IN HUMAN POPULATIONS

A. Local Adaptation

B. Behavior

C. Group selection

IV. SOCIOBIOLOGY

A. Nature vs. nurture

The basics: $P = G + E + G * E$

B. Two fundamental questions

1. What are the sources of phenotypic variation of a trait?

2. How much *can* a trait be modified further?

C. Case study: IQ

V. CULTURAL EVOLUTION

A. Control over the Environment

B. Primacy of Cultural memory over Genetic memory

C. Cultural Diversity

1. Languages

2. Matriarchal vs. Patriarchal societies

VI. EVOLUTIONARY PAST - HUMAN ANCESTORS

A. Primates & Hominids

B. Origin and Spread of “Modern Humans”

1. Hypotheses of origins

2. Migration patterns

VII. THE EVOLUTIONARY FUTURE OF HUMANS

A. Biological evolution

B. Cultural evolution

EEB 202. Evolution and Human Diversity. Spring, alternate years. 3 units.

An overview of the biological bases of human diversity from genetic and evolutionary perspectives. Topics to be covered will include: The genetic basis for human variation and race; adaptations of different human populations; “Nature vs. nurture”: what are the relative roles of genes and environments in producing human variability?; Cultural evolution: What is the role of non-genetic transmission of information across generations?; Hypotheses on the origin and spread of “modern” humans.

Enrollment Requirement Group

Open to sophomores.

Spring 2005
Group 4 and Group 3

Evolution and Human Diversity **Carl Schlichting, EEB**

A new course that documents and highlights *human diversity within a scientific context*.

Culture: the scientific community.

In addition to the underlying 'rules' of the scientific method, fundamental concepts of genetics and evolutionary biology will provide the framework underlying the course. One key contrast that will be reiterated is that of the cultural conflict within biology between the preeminence of genes vs. environment in the determination of the traits of individuals, groups etc.

Diversity is not only a social issue. It is increasingly recognized as an important scientific issue as well. Questions range from such fundamental ones as "*What are the genetic bases of human diversity?*" to applied investigations such as "*Can genetic diversity in the response to HIV lead to a cure?*"

The proposed course will investigate the richness of human diversity through scientific examination of such topics as:

- ◆ The genetic bases for human variation
- ◆ The lack of genetic support for racial designations
- ◆ Adaptation within and among human populations
- ◆ "Nature vs. nurture": *What are the relative roles of genes and environments in producing human variability?*
- ◆ Cultural diversity & Cultural evolution: *What is the role of non-genetic transmission of information across generations?*
- ◆ Hypotheses on the origin and spread of "modern" humans
- ◆ Discussion of the evolutionary future of humans, e.g., *What effect will future conditions have on promoting or reducing human diversity?*

The course will incorporate materials not just from biology, intentionally bringing in materials from allied disciplines such as psychology and anthropology, to illuminate them from a genetic and evolutionary perspective.

Relation of the course to the new general education requirements

The proposed course will be designed to meet GenEd **Diversity** criteria, specifically:

Criteria 1. Emphasize that there are varieties of human experiences, perceptions, thoughts, values, and/or modes of creativity;

We will examine the origins of some human inventions (e.g., language, tool use, domestication of plants and animals), and trace their paths of dispersion and the ways in which these inventions evolved as they passed from one culture to another.

Criteria 2. Emphasize that interpretive systems and/or social structures are cultural creations;

We will emphasize that differences among human cultures are largely not genetic in origin; much cultural variation is due to the differences in shared experiences that arise due to differences in the environments that populations occupy. The concept of cultural evolution details how traditions and innovations can be passed on non-genetically across generations.

Criteria 3. Consider the similarities that may exist among diverse groups
Human phenotypic and genetic variation will be explicitly examined. It will be shown that there is little genetic basis for the standard human racial divisions, and that there is usually more genetic variation within populations than between them. We will also examine variation among human groups that is related to adaptations to their local environmental conditions.

The course will also meet the GenEd **Science** criteria (non-laboratory course):

Criteria 1. Explore an area of science or technology by introducing students to a broad, coherent body of knowledge and contemporary scientific or technical methods;

Students will learn general concepts of genetics and evolutionary biology.

Criteria 2. Promote an understanding of the nature of modern scientific inquiry, the process of investigation, and the interplay of data, hypotheses, and principles in the development and application of scientific knowledge;

Course will highlight the progress in our understanding of the evolution of some major human innovations, e.g., domestication, language. We will discuss how hypotheses about origins and causes of human variation are tested (e.g. IQ).

Criteria 3. Introduce students to unresolved questions in some area of science or technology and discuss how progress might be made in answering these questions;

As an example, we might explore the question "How has the human brain and intelligence evolved?"

Criteria 4. Promote interest, competence, and commitment to continued learning about contemporary science and its impact upon the world and human society.

Course will emphasize the genetic and cultural diversity of human populations and the ways that humans have adapted to diverse ecological habitats. We will also discuss the prospects for human evolution in the future.

2005-103

Syllabus for EEB 276W section

In addition to all exams and assignments required of EEB 276, EEB 276W students will write an extensive research paper on one of a series of topics provided by the instructor, or on a topic of their choice pending instructor approval. The paper will focus on the internal structure of plants (i.e. plant anatomy) from a functional, phylogenetic or ecological perspective.

Students will be required to consult at least 15 external sources, 10 of them from the primary published literature, i.e. not reviews or web sites.

Students will produce a final product of at least 15 text pages, double spaced, font 12, margins 1.25 inches. In addition, students will produce a title page, abstract, and bibliography in a professional journal style, and appropriate figure legends and citations for any figures used. Note: Students who fail the W assignment will fail the entire course.

The time table will be approximately:

2 wks for choosing a topic, obtaining instructor approval (This long start up time is to give students a chance to become comfortable with the course content and instructor expectations)

2 wks for producing a list of 5 primary references, and outline

1 wk for student meetings with instructor

1 wks for producing the introduction

1 wk for student meetings with instructor to discuss editorial comments

2 wks for revision of introduction and the remainder of the outline and the list of remaining references

1 wk for meeting with instructor to discuss editorial comments

3 wks for complete first draft

1 wk for student meetings with instructor to discuss editorial comments

2 wks for completed final draft

(16 wks total)

2005-105

SYLLABUS

EEB 333 *EVOLUTIONARY DEVELOPMENTAL BIOLOGY*

INSTRUCTORS: *ELIZABETH JOCKUSCH & CARL SCHLICHTING*

I. An Organismal View of Development

Morphogenesis: cell division and differentiation

Early stages in animal development

Blastulas, gastrulas, & the phylotypic stage

Early stages in plant development

Embryos and endosperm

Origins of development/ontogeny

How can development be modified?

Changes in timing

Creation (deletion) of stages

Terminal addition

Insertion/Deletion

II. A Gene-centered View of Development

Developmental Genetics

Gene expression & regulation

Pattern formation

Regulatory networks

How can development be modified?

Structural gene changes

Regulatory changes

Gene co-option

Gene duplication

III. Homology

Background

Homology at different hierarchical levels

gene sequences, functions, organs

Biological vs. historical homology concepts

Fractional homology – when is it ‘enough’?

IV. “Constraints”: Limits to Evolutionary Change

What are constraints? How can they be identified?

Genetic factors

Linkage

Lack of V_g : & stabilizing selection

Pleiotropy & oppositional selection: Life History trade-offs

Developmental / Functional Constraints

Phylogenetic “inertia”

Constraint as opportunity? Time-scale of Constraint

V. Heterochrony & Heterotopy

Heterochrony: Alberch et al.

Morphological studies: Paleontological/Neontological

Gene expression studies

Avoiding Pan-heterochrony

Heterotopy: Morphological studies

Gene expression studies

VI. Reaction norms

Background

Phenotypic plasticity

Polyphenism

Canalization

Genetic assimilation

Development as a reaction norm

VII. Modularity and Integration

Background – D’Arcy Thompson

Modularity of morphology

Modularity of gene regulatory networks

VIII. Evolvability

Evolution of diversity

Evolution of novelty

Hopeful Monsters?

Key innovations

Gene duplication & polyploidy

IX. Historical Evo-Devo

Pioneers: Geoffroy vs. Cuvier, von Baer, Owen, Haeckel

Evolutionary Embryologists: Goldschmidt, de Beer, Waddington, Schmalhausen

Botanical Evo-devo: Buchholz, Takhtajan

The split with the Modern Synthesis

Renaissance: S.J. Gould, E.B. Lewis, Brian Hall

A new split: Phenotype vs. Molecular

Projects

End of Appendix for April 12, 2005