

Hampshire College

**Course
Descriptions**

**Spring Term 1973
Amherst,
Massachusetts**

HAMPSHIRE COLLEGE
Spring Term 1972

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REGISTRATION DATES AND CALENDAR

Registration Period for Fall Term	Monday, November 27 - Friday, December 15
Discussions with Advisers	Monday, November 27- Friday, December 1
Selection Period	Monday, December 4- Thursday, December 7
Registration	Monday, December 11 - Friday, December 15
Spring Term courses begin	Monday, February 5
Drop-Add Period	Monday, February 5 - Friday, February 16
Last day to register for Five College Interchange	Friday, February 9
Spring Recess	Saturday, March 17 - Sunday, April 1
Pre-registration for Fall Term	Monday, April 30 - Friday, May 4
Last day of classes	Saturday, May 12
Reading Period	Monday, May 14 - Sunday, May 20
Examination Period	Monday, May 21 - Friday, June 1

HAMPSHIRE COLLEGE ACADEMIC PROGRAM

DIVISIONS

Students at Hampshire College progress through three sequential Divisions, Basic Studies, School Studies, and Advanced Studies, moving steadily toward greater independence in study. This divisional framework, which replaces the conventional freshman-senior sequence, is designed to accommodate individual patterns of learning and growth.

Each Division marks a stage in the student's progress toward understanding and mastery of the subjects the student chooses for study, and each of them has its own distinctive purposes and procedures.

Division I: The Division of Basic Studies introduces students to the aims and methods of liberal education at Hampshire College, giving them limited but direct and intense experience with disciplines in all four Schools. This is done not in the customary introductory survey courses, but through close examination of particularized topics of study in seminars stressing the notion of inquiry. Students in the first division learn how best to inquire into subject matters, how to understand their own educational needs and abilities, and how to develop the arts of self-instruction as they apply to their own style of learning.

Division II: In the Division of School Studies the student develops a concentration in one or more fields while continuing to explore other areas. Students determine with their faculty adviser what they want to achieve in their concentration, and design a program of study which will allow them to explore in depth one or more disciplines within one of the four Schools, and to broaden their knowledge of the linkages among disciplines.

Division III: The Division of Advanced Studies occupies students with advanced studies in their chosen concentration and integrative studies across disciplines. The student designs and completes an independent study, project, or original work. In addition, students participate in advanced integrative work in which they encounter a broad and complex topic requiring the application of several disciplines.

SCHOOL OF HUMANITIES AND ARTS

DIVISION I

AMERICAN BLACK AUTOBIOGRAPHY HA 102	Terry
SEMINAR ON DOSTOEVSKY HA 103	J. Hubbs
COLOR HA 108	Hoener
ELECTRONIC MUSIC HA 114	R. McClellan, Kilgore
OUR MUSIC HA 116	McElwaine
SELF AND SOUL: ETHICS OF ARISTOTLE AND KIERKEGAARD HA 118	Meagher
GODS, BEASTS, AND MEN: THE BEGINNINGS AND THE END OF POLITICAL THEORY <u>HA 121 (SS 122)</u>	Meagher
THE AMERICAN LITERARY LANDSCAPE HA 122	D. Smith
THE POLITICAL NOVEL: THE POLITICS OF ART HA 123 (<u>SS 149</u>)	Lunine
THE MAN-MADE ENVIRONMENT: STRUCTURE AND FORM HA 136	Juster, Pope
ANGLO-SAXON ENGLAND: AN INTRODUCTION TO ITS LANGUAGE AND CULTURE HA 147	Houle
THREE AMERICAN PHILOSOPHERS: EMERSON, JAMES, SANTAYANA HA 148	Lyon
STILL PHOTOGRAPHY WORKSHOP HA 150	Arnold, Liebling, Mayes

DANCE LAB I
HA 156

F. McClellan

THE THEATRE OF CRUELTY
HA 197

C. Hubbs

DIVISIONS I AND II

HAMPSHIRE GRAPHIC DESIGN
HA 109 (HA 209)

Hoener

THE CREATIVE EXPERIENCE
HA 126 (HA 226)

Hoener, Liebling,
Mansfield, Mayes

THE CREATIVE PROCESS IN MUSIC
HA 128 (HA 228)

R. McClellan

COLLEGE WRITING
HA 134 (HA 234)

Houle, F. Smith,
Terry

MODERNISM IN CRISIS: ART SINCE 1959
HA 137 (HA 237)

Scott

SEVENTEENTH-CENTURY STUDIES
HA 138 (HA 238)

Haden, J. Hubbs

PUPPET WORKSHOP
HA 139 (HA 239)

Terry

I AND THOU
HA 166 (HA 266)

J. R. Boettiger

APPRENTICE COURSE IN FILM MAKING
HA 167 (HA 200)

Liebling

MUSIC AT HAMPSHIRE
HA 186 (HA 286)

McElwaine

THEATRE AS EVENT II
HA 198 (HA 298)

Landfield, Schrock

DIVISION II

THE CLOWN
HA 204

C. Hubbs

CULTURE, NATIONALISM, AND IDENTITY
HA 207 (SS 207)

Marquez, Glick,
McKean

THE INTELLECTUAL AND SOCIAL HISTORY OF
SPANISH AMERICA
HA 211 (SS 225)

Marquez, Weaver

CREATIVE MOVEMENT IN THE ELEMENTARY
CLASSROOM
HA 212

F. McClellan

PERFORMANCE WORKSHOP
HA 213

F. McClellan

IMPROVISING MUSIC
HA 214

McElwaine

BETWEEN PAST AND FUTURE: THE POSSIBILITY
OF APPEAL
HA 216

Meagher

THE LITERATURE OF SELF-DISCLOSURE
HA 217

Roberts

PHOTOGRAPHY WORKSHOP
HA 225

Mayes

THE IRRATIONAL ENLIGHTENMENT
HA 245

J. Hubbs

PROBLEMS IN ENVIRONMENTAL DESIGN: ISSUES
AND IDEAS
HA 250

Juster, Pope

STUDIO ART WORKSHOP
HA 280

Hoener, Mansfield

BODY AND PSYCHE: A WORKSHOP IN MOVEMENT
HA 293

J. A. Boettiger

SCHOOL OF HUMANITIES AND ARTS

CURRICULUM STATEMENT: SPRING 1973

In these course listings you will find a quite astonishing range of offerings for the Spring Term. Remember this at the outset as you begin to plan your studies for Division I: the courses in Basic Studies are not intended to serve as introductions to this or that subject matter, but as introductions to modes of inquiry.

The difference is so critical that you will underestimate it only at the peril of promoting your own confusion. There is something like a Copernican revolution going on here--each of the great, traditional disciplines of study (English, History, Philosophy, Music . . . etc.) rather than being treated as a closed system of knowledge in itself, is treated as a perspective on the whole phenomenon of Man.

There are observably different ways in which the artist and the humanist (as contrasted, say, with the scientist) approach their subjects of study, conceive of their problems, attack them, resolve them, report them, or express them, and that is the main matter of concern in any Division I course.

If you take a course with a literary scholar, for example, or with a philosopher, you will learn how a specific kind of humanist, who has mastered one great body of materials in the Humanities, illustrates the general modes of inquiry employed by humanists in a variety of circumstances. It might come down to library methods, the mechanics of analysis, the selection and validation of documentary data or the techniques of argument, but the overriding concern will be to show you a working humanist in action up close. In the arts there is a much greater emphasis necessary on perception and expressive form, but the model should operate the same way.

When you come to take your Division I comprehensive examination in Humanities and Arts, you will work on some problems that represent the next order of complexity beyond what you have already studied. No recap of the course, with spot passages or memorized list of terms--none of that. The purpose of that examination will be to determine diagnostically if you are ready to go on to work in more complex problems, so it will be much more like an entrance exam to Division II than any exam you've had previously.

We have kept the course descriptions as simple and honest as possible. Where it says "seminar" it means regular discussion group meetings in a class no larger than twenty students. Where it says "workshop" the size of the group should be the same, but

the style of work will involve more moving away from the discussion table to some hands-on experience in the studio or out with field problems.

Those of you entering Division II courses will find that they are more typically focused on some special problem within an academic discipline--for example, the dialogues of Plato or the poetry of Eliot, or that they deal with a general problem in the arts or humanities at a much higher order of complexity than is usual in the first Division. The same emphasis will be placed, however, on the interplay of the humanities and the arts.

Perhaps we in this School are most eager to try this academic experiment of putting the Humanities and the Arts to work together because we share the sense of Erich Fromm about the good that "flows from the blending of rational thought and feeling. If the two functions are torn apart, thinking deteriorates into schizoid intellectual activity, and feeling deteriorates into neurotic life-damaging passions."

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HA 102

AMERICAN BLACK AUTOBIOGRAPHY

Eugene Terry

An examination of major autobiographies of the 19th and 20th centuries noting the classic form these works take with their recurrent movement from despair to insight through attention to self, race, and humanity.

Examples of authors to be read: Frederick Douglass, Booker T. Washington, W. E. B. Dubois, James Baldwin, Richard Wright, Eldridge Cleaver, and Malcolm X.

This course has been accepted for listing by the Five College Black Studies Executive Committee. Enrollments through the Five College Interchange program are welcome.

The class will meet twice a week for one two-hour session and one one-hour session. Enrollment is open.

HA 103

SEMINAR ON DOSTOEVSKY

Joanna Hubbs

"Gentlemen, I am tormented by questions; answer them for me."
--Notes from Underground

In this seminar we will read some of the major works of Dostoevsky and discuss them from several perspectives: historical, psychological, literary, and linguistic. We will familiarize ourselves with the social context in which Dostoevsky wrote and critically examine the literary techniques which he used to express the agonies of a psyche caught in the maelstrom of social and cultural change of Russia in the last half of the nineteenth century.

The seminar will include some lecturing, but it will be largely devoted to group discussion. We will meet together once a week for 2-3 hours. Sub-groups of 5-6 students will meet once a week with the instructor. Those who know Russian are particularly encouraged to take the course and undertake special tutorial work on original texts. Students will be expected to do a significant amount of writing.

Works to be read (with probable additions or substitutions):

Notes from the House of the Dead
Winter Notes on Summer Impressions
Notes from Underground
The Double
The Brothers Karamazov
The Possessed
The Pushkin Speech

Enrollment is open.

HA 108

COLOR

Arthur Hoener

This course will be a study of the physical and psychological effects of color. It will examine color theories and how these ideas relate to the practical use of color.

The course is designed to develop and refine visual perception as well as to develop a working knowledge of basic principles. No prior studio experience is required or special talent expected.

The class will meet twice a week for 1½-hour sessions and will involve outside assignments. Each student will be responsible for his personal art supplies which are available through local dealers.

Enrollment is open.

HA 109 (HA 209)

HAMPSHIRE GRAPHIC DESIGN

Arthur Hoener

This course will deal with the problems of the commercial artist on two levels. On the first and most immediate level, we will concern ourselves with running a Graphic Design Service. We will print and design posters for clients in the valley; and in so doing we will deal with the problems of financial organization, production schedules, and most importantly, successful graphic design. The students will design each poster and then print it.

We will explore the possibilities and flexibility of our press, using methods such as letterpress, paper printing, photographic plates, woodcuts, and silkscreen. On a more abstract level, we will look at and discuss the work of well known graphic designers and commercial artists. We will read and discuss material concerning the subject of graphic design today.

Through this course we hope to achieve an understanding of successful graphic design and the situation of the graphic designer today.

The class will meet once a week for an hour, but students will be expected to spend large amounts of time working out of class with the instructor and with each other.

Enrollment is limited to 15 students.

HA 121 (SS 122) GODS, BEASTS, AND MEN:
THE BEGINNINGS AND THE END OF POLITICAL THEORY

Robert Meagher

In order to situate ourselves politically in a thoughtful manner, it is well to realize that, as historical mappings go, both the emergence and the demise of political theory lie behind us. Political philosophy begins with the city, the Greek polis, a place for neither gods nor beasts but for men. According to Plato and Aristotle, a man who is little more than an animal is unsuited for life in the city; whereas the man who is little less than a god has no need of the life of the city. It is men whose lives fall with modesty and moderation between the madness of passion and the madness of thought who require the city as a place of light and speech to illuminate and to articulate their lives and to bring them into being.

From there our political path leads eventually to the denial of the primacy of the possibility of thought, and it remains for man only to calculate his power and his own immediate benefit. We will follow the rough outline of that path from wisdom to power, the path from the fundamental in-commonness of the human to the radical privacy of the human.

Our principal readings will be: Plato, The Republic; Thomas More, Utopia; Machiavelli, The Prince; Thomas Hobbes, Leviathan; Karl Marx, Economic and Philosophical Manuscripts; and Toothing Stones: Rethinking the Political, ed. Robert Meagher. Our final aim will be to question both in theory and in practice whether it is responsible to speak of the end of political theory, or to let others speak of it, or to live as if the only appropriate or possible objects of political thought and speech are privately calculated and fully practicable benefits. However, this aim, if reached, will be the fruit of an arduous route through rewarding but wearying works.

This course will meet twice weekly for two-hour sessions and is limited to 16 students.

HA 122

THE AMERICAN LITERARY LANDSCAPE

David Smith

"The land was ours before we were the land's," says Robert Frost, who also speaks of our "vaguely realizing westward." This course will examine the function of the specifically American setting in the work of a number of American writers from the Puritans through Faulkner and Frost.

Neither a survey nor a course in one genre, the course will instead concentrate on four related sub-themes for which literary examples are plentiful: wilderness, virgin land, the garden, property. Around each of these ideas cluster a number of assumptions, attitudes, and myths, and a lot of good writing. Some likely examples: William Bradford, Captain John Smith, William Byrd, Thomas Jefferson, Crèvecoeur, Cooper, Thoreau, Hawthorne, Mark Twain, Frost, Faulkner, Robert Lowell, James Dickey.

The class will meet twice weekly for two-hour sessions. Enrollment is limited to 16 students.

HA 126 (HA 226)

THE CREATIVE EXPERIENCE

Arthur Hoener, Jerry Liebling, Robert Mansfield, Elaine Mayes

Painting, design, sculpture, film, photography: an exploration of the Creative Experience which is designed to bring together visual artists of differing viewpoints and artistic media in a symposium lecture series dealing with the artist's experience, his relationship to the history of and contemporary thought in his craft, and an exploration of the interrelationship of the Arts.

Leader-lecturers will be Arthur Hoener, Jerry Liebling, Robert Mansfield, and Elaine Mayes. Each artist will explore one medium for two lectures a week. At the end of a cycle of four weeks, a monthly panel-symposium will be held with all four artists participating.

The course has unlimited enrollment and may be taken at Division I or Division II levels. Students will be expected to participate in forums, museum visits, readings, and papers.

The class will meet twice a week for 1½-hour sessions.

HA 128 (HA 228) THE CREATIVE PROCESS IN MUSIC

Randall McClellan

This course is designed as a basic composition course for beginners and as a course in twentieth-century techniques for more advanced composition students. As such, we will meet together once a week for two hours to experiment and share our ideas. The two groups will meet separately in two-hour tutorials designed to meet the specific needs of each.

For those who take the course as Division I, we will examine the process of composing music and create music using a variety of methods. Here the thrust of our work will be to demonstrate music composition as a natural manifestation of the innate creativity of man.

For those in Division II, the course is designed as Part IV of the series Technical Aspects of Music. In our separate sessions we will examine the compositional techniques of such twentieth-century composers as Debussy, Schoenberg, Stravinsky, Webern, Bartok, Hindemith, and Cage. We will then compose music using some of these techniques.

Enrollment will be limited to 20 students. Prerequisites: Division I students - ability to read music; Division II - ability to read music, proficiency in singing or on an instrument, and previous exposure to musical theory.

HA 134 (HA 234)

COLLEGE WRITING

Sheila Houle, Francis Smith, Eugene Terry

This course will be open to students in all Divisions. It will be an open workshop in which students will be grouped in roughly comparable ability groups. The instructors will move from group to group working on different problems with each. Typical group concerns will be: remedial writing for those who really have difficulty with written expression; writing a research paper; writing and its uses in (a) taking reading notes, (b) taking lecture notes, and (c) writing a seminar report.

We will meet twice a week for two-hour sessions. Everyone will write at least one paper each week. Everyone will read many assigned examples of good writing, and we will discuss them. Everyone should come out of the course with the elements of a decent writing style and with the skill and discrimination to handle several kinds of writing.

Enrollment is open.

HA 136 THE MAN-MADE ENVIRONMENT. STRUCTURE AND FORM

Norton Juster and Earl Pope

The Division I course offered in the Fall Term (HA 145) dealt with the processes and approaches to design. This Spring Term course will be concerned with structure and form--that is, the external determinants which give form to our environment. More specifically, it will deal with intuitive approaches to structure, the nature of building materials, and environmental systems. The material will be structured around design projects within a studio format.

Visual presentations, both two-dimensional and three-dimensional models, will be required but no prior technical knowledge or drawing skills are necessary.

Although this course is complementary to the Fall Term course, there is no prerequisite.

The class will be limited to 24 students and will meet twice a week for three-hour sessions.

HA 137 (HA 237) MODERNISM IN CRISIS:
ART SINCE 1959

Kenneth Scott

The course will look at the chronological development of art since 1959 to explore attempts to develop viable alternatives to the modernist tradition and the consequent interweaving of art and criticism. This is to be a comprehensive survey with readings taken from critical journals, anthologies, histories, and seminal theoretical works. Considerable discussion will be given to the art of the precursors, Marcel Duchamp and Yves Kline. We will also consider such topics as the changing roles of museums, galleries, and journals. Field trips may be arranged to New York and Boston.

The class will meet twice a week for two-hour sessions. Enrollment is open.

HA 138 (HA 238) SEVENTEENTH-CENTURY STUDIES

James Haden and Joanna Hubbs

The seventeenth century was the period when, in the judgment of most scholars, our modern Western world was decisively founded, for better or worse. Between the opening of the century and its close, there occurred changes in man's thinking and man's practice such that the West was effectively launched into the modern age. It was the century of Galileo, Harvey, and Newton; of Rubens, Rembrandt, and Velázquez; of Descartes, Locke, and Leibniz; of Cromwell and Louis XIV; of Calderón, Molière, Bunyan, and Milton. It was an age of extremes, of excesses, of power. It was an age when men became almost hyperconscious about the very roots and methods of human thought. These are some of the reasons for knowing about this century.

Seventeenth-Century Studies will therefore attempt to deal with a wide variety of aspects of that era, both major and minor, commonly and not so commonly studied. Work toward any Hampshire Division I area can grow out of it.

This is neither a monolithic course nor a sequence of equal modules. It is a matrix, with a large number of components of many different sizes and shapes, within which you can move in diverse directions. The matrix will contain contributions from the entire Hampshire community, and it is intended to be as open to the community as teachers and learners as possible. Most of it will be public, in the forms of lectures, concerts, films, demonstrations, and the like, and no one needs to be enrolled to participate in these.

Enrolling formally carries with it a commitment to participation on a scale comparable to that of a more conventional course, with work centering around a coordinating seminar (described below). It will be permissible for anyone who wishes to do so to enroll in both seminars, thus comprising two-thirds of his term's work. The seminars are paralleled by the presentations which will form the other part of the program, and all those enrolled are expected to take full advantage of those presentations. At the end of the term, evaluation of students will be through portfolios which form a record of the various things they have done, read, studied, and attended throughout the term.

Seminar A:

Our concern in this seminar will be with the evolution of religious thought and its impact upon the literature of the seventeenth century. The focus will be on France, with occasional excursions into German and Spanish literature.

The seventeenth century is marked by a turn inward--an exploration of man's psyche as the source of value and reality, a source underlined by the rise of Protestantism and its struggle with Catholicism. We will explore the ways in which this conflict reveals itself in the works of Calvin, Pascal, Fénelon, and Bossuet, and how it is in turn reflected in the literature of the period (Mme. de Sévigné, Molière, Corneille, Racine, Grimmelshausen, and Calderón).

This seminar will meet once a week.

Seminar B:

This coordinating seminar centers on philosophy, science, and political events during the seventeenth century. It takes as its theme the idea of method in its transformations from Francis Bacon, Galileo, and Descartes to Locke, Bayle, and Leibniz, and the interrelations of methodology with contemporary scientific and political developments. There will be intensive reading of selected source materials, and students will be expected to take full advantage of the parallel lectures and seminars on related men and ideas.

This seminar will meet once a week, for two hours.

HA 139 (HA 239)

PUPPET WORKSHOP

Eugene Terry

The Puppet Workshop will continue the work begun during the Fall Term, bringing to performance the theatre's first production. A script, a stage, lights, sets, and marionettes have been made during the Fall. Those members of the group who have begun this work will be given preference for those jobs which will complete it.

New members will be expected to design and prepare a new work for the group's repertory. Since a production involves the careful coordination of work by a number of people, the design for each puppet and set must be worked out in detail prior to their making. The first part of the term will be spent, therefore, in script preparation and drawing up plans; the second part, in their execution.

Enrollment is limited to 12 Hampshire students (not counting old hands). Additional students will be accepted through the Five College Interchange program. The class will meet twice a week for two-hour sessions.

HA 147 ANGLO-SAXON ENGLAND:
AN INTRODUCTION TO ITS LANGUAGE AND CULTURE

Sheila Houle

The fifth to the eleventh century was one of the most critical and dramatic periods in English history. After the Romans left Britain, c. 410 A.D., the country was wide open to the invasions of Germanic tribes, whom the 8th-century historian Bede identified as the Angles, the Saxons, and the Jutes. These tribes brought their language and culture to a native population which had retained many features of Roman civilization. Some three centuries later, a new wave of invasions, this time by the Norsemen or Vikings, brought Scandinavian cultural influences to England.

The purpose of this course is to examine closely the rich and complex pattern of English culture during the Anglo-Saxon period. Topics of study will include the political and social structure of Anglo-Saxon society, warfare, the influence of the Church, education, and the formal and thematic features of Old English literature.

Readings will generally be primary sources, and literary texts will be read in the original language--Old English (that stage in English language history lasting from approximately 700-1100 A.D.). Consequently, an ability to read Old English is a prerequisite for the course. Interested students should discuss their linguistic qualifications with the instructor. (There will be January Term 1973 course that could provide the prerequisite.)

Texts for the course are: Peter Hunter Blair, An Introduction to Anglo-Saxon England; The Parker Chronicle; Aelfric's Colloquy; John C. Pope, Seven Old English Poems; Beowulf.

The class will meet twice weekly for 1½-hour sessions and is limited to 16 students.

HA 148

THREE AMERICAN PHILOSOPHERS:
EMERSON, JAMES, SANTAYANA

Richard Lyon

The course will center on selected essays of three American thinkers concerned with the general problems of civilized life and living as well as questions of special concern to philosophers. The views taken by these men of the character and culture of the United States, the nature of belief, the problem of evil, the nature and place of science, the conflict of idealism and materialism, and the grounds of anti-intellectualism will be among the topics discussed. We will sometimes notice the personal character and history of each philosopher and the times in which they lived, with an eye to the ways in which these might assist understanding of their systematic positions. (Whether or not, and in what ways, private and public history influences beliefs were questions of vital interest to the three philosophers themselves.)

The general aim of this Division I course is to introduce three radically different perspectives, or modes of vision--those of a transcendentalist, a pragmatist, and a materialist--as alternative means of comprehending the miscellany (or chaos) of the world and our experience of it.

There will be one lecture a week with group tutorials. Enrollment is limited to 16.

HA 150

STILL PHOTOGRAPHY WORKSHOP

William Arnold, Jerry Liebling, Elaine Mayes

The photograph as Art and Communication--its production and implications.

Photography has become one of the primary means of visual experience today. The directness and impact of the photograph makes an understanding of its techniques indispensable to the artist, teacher, and student. So varied is the use of photography in all areas of human endeavor that the need of a "visual literacy" becomes of basic importance.

The course is designed to develop a personal photographic perception in the student through workshop experiments, discussions of history and contemporary trends in photography, and field problems to encourage awareness of the visual environment.

A \$15.00 laboratory fee is charged for this course. The College will supply chemicals, laboratory supplies, and special materials and equipment. The student will provide his own film and paper.

The class will meet once a week for four hours plus lab time to be arranged. Enrollment is limited to 30 students (two sections of 15 students each).

HA 156

DANCE LAB I

Francia McClellan

This will be a class for people with little or no previous experience.

Dance is: Imagination acting in and through time and space.
Expressing one's emotion through rhythmic movement.
Mind/body working harmoniously in space and in time.
Taking one's place in living space.
Motion--of the instant and part of the continuum of flowing energy.

The class will meet for 1½ hours three times a week. Class work will involve experiences in technique, improvisation, individual and group exploration; and through films, discussions, concerts, and guest artists, I hope we will have an opportunity to discover living philosophies of dance and movement.

Enrollment is limited to 20 students.

HA 166 (HA 266)

I AND THOU

John Boettiger

This workshop will be a self-reflective inquiry into the nature and quality of intimate human relationships.

Mothers and fathers and their children
Husbands and wives and lovers
Friends

--these are the sorts of relationships we shall be exploring out of our own experience and through the ways and works of others.

Our principal interests will be in developing individual perceptions of relationships--the kind of sensory and intuitive and conceptual awareness that promote human understanding; in knowing better the varieties of intimate experience; and in exploring the arts of intimacy and their spoliation--the nurturant and the toxic ways we may be with another in love and friendship, the sorts of considerations that incline one relationship to fruitfulness, another to stagnation, and another to self-destruction.

In selecting the course's membership, an effort will be made to bring together a variety of perspectives, including those of men and women of different ages. Similarly, materials for the course will be drawn from a variety of humanistic sources, including R. D. Laing, Rollo May, and Virginia Satir, the literature of women's liberation, encounter and sensitivity training, and transactional analysis.

The class will meet twice weekly for two-hour sessions. Enrollment is limited to 16 students.

HA 167 (HA 200) APPRENTICE COURSE IN FILM MAKING

Jerry Liebling

Theories and techniques of film production will be developed through the relationship of apprentice to advanced student.

Division I students will become part of the ongoing film production activity of Division II students. The broad range of film inquiry and investigation, as well as actual production techniques, will be advanced through collaborative effort.

The class will meet twice a week for 2½-hour meetings and is limited to six Division I and six Division II students. There will be a fee of \$15.00 for materials.

HA 186 (HA 286)

MUSIC AT HAMPSHIRE

James McElwaine

This course is a continuation of last term's "Workshop in Musical Performance." Meeting as a group once a week, we will listen to each other's performances, discussing them technically, historically, and aesthetically. Tutorial ensembles will account for the balance of the course; these ensembles range from string and wind groups to jazz and rock ensembles.

The class will meet once a week for 1½ hours plus tutorial ensembles. Enrollment is unlimited.

HA 197

THE THEATRE OF CRUELTY

Clayton Hubbs

Antonin Artaud's important and fascinating The Theatre and Its Double (1938), a collection of essays on dramatic theory, is difficult to summarize; essentially, Artaud calls for a return to an atavistic theatre of gesture projecting collective archetypes and a rejection of the "old" psychological and narrative (realistic) theatre. Artaud, a playwright, poet, and actor as well as a theoretician, will be our starting point and his theory our touchstone. We will try to look at other dramatic theory and practice from Artaud's point of view, so the first playwrights we read will be some of Artaud's favorites: Euripides, Seneca, John Ford, Webster, Tourneur, Buchner, Jarry, and Strindberg.

Artaud called for a dreamlike theatre of metaphysical cruelty whose rituals of involvement are patterned after religious rites. In contrast to Artaud, we will consider Chekhov's realistic theatre of human cruelty whose secular rituals of noninvolvement are those of everyday life. Chekhov was concerned to show "life as it is" rather than life as we see it in our dreams (or nightmares). Still, Chekhov and Artaud share a similar expressed objective--to shock us into a recognition of our situation so that we will do better. We will finish our reading and discussion with two contemporary playwrights who exemplify the similar aims and conflicting methods of Chekhov and Artaud: Pinter and Genet.

Because of the amount of material to be covered, the course will be tightly structured. Each student will participate in the teaching of the course by giving at least one class presentation (the written form of which will be given out ahead of time) in addition to writing a paper. The class will meet twice a week for two-hour sessions. Enrollment is limited to 16 students.

HA 198 (HA 298)

THEATRE AS EVENT II

Tim Landfield and Gladden Schrock

This will be a continuation of the master course, begun in the Fall Term, involving playwrights, directors, and actors, and will concentrate on the following:

- An analysis of invention. Imagination as opposed to rational thought. Intellectual paralysis: what is the cathartic when the bind happens? A study of a healthy organism.
- An analysis of language and the oral tradition. Toward an understanding of metaphor. Metaphor in third dimension arrives at plot. A radical approach.
- Characteristic groups of people, locale, ethnicity, income. What constitutes tradition? The necessity of tradition in theatre. Is there theatre without a sense of generation? (This implicates history and history implicates the best of humor.) Field studies of characteristic groups of persons, garnering speech patterns, investments, signs of humor, native imagination, assessing their immunity from intellectual outrage and rational stupor.
- The moot riddle of form versus content.
- The secular and the poetic: what are they and when do they mate?
- Mortality and a use of Time. A way to bear the pain.
- Human contempt and human compassion. The nature of compassionate phenomenology. A sensible approach to a social contract. The rage of irony: to where do we escape?
- Toward a concept of human peerdom. Whose ear do we speak to, whose lips do we touch?

1. Playwrighting Workshop

This workshop will consist of a continuing refinement of playwrighting craft, working extensively on details such as creating an integrated aesthetic universe; abstaining from straw antagonists; the hard reality of plotting; acceptable mediocrity and unacceptable brilliance; is language dead and why not; anger as a route to nowhere; etc.

We will continue to work as rapidly and with as much vigor as the traffic will allow on full length plays, seeing them into production by acting and directing workshops, to be open to the public.

This workshop will meet twice monthly for two-hour sessions. Enrollment is limited to 10 students.

2. Directing Workshop

This is a continuation of the workshop offered in the Fall Term but with longer material, a more exacting look at detail, and putting the 'event' together.

In each workshop we shall attempt to put more and more practical valence upon those definitions arrived at by the main THEATRE AS EVENT course. That is, for instance, what peership means in terms of establishing humor on stage; how does one trust an audience; how to spot an acceptable protagonist; abuse vs. enlightenment; speak softly and carry a big script; nitty gritty of blocking techniques; how to flower a french scene in five-second units; etc. Very little talk in the abstract. It will be practical work--all else is beside the issue.

This workshop will meet once a week for a two-hour session. Enrollment is limited to 10 students.

3. Acting Workshop

This is a continuation of the Fall Term workshop. Topics for concentration will be:

- To be or not to be: further study in characterization.
- The actor as director; the director as actor.
- Through-line; how to sustain a role. The audacity and technique of demanding attention.
- How not to make a jackass of one's self, except to advantage--for the actor and for the audience.
- Aesthetic distance and aesthetic weights. Knowing what ball park one is playing in.

We will be working on increasing lengths of scenes, short plays, some selected full plays--or many, depending upon the individual initiative taken.

The workshop will meet twice weekly for two-hour sessions. Enrollment is limited to 20.

HA 204

THE CLOWN

Clayton Hubbs

The clown, who takes on various forms and names in Western literature, thrives in chaos and therefore seems peculiarly adapted for surviving in a nonstructured ("absurd") world: He is a central figure in many of the works of important modern writers from Dostoevsky to Burroughs. But he is by no means a modern invention and his history is long and fascinating.

Our primary objective in the course will be twofold--to trace the literary (and to some extent social) history of the clown up to the present and to examine his function in the plays, stories, and novels of one contemporary writer, Samuel Beckett. Although Beckett's works will be our center of interest, students will select works of other writers for class presentations and short papers.

The class will meet twice a week for two-hour sessions. Enrollment is limited to 20 students.

HA 211 (SS 225)

THE INTELLECTUAL
AND SOCIAL HISTORY OF SPANISH AMERICA

Robert Marquez and Fred Weaver

This course aims to explore the mutually influencing effect of culture and ideology, politics and economics, on the ethos and history of Spanish America since independence, focusing on Cuba, Peru, and Argentina as examples of general trends throughout the area.

A reading knowledge of Spanish will be helpful but not required. The format of the class will depend on the size of enrollment.

The class will meet twice a week for 1½-hour sessions. Enrollment is open.

HA 212 CREATIVE MOVEMENT IN THE ELEMENTARY CLASSROOM

Francia McClellan

This seminar is an experiment in personal and inter-community education. Our work will involve two facets: (1) we will investigate and discuss concepts of movement education, child psychology, and affective learning; and (2) we will put theories of creative movement education to practice in pre-school and elementary classroom situations, working closely with the curriculum presented in the classrooms in which we participate.

Our concerns for the children we teach will involve:

- Movement as another means of understanding and experiencing curriculum (i.e., language arts, math, science, visual arts, etc.)
- Movement as a way of developing and experiencing self-concepts
- Movement as a way of contacting one's environment
- Movement as a way of contacting one's self
- Movement as a way of developing the ability to listen to others and to oneself
- Movement as a way of sharing a part of oneself
- Movement as a way of making choices, and of following directions within the scope of one's personal preferences (and of finding out what those preferences are)
- Movement as a way of working toward a total group effort

Although much of our practical work will be with children, we will also "practice," discover, and experience our ideas on ourselves, encouraging understanding of ourselves through movement, as we will encourage a child's awareness and experience.

This seminar will meet twice weekly for one 3-hour discussion/experience session and one 60-minute practice session. (Note: we will not begin our classroom practice until the third or fourth week. We will be assisted by a doctoral student from the Center for Aesthetic Education at the University of Mass.) In addition to the two weekly sessions, two one-hour technique classes will be offered weekly to those students enrolled in the seminar (in conjunction with the Performance Workshop).

Enrollment is limited to 8 students. An interview with the instructor is necessary prior to registration.

HA 213

PERFORMANCE WORKSHOP

Francia McClellan

This seminar will meet twice weekly for 1½-hour sessions. Our time will be devoted to the learning and subsequent spring performance of two works: Session for Six, a jazz piece by Anna Sokolow, and another group work as yet undetermined. We will learn these works from their Labanotated dance scores and will perform them in a joint concert with Smith and Mount Holyoke Colleges.

While no knowledge of Labanotation is required for the course, students in the class will be expected to learn elements of Labanotation so that they will participate in the reading of the scores.

In addition to the twice weekly meetings, two one-hour technique classes will be offered weekly to those students enrolled in this seminar (in conjunction with the Creative Movement Workshop).

Enrollment is limited to 15 students.

HA 214

IMPROVISING MUSIC

James McElwaine

Instruction in chordal, atonal, melodic, and rhythmic improvisations. The class will begin with basic chordal theory, including writing "leadsheets," notating both borrowed and original solos. These will be realized through twice-a-week improvisation sessions with a student rhythm section. The class will progress through succeeding difficult chord changes, eventually discarding harmony in favor of pure melodic and rhythmic improvisations.

The class will meet three times per week: once for 1½-hour discussion period and twice for 2-hour improvising sessions.

Enrollment is open.

HA 216

BETWEEN PAST AND FUTURE:
THE POSSIBILITY OF APPEAL

Robert Meagher

This course will be a student colloquium in the philosophy of religion and may be sketched as follows:

To characterize an age is to run a variety of risks, none of them so threatening, however, as the silent incomprehension which equates the current with the real. If what characterizes us, then, as modern and as western is the attempt to alter human fate, human necessities, through the technological control of our resources, natural and human, in what ways is this project called into question by our traditions, philosophical, literary, and religious? Will our past allow us to live with our future; and if so, ought it? Again, do we have any appeals, beyond those of nostalgia and spiritual squeamishness, against the momentum of our characteristically modern designs and capacities; and how might we articulate those appeals? Between past and future, between yes and no, we pause to consider our alternatives.

Six guest speakers will address public lectures to this theme on six Sunday evenings during the Spring Term: February 11 and 25, March 11, April 8 and 22, and May 6. These lectures will form the core of the seminar.

Students enrolled in the course, limited to 16 in number, will be given at the outset a set of readings for each lecture, suggested by the lecturer. On Monday mornings following each of the six public lectures, the students will meet with the lecturer from 9:00-12:00 in order to discuss both his lecture and the recommended readings. Following each such discussion there will be an informal luncheon. Students should expect to prepare at least one essay of seriousness and stature.

A tentative list of guest lecturers for this colloquium follows:

- Joseph M. Duffy, Professor of English Literature, University of Notre Dame
- E. A. Coerner, Professor of Political Theory, University of Notre Dame
- Julian Hartt, Professor of Religious Studies, University of Virginia
- Arthur McGill, Professor of Religious Studies, Harvard University
- William F. May, Professor of Religious Studies, Indiana University
- William Walsh O'Grady, Tutor, St. John's College, Annapolis

HA 217

THE LITERATURE OF SELF-DISCLOSURE

David Roberts

What motives cause a writer to recount his (or her) own life? What does the autobiographer assume his readers want to know? What is he unwilling to tell? What creates the peculiar fascination, for the reader, of writing that we know is both "true" and intimately personal? How well can we know an author through his memoir or diary?

At the heart of most good autobiographical writing lies the uniquely vulnerable act of self-disclosure. Yet the range of literary forms which that disclosure takes, as well as the range of experiences that authors think pertinent to an explanation of their own lives, is immense. Through a study of several modes of literary approach (memoir, fiction, poetry, diary, letters, in addition to autobiography) written out of a variety of cultural contexts (mostly modern), this course hopes to focus on the act of self-disclosure itself, as it is manifested in the written words.

Books will be chosen from among the following:

St. Augustine, Confessions
 Rousseau, Confessions
 Robert Graves, Good-bye to All That
 C. S. Lewis, Surprised by Joy
 Mary McCarthy, Memories of a Catholic Girlhood
 Norman Mailer, The Prisoner of Sex
 Simone de Beauvoir, Memoirs of a Dutiful Daughter
 Doris Lessing, The Golden Notebook
 Sylvia Plath, Ariel (with Ted Hughes' commentaries)
 Anais Nin, Diary
 James Thurber, My Life and Hard Times
 Malcolm X, Autobiography
 Richard Wright, Native Son
 Eldridge Cleaver, Soul on Ice
 George Jackson, Soledad Brother
 Bill Haywood, Autobiography

Each student will also be expected to attempt some personal autobiographical writing.

The class will meet three times weekly for one-hour sessions. Enrollment is open.

HA 225

PHOTOGRAPHY WORKSHOP

Elaine Mayes

This course will have a special and experimental approach to learning photography. In the tradition of an intensive workshop, the class will meet for one 14-hour session (8 a.m. to 10 p.m.) every two weeks.

The uniqueness of the course will be in its potential for experiencing the process of the medium with sufficient time for projects to be begun and completed during each meeting. A class meeting will include photographing, processing, discussion, collaboration, critique session, presentation, and the opportunity for everyone to be involved in a rich and thorough exchange of ideas. During the time between meetings, ideas generated in class will offer stimulation for further individual responses, and each student will be expected to work on his own until the next class.

Students must be willing to commit themselves to the entire 14 hours--eating, working, staying together--so that great intensity and interaction can occur. Course content will emphasize using the medium as a means to personal expression and artistic statement.

Enrollment is limited to 15 students. HA-150 or its equivalent is a prerequisite, and a portfolio is required for admission. There will be a \$15.00 lab fee.

HA 245

THE IRRATIONAL ENLIGHTENMENT

Joanna Hubbs

What is the relationship of the Age of Reason to Romanticism? This will be the central question in a seminar on France in the latter half of the eighteenth century. Our approach to the problem will be through an examination of the philosophical thought of the age as it is reflected in the novel. We will consider this emerging literary genre as a vehicle for the ideas of the philosophes and will examine the extent to which attempts to build a world view on the basis of rationalism and empiricism lead to irrational conclusions.

We will read works by Montesquieu (Persian Letters), Prevost (Manon Lescaut), Rousseau (Nouvelle Heloise), Diderot (Rameau's Nephew, Jacques the Fatalist), Laclos (Liaisons Dangereuses), de Sade (Justine), Goethe (Faust, Sorrows of the Young Werther), and Chateaubriand (Rene, Atala) against a background of interpretations of Enlightenment thought: Becker, The Heavenly City of the 18th Century Philosophers; Cassirer, The Philosophy of the Enlightenment; Gay, The Enlightenment: An Interpretation; and Crocker, An Age of Crisis: Man and World in 18th Century French Thought.

A reading knowledge of French would be helpful as would some general background in history or philosophy.

The class will meet twice a week for two-hour sessions. Enrollment is limited to 16.

HA 250

PROBLEMS IN ENVIRONMENTAL DESIGN:
ISSUES AND IDEAS

Norton Juster and Earl Pope

This course will investigate some of the important practical, technological, and philosophical problems confronting environmental designers today and the directions and possibilities for the future. The course will examine both the ideas and the practitioners that have influenced design, some of the historical background that establishes the context for their work, and the implications and effects of their work.

The work will be organized around a series of seminars on the "literature of form" as well as related field studies and critical investigations of existing projects.

Students will be responsible for extensive reading on the subjects chosen as well as the detailed preparation of at least one major seminar (including visual material) and several projects. The focus and scope of the material studied will be mutually determined by the class and the instructors.

Class size is limited to 12 students and will meet twice a week for two-hour sessions. While there are no formal prerequisites, the course presupposes some background or prior concern for environmental studies. Admission to the class by approval of the instructors only.

HA 280

STUDIO ART WORKSHOP

Arthur Hoener and Robert Mansfield

The major concern of this workshop will be to develop a critical aesthetic to reinforce the work produced in the studio. The students will develop their own course of study in the areas of painting, sculpture, graphic design, or typography, etc., and meet as a group for regular critique sessions.

Field trips and visiting artists will be part of this program.

Students will be responsible for the purchase of all their studio materials.

The class will meet twice weekly for two-hour meetings. Enrollment is limited to 15.

HA 293

BODY AND PSYCHE: A WORKSHOP IN MOVEMENT

Janet Adler Boettiger

We are heavily conditioned to trust the verbal mode of expression and reception as if there were no other--to rely on the verbal memory as if the body held no memory of its own--to look for answers to our problems in our heads, as if our bodies possessed no hint of solution. We are our bodies. This course will be concerned with ways to connect our bodies consciously with our psyches--to more fully realize the integrity of body and psyche. Such an integrity inherently exists in us all, though we are often unconscious of it.

Through intensive experience in movement we will actively search for bridges between what we do and how we feel. We will be in search of the small child within us, of our mother and father within us, of the powerful realm of polarities--the earth and the sky, the light and the dark--within us, of the shadow or the unknown within us. The discovery of such parts often brings new awareness of self, and new awareness can bring growth toward owning one's experience, toward being responsible for one's life, toward wholeness.

The constant medium of intrapersonal and interpersonal work will be movement. In addition, we will be talking much together, writing consistently, and reading in response to experience--all as catalysts to reawaken the life of our bodies, to reawaken ourselves.

Basic reading will be drawn from the work of Mary Whitehouse, Charlotte Selver, Alexander Lowen, Ashley Montagu, and Edward C. Whitmont.

Ten students will be admitted to the course which will meet twice a week for two-hour sessions. I will also offer six independent study programs for people interested in similar work but on an individual basis. Because readiness for this work is crucial to the actual experience, I would like to ask any student interested in taking either the workshop or the independent study program to talk with me before registration.

SCHOOL OF LANGUAGE AND COMMUNICATION

AN INTRODUCTION TO ROBOTOLGY LC 102	R. Ackermann
ASSESSING PUBLIC COMMUNICATION PERFORMANCE LC 103	D. KerF, R. Muller
BLACK COMMUNICATIONS LC 104	K. Green, D. Peterson, G. Whittaker, (M. Lillya)
LANGUAGE ACQUISITION LC 105	J. Koplin
CONVERSATION ANALYSIS LC 108 (LC 203)	J. Tallman
THEORIES OF LANGUAGE LC 114	S. Mitchell
THE RETREAT FROM THE WORD LC 115	R. Lyon
KNOWLEDGE AND DOUBT: PHILOSOPHICAL PROBLEMS LC 117	C. Witherspoon
PRACTICAL MORAL ARGUMENT AND ETHICAL THEORY LC 119	M. Radetsky
TELEVISION PRODUCTION LC 121	S. Gilford
THOUGHT AND LANGUAGE LC 123	J. LeTourneau, N. Stillings T. Wasow, C. Witherspoon
PROBLEMS IN PHILOSOPHY OF THE SOCIAL SCIENCES LC 129 (LC 206) (SS 134 SS 228)	M. Radetsky
LANGUAGE PROBLEMS OF DEVELOPING NATIONS LC 139 (LC 239)	M. Lillya
GEOMETRY AND PROBABILITY MODELS FOR DATA REDUCTION LC 146 (LC 207) (SS 136 SS 229) (NS 103 NS 203)	J. LeTourneau, M. Sutherland
MODEL THEORY LC 208	W. Marsh

MUCKRAKING
LC 209

D. Kerr

PEOPLE PROGRAMMING: A WORKSHOP ON
COMPUTER ASSISTED INSTRUCTION
LC 211

A. Lantz, (R. Muller)

SEMANTICS
LC 212

T. Wasow

INTRODUCTION TO COGNITIVE PSYCHOLOGY
LC 213 (SS 211)

N. Stillings, J. Koplin

SCHOOL OF LANGUAGE AND COMMUNICATION

Curriculum Statement: Spring 1973

Language and Communication is the newest of the four Schools at Hampshire College--so new in fact that, as far as we know, no other college has caught up with us. Because we are new, we cannot rely on habit and previous experience to suggest to students what we are doing; we ask you, therefore, to take time to read the statement in the Student Handbook on our Division I examination and then to read or skim through the course descriptions which follow. A very brief statement of what we "cover" might be: related areas of the disciplines of linguistics, psychology, philosophy, mathematics, computer and information science, and the sciences which study communication.

Other Schools offer courses in these areas, and, as always, students need not base a School's Division I examination on courses taken within that School. Among the courses offered this term in other Schools, we might draw a student's particular attention to: Sheila Houle's course on Anglo-Saxon England, the mathematics courses offered by Professors Hoffman and Kelly, and the psychology courses offered by Professors Birney and Cole.

Since we are so new, I cannot resist trying to describe our program by reference to something very old. More than a thousand years ago, and for a considerable time, the standard curriculum consisted of the Seven Liberal Arts, divided into the trivium and the quadrivium. The former was considered basic and consisted of logic, rhetoric, and grammar. Our program might be seen as consisting of these subjects, taken in view of the developments in the appropriate disciplines, and in view of their social and technological contexts.

William E. Marsh
Coordinator

LC 102

AN INTRODUCTION TO ROBOTOLGY

Robert J. Ackermann*

Borrowing the alleged style of Hampshire College course descriptions, I could say that this course might be titled "Is it possible that Bill Marsh is a robot?," or slightly more accurately, "Is it possible that Bill Marsh is a sophisticated robot?" Participants will examine issues in the philosophy of psychology that are closely related to a battery of arguments invented by various philosophers to establish the impossibility of computer simulation of human intelligence. Bill, of course, is an obvious instantiation of these arguments given the (perhaps gratuitous) assumption that he is at least human.

As with most impossibility arguments that remain open (the impossibility of trisecting the angle with straightedge and compass without an awful lot of luck is a closed argument) the two sides have different gestalts about the growth and direction of artificial intelligence. The philosophical arguments point out that there seem to be some properties of human intelligence that are so qualitatively different from current computer simulations of intelligence that the gap cannot be closed by larger computers or more sophisticated programming. We will examine these arguments by reading What Computers Can't Do (Dreyfus) as well as discussing some additional philosophical arguments based on Gödel's theorems. On the other side, we will attempt to get a basic feel for the exciting nonintuitive discoveries made in programming related to intelligence by reading Perceptrons (Minsky and Papert). These discoveries suggest that the properties of futures programs can perhaps not be predicted by a smooth projection from what is done at present. At the end of the course we may still have to accept individual differences and simply vote on Bill instead of proving a result. Participants are only guaranteed a deeper understanding of the issues bandied about in serious discussions of computer intelligence so that they can defend their considered views in a more articulate fashion.

The course will meet twice a week, 2 hours each session.

Enrollment limit: 30

*Dr. Ackermann is Professor of Philosophy at the University of Massachusetts.

LC 103 ASSESSING PUBLIC COMMUNICATION PERFORMANCE

David Kerr and Richard Muller

This course will be concerned with critical research and evaluation of sources of public communication. We will probably restrict ourselves to print and electronic media serving the western Massachusetts area, but the range is open to discussion. Our purpose will be threefold:

1. To determine viable standards for judging mass media performance,
2. To apply these standards to sources of public communications in our target area, and
3. To publish our findings.

This course will take the form of a consumer-oriented research project and as such will make use of research techniques employed in similar projects, such as survey research, content analysis, interviews with editors, publishers, and station managers, and monitoring newspapers and radio and TV stations over a period of time. Experience with these techniques is not, however, a prerequisite.

Participants will be introduced to use of the computer in analyzing data gathered in such ways; no programming ability will be assumed, and no great sophistication will be developed.

One time period of the course will be devoted to an examination of current claims for alternative means of delivering public communications, with special attention to cable television and cartridge television.

The course will meet once a week for three hours at the outset and adapt our meeting times and duration to meet our research needs.

Enrollment limit: 40

LC 104

BLACK COMMUNICATIONS

Kenneth Green, Deborah Peterson, Gail (Mana) Whittaker*

This will be a student-taught course focusing primarily on the dialect of American English currently called Black English. It will include an examination of various theories about the origin of Black English, its structure, as well as its use culturally. The course will also touch on the problems faced by Black English speakers in the educational and economic systems in America.

Class participants will be expected to read and discuss major historical, linguistic, and literary works in the field, such as:

Beryl Bailey	<u>Jamaican Creole Syntax</u>
J. L. Dillard	<u>Black English</u>
Frantz Fanon	<u>Black Skin, White Masks</u>
Langston Hughes	<u>Selected poems</u>
Dell Hymes	<u>Language in Culture and Society</u>
William Labov	<u>"The Logic of Nonstandard English"</u>
Ronald Langacker	<u>Language and Its Structure</u>
Julius K. Nyerere	<u>Uhuru Na Ujamaa</u>

Audiovisual materials, guest lectures, and independent student projects will contribute additional perspective to the subject.

Faculty consultants for the course will be Maija Lillya and/or Robert Rardin.

The course will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 12

*The instructors are all second year students at Hampshire College. The faculty sponsor is Maija Lillya.

LANGUAGE ACQUISITION

James Koplin

Almost all children acquire the language of their community on a regular schedule and within a relatively short period of time. We will spend most of this course examining what it is that the child does in this task. Special attention will be given to the descriptive material in such sources as Ruth Weir's Language in the Crib, moving on to Roger Brown's studies of pre-school children, and finally to Carol Chomsky's analysis of the continued development of language in the grade school years. There is no substitute for a thorough acquaintance with this work as assistance in avoiding inadequate answers to the question, "How does a child do it?" The only accurate answer at this time, however, is that "nobody really knows."

Each student who enrolls in the seminar will be encouraged to locate a child in the community whose language development can be observed during the term. This is not a requirement, but experience with this course during the past year has indicated that this concrete field observation of a child in the process of acquiring language was an invaluable aid to understanding the theoretical issues discussed during class sessions. Time will be made available near the end of the term for these students to report on their work for the benefit of everyone.

The course will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 20

CONVERSATION ANALYSIS

Janet Tallman

Do the ways in which people converse as well as the content of their conversations shed light on their relations, rankings, and what they are able to say to each other? Analysis of conversations has appeared recently as means to several different ends in investigations in philosophy, psychiatry, linguistics, and sociolinguistics, among other disciplines. I would like to focus on conversation from a sociolinguistic point of view, using conversations as a way of seeing patterns in social behavior and in the talk itself. We will do some readings in sociolinguistics, using ideas of Gumperz, Hymes, Bernstein, Labov, and others. The main emphasis of the course will be on each member's videotaping or tape recording and analyzing conversations in natural settings, on finding the patterns the conversations reflect and contain. Our sources of conversations will be living groups, classrooms, and other situations in which and with which we are fairly familiar. We will look for the ways conversations vary, both topically and to a small extent linguistically, according to varying situations: size of group, sex, age, social position, distance or intimacy of the participants, and general social setting, for example. We will also look for patterns in the flow of conversations, and the social ways of keeping conversation going. No previous knowledge of linguistics is necessary for understanding the work, but some background in interaction theory would be helpful.

The class will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 30

LC 114

THEORIES OF LANGUAGE

Stephen O. Mitchell

This course is a survey of major historical linguistic theories and their impact on various literary and social practices.

After an initial introduction to early widespread linguistic concepts such as "name magic" and "tongues," the course will move to a consideration of Plato, Quintillian, Loginus, and other theoreticians who influenced both formal literary work and educational theory. The course will conclude with an investigation into the origins and effects of several persistent linguistic concepts, including universal grammar, roots, correctness, and decline.

Under the guidance of the instructor, students who enroll in this course will be asked to select some earlier literary, religious, or political document and to write a paper explaining its linguistic assumptions.

The course will meet twice a week. The first meeting will be for two hours and the second for one hour.

Enrollment limit: 16

LC 115

THE RETREAT FROM THE WORD

Richard C. Lyon

This century has put language on trial. The adequacy of words to describe the world and our experience of the world is now questioned. The worth of words as the necessary means to intelligence or as a possible means of personal fulfillment is in doubt. Old claims for the importance of verbal discourse are being challenged by formidable rivals: visual images, the abstract languages of the sciences and mathematics, religious and aesthetic contemplation, mysticism, music and dance, modes of nonverbal communication within groups. These are ways of knowing and of communicating which bypass the verbal, or subsume it, and which are often said to be superior to it.

The seminar will consider several aspects of this "retreat from the word" in order to determine some of the things words can and cannot do, their status with respect to consciousness, and their relation to reality.

Discussion will center on the ideas or works of a number of philosophers, critics, and poets. These may include William James, Santayana, Wittgenstein, Emerson, George Steiner, Dwight McDonald, Marshall McLuhan, Wallace Stevens. Students will be asked to help in drawing up a list of others whose works may be read.

This course can be used in preparation for the Division I examination in the School of Humanities and Arts.

There will be a one-hour class meeting per week plus group tutorials.

Enrollment limit: 30

LC 117 KNOWLEDGE AND DOUBT: PHILOSOPHICAL PROBLEMS

Christopher Witherspoon

Required readings:

Plato, Theaetetus and Republic; Descartes, Discourse on Method and Meditations; The Philosophy of David Hume, Chappell, ed.; Russell The Problems of Philosophy; Moore, Philosophical Papers; Wittgenstein, On Certainty; articles by Carnap, Austin, Strawson, and Gettier.

Many of these works are undisputed classics. All of them are philosophically important, and all contain certain important contributions toward a satisfactory philosophical understanding of knowledge, certainty, and warranted belief. Those which we won't read in their entirety, for example, Plato's Republic and Moore's Philosophical Papers, we'll read large parts of.

Our discussions and my lectures will be focussed mainly on passages from these works which bear on problems about what knowledge is, about the possibility of knowledge and of particular kinds of knowledge (knowledge about the past, for example, or about what another person is experiencing at a given moment), and about how we know what we in fact know, i.e., about what it is that makes certain of our true beliefs instances of knowledge. The main thing we'll be doing is attempting to perspicuously formulate and to solve philosophical problems. Fairly little attention will be given to the biographies and world views of the philosophers to be read, to the intellectual-historical settings of their thought, and to their discussions of problems not connected to problems of knowledge.

This seminar is a relatively intensive introduction to philosophy. Each participant will be expected to write at least three 3 to 5-page papers and two 12 to 15-page papers.

The course will meet three times a week, 1 hour each session.

Enrollment limit: 16

Priority for admission will be given those who have taken neither an L & C course nor a course in philosophy.

LC 119 PRACTICAL MORAL ARGUMENT AND ETHICAL THEORY

Michael Radetsky

Most of us have, at one time or another, gotten into fairly serious arguments over issues that can fairly be described as ethical questions. In this course, we will try to see what kind of standards there are for such arguments, what connections there are between such arguments and traditional ethical theory, and whether we can actually improve our abilities to deal with these arguments. We will start by selecting a number of issues for discussion (possible examples: abortion, capital punishment, discrimination, draft dodging, war), and examining in some detail how arguments for some position on these issues actually work. Simultaneously, we will read, and write short papers on, a variety of articles on the nature of moral laws and the basis of moral claims. Hopefully, we will manage to put these two moves together, and see where, if anywhere, in taking ethical stands, we must go beyond sound reasoning ability and knowledge of the specific issues (though these are both absolutely crucial), to appeal to theory.

The course will have one 2-hour meeting and one 1-hour section meeting each week.

Enrollment limit: 30

LC 121

TELEVISION PRODUCTION

Stephen A. Gilford

Through the production of a limited variety of programming for cable use, students will face the philosophies, problems, and joys of reaching out to diverse audiences. If there is interest, visits to production centers in Boston, New York, and local stations can be arranged. We will not be assuming any prior experience with television. Mr. Gilford will be on campus Sundays through Tuesdays. Students who have a beginning knowledge of television will find this course an opportunity to develop conceptual production skills.

Meeting times will be arranged, but students should plan to spend most of the day on Mondays on the course.

Enrollment limit: 20

LC 123

THOUGHT AND LANGUAGE

J. LeTourneau, N. Stillings, T. Wasow, C. Witherspoon

Determining the nature and structure of thought is a problem that cuts across traditional disciplinary boundaries. This course brings together a logician, a psychologist, a linguist, and a philosopher to discuss the contributions of their fields to the understanding of human thought processes. The course will begin with a two-week-long lecture series. Next, we will divide up into three modules lasting four weeks. This will be followed by a reading period of two weeks, during which each student will be expected to write a 5 to 10-page paper. Finally, we will have another four-week long session divided up into three modules. Two of the modules will be offered in both sessions. It is expected that many students will use the course to begin work on Division I exams.

The modules are described briefly below.

The Kurt G del Memorial Module on Logic (LeTourneau)

We will explore the uses and misuses of logic in common speech, propaganda, and in more structured disciplines like mathematics. Some effort will be directed to theories of how children acquire logical skill. In addition we will look at the various attempts by logicians to codify the "proper principles of reasoning" and discuss the limitations that have been discovered to be inherent in this process of formalization.

This module will be given twice.

The Max Wertheimer Memorial Module of Problem Solving (Stillings)

In this module we will try to determine what goes on in a person's mind when he solves a problem, that is, to formulate a psychological theory of problem solving. We will study several theories of problem solving and the experimental techniques which have been used to gather evidence for and against them. Theories of the workings of thought have consequences for questions such as, What is intelligence? and What is insight? Readings for the module will be drawn from journals and from books such as

Wertheimer	<u>Productive Thinking</u>
Reitman	<u>Cognition and Thought</u>
Simon	<u>The Sciences of the Artificial</u>

This module will be given only in the first set of modules.

The Benjamin Lee Whorf Memorial Module on Linguistic Relativity (Wasow)

"The 'real world' is to a large extent unconsciously built up on the language habits of the group.... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose

LC 123/page 2

certain choices of interpretation" -- Edward Sapir. This module will examine the validity of this "new principle of relativity," as Whorf called it. The essential question we will seek to answer is: To what extent does the structure of our language determine how we perceive the world? We will also consider the compatibility of the Whorf hypothesis with certain modern developments in linguistic theory, which suggest that linguistic structure may have a large innate component.

This module will be given twice.

The F.P. Ramsey Memorial Module on Truth (Witherspoon)

The Concept of Truth: An Introduction to Philosophical Analysis

Of the desirable characteristics that our beliefs and thoughts may have, perhaps the most obvious is being true. Almost everyone has in his stock of profound pronouncements some items about truth and truths--such things as "Being true for me is all that matters!," "Whether it's true is irrelevant; the question is: does it work?," "There are no absolute truths." We'll take up these and some less familiar ideas in this module, where our business will be to investigate the notion of truth from a philosophical standpoint. Roughly the first third of our time will go into developing such a point of view, and for this purpose we'll work through Wheatley's Prolegomena to Philosophy. We'll then read and discuss important philosophical articles, some of which are included in Pitcher, ed., Truth.

This module will be given only in the second set of modules.

The modules will meet twice a week, 2 hours each session; the lectures will be announced.

Enrollment limit: 60.

LC 129 (LC 206) PROBLEMS IN PHILOSOPHY OF THE SOCIAL SCIENCES
(SS 134 SS 228)

Michael Radetsky

"Oh, the monster!" exclaimed the
Reverend Doctor Folliott, "he has
made a subject for science of the
only friend he had in the world."

Peacock, Crotchet Castle
(cited by A. J. Ayer)

The particular problems in the philosophy of the social sciences which we will consider center around their relation to the physical sciences, in light of their taking, as objects of study, purposive human action. It will be necessary and useful to start by considering some questions for philosophy of science in general; primarily concerning the nature of explanation and the relation between explanation, prediction, and causal laws. We will also discuss the notions of "description," "theory," and "model," and some suggestions as to how these fit into the idea of scientific explanation.

After all too little time on this, we will go on to discuss explanation in history and in psychology, the role of theory in such explanations, and the problems raised for considering such theories as scientific explanations by the notion of "causal laws." We will be led to consider the alternative approaches of "Verstehen" and teleological explanation, the latter in some detail with respect to the notions of purpose and function.

Should we make some progress with these considerations, we will spend some time on a couple of interesting difficulties for the social sciences: the problem of values, frameworks, and objectivity; and the problem of the relation between social facts and individuals.

This course will involve extensive difficult readings -- so far I'm pretty sure I'll want to use May Brodbeck's Readings in the Philosophy of Social Sciences and probably several supplementary works -- and group discussion.

Division I students will be better prepared for this course if they have already had some experience with studies in social science. The course will meet twice a week for 1½ hours each session.

Enrollment is limited to 16.

LC 139 (LC 239)

LANGUAGE PROBLEMS OF DEVELOPING NATIONS

Maija Lillya

Most of the developing nations in the world today face a complex set of social, economic, and political problems. Frequently at the root of these problems is the inadequate level of communication among segments of the nation due to lack of a common, well-developed language. This often results in the creation of a new caste system based on language, which severely limits implementation of the ideal of equality of opportunity within the nation. In India, for example, establishment of Hindi as the national language would mean that 60% of the total population would be placed at a distinct disadvantage in the competition for desirable jobs.

This course will explore the questions of (1) what characteristics a language must possess to be an adequate tool of communication within a nation, and (2) the nature of the people-language bond which makes governmental linguistic manipulation difficult. We will also examine various ways people in multi-lingual societies carry on necessary communication, cases where lack of communication hampers national progress, successful and unsuccessful means which have been tried to solve a nation's linguistic problems, etc.

While the course will cover both linguistic and sociological aspects of the subject, each student will have the option of concentrating more effort on one approach than on the other. Students interested in Israeli culture, for example, could examine either the processes by which ancient Hebrew was developed to serve the needs of a modern nation, or what problems exist in Israeli society due to linguistic differences.

Many of the readings for the course will be taken from Readings in the Sociology of Language, J.A. Fishman, ed., Language Problems of Developing Nations, Fishman, Ferguson, Das Gupta, eds., and Socio-Linguistics, W. Bright, ed., among others.

Students electing to take this course as a Division II course will be expected to write a paper demonstrating Division II level competence in the linguistic aspects of the subject.

The class will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 20

LC 146 (LC 207)
(SS 136 SS 229)
(NS 103 NS 203)

GEOMETRY AND PROBABILITY MODELS
FOR DATA REDUCTION

Jack LeTourneau and Michael Sutherland

This is a highly modular course. The modules will consist of:

1. "Getting into APL" -- The basics of the language, getting to know your operators, using your skills to some advantage, i.e., typical data analytic problems, statistics and their development in terms of APL.
2. "Linear Algebra or Finite Dimensional Vector Spaces as a Way of Life" -- The basics of vector spaces with emphasis on the geometry of vector spaces. Basics include independence, dependence, bases, dimension, orthogonalization, inner products, subspaces, projections, etc.
3. "Data Reduction for Fun, Profit and Understanding" -- Data as points in individual space, as points in variable space, the geometry of data reduction, inner products as correlations and other subjects. Doing data reduction using APL. Problems, problems...students may use own data.
4. "Geometry in APL/Advanced APL" -- Using APL to accomplish data reduction, advanced programming for standard data reducing techniques -- means, variances, correlations, regressions, analysis of variance, factor analysis, principal component analysis, projections, etc.
5. "Probability Modeling" -- the usual basic probability models - binomial, hypergeometric, multinomial, Poisson, exponential, uniform; models as the intrinsic part of exploratory data analysis; modeling as a smoothing procedure when data is sparse. Independence and randomness as the baseline of inference. Some Markov chains.

Students are not necessarily expected to participate in all five sections. Students are expected to be responsible for going well beyond the core lectures' material in terms of their understanding and ability to apply the ideas presented. We will spend a good deal of our time participating in/directing students' semi-independent activities.

LC 208

MODEL THEORY

William E. Marsh

Model theory was the last to appear of the four major parts of mathematical logic: the other three parts are set theory, proof theory, and recursive function theory. The major work in the field has been done since the late fifties and grows out of the work of Alfred Tarski, Abraham Robinson, and others on problems on the borderline of mathematical logic and modern abstract algebra. It is the only one of the four parts mentioned which has had substantial applications in other areas of mathematics.

This course will focus around two papers which delineate the beginning and the culmination of research on one question: in what ways can first-order theories be (nearly) categorical. We will acquire the necessary background and then read R. L. Vaught's "Denumerable models of complete theories" (1961) and J. T. Baldwin and A. W. Lachlan's "On strongly minimal sets" (1971). Any time left in the term will be spent on ultraproducts and non-standard analysis.

Students in the course should have had the equivalent of either a first course in modern algebra or a first course in mathematical logic.

The course will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 30

LC 209

MUCKRAKING

David Kerr

Variously called "investigative reporting," "exposé journalism," "sensationalism," and "scandal-mongering," (depending upon whose muck was being raked) this emphasis in reporting has been with us a long time. This course will address itself to the theory, practice, and reception of muckraking in America.

The readings will consist of social and philosophical justifications and condemnations of the practice, commentary on what can and cannot be considered legitimate muckraking, examples of muckraking from various historical periods, and assessments of the state of the art today. Throughout, our chief concern will be the effect of muckraking (or lack of effect) on American institutions and on the American public.

Students will be expected to prepare as a term project a case study of an example of muckraking. This would presumably trace such an example from the conditions which motivated the journalist's investigation, the investigation itself, problems involved with disseminating the information to the public, critical reaction, and pressures for change which may or may not have resulted. Those so inclined may decide to rake some muck themselves and use their experiences, critically considered, as such a case study.

The class will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 30

LC 211 PEOPLE PROGRAMMING:
A WORKSHOP ON COMPUTER ASSISTED INSTRUCTION

Anthony Lantz*

This course will provide an opportunity for students to spend a term working on a large scale computer program. Students in the course will be expected to write, either individually or as part of a team, a computer assisted instruction program or a language in which computer assisted instruction may be written. Each student (or team) will go through the steps of planning, programming, implementing, testing, and evaluating a substantial computer program.

This course will not teach any programming. Students must know one of the programming languages available on the UMass time-sharing system before they begin this course. In addition to discussing the projects in programming, students will be asked to read and discuss materials on the theories of computer assisted instruction and to evaluate other people's efforts in this field. Computer assisted instruction was selected as the topic for the workshop because it does not require an extensive background in mathematics, which many computer applications do. Some previous knowledge of psychology or education will be helpful, but not required. Those interested in writing programs for children should be aware that they will have to find subjects to test their programs out on.

This is a Division II course and students will be expected to do most of their work outside of the classroom. The class will meet once a week for two hours to discuss progress and problems and the assigned reading.

Enrollment limit: 30

*Mr. Lantz is a third-year student at Hampshire College. The faculty sponsor is Richard L. Muller.

LC 212

SEMANTICS

Thomas Wasow

This course will be concerned with the question of how the meanings of individual words combine to produce the meaning of a sentence. Linguists had largely ignored this question until the last decade, so the answers to it are necessarily tentative and incomplete. We will examine and compare the theories of meaning that have been proposed within the general framework of transformational grammar. Particular emphasis will be given to problems concerning the interpretation of quantifiers, negation, pronouns, and presuppositions. We will attempt, for example, to find a systematic account of the ambiguity of such sentences as Senator Eastland doesn't grow cotton to make money. If this account is to be sufficiently general to explain different but related cases (such as Rip van Winkle didn't sleep for twenty years), then we must formulate a principle for determining how negation interacts with adverbs. Much of the course will thus consist of attempting to discover such rules of interpretation for English. Various general theories will be judged according to their compatibility with the particular rules we formulate.

Readings will include many of the selections from Steinberg and Jakobovits, Semantics: An Interdisciplinary Reader.

There are no prerequisites, but some exposure to transformational grammar would be helpful.

The class will meet twice a week, 1 1/2 hours each session.

Enrollment limit: 30

LC 213 (SS 211)

INTRODUCTION TO COGNITIVE PSYCHOLOGY

James Koplin and Neil Stillings

This course is an intensive introduction to the experimental study of language, thought, memory and perception. The aims of the course are

1. An understanding of the metaphor that has dominated modern cognitive theory -- the view of man as an information processing system.
2. A thorough study of three research problems, illustrating the relationship between psychological theory and experiment. Some questions we might study are, Is a memory anything more than a faded internal tape recording or film strip? How are the sound waves of speech converted into meanings? Why are problems with easy solutions sometimes very hard to solve?
3. The design, performance and analysis by the class of two or three experiments related to the three research problems.
4. A survey of the major results of cognitive psychology through assigned readings from textbooks and reviews.

Readings will be drawn from journals and from books such as P. H. Lindsay and D. A. Norman, Human Information Processing: An Introduction to Psychology; Ulric Neisser, Cognitive Psychology; Herbert Simon, The Sciences of the Artificial.

The course will be of particular interest to students working in experimental psychology, computer science, neurobiology and linguistics. There will be two class meetings per week for 1½ hours each session. Roughly equal numbers of meetings will be devoted to lectures, discussions of readings on the topic or the survey, and the class experiments.

Enrollment limited to 50.

SCHOOL OF NATURAL SCIENCE AND MATHEMATICS

PROGRAMS

NS 123 (NS 223)	THE WORLD OF MATHEMATICS - David Kelly, Director
NS 130 (NS 230)	PHYSICAL SCIENCE - Everett Hafner, Director
NS 135 (NS 235)	EARTH AND UNIVERSE - Courtney and Kurtiss Gordon, Directors
NS 140 (NS 240)	DE RERUM NATURA - Raymond Coppinger, Director
NS 180 (NS 280) (SS 139, SS 231)	SCIENCE AND PUBLIC POLICY - Brian O'Leary, Director
NS 190 (NS 290)	ECOLOGY PROGRAM - Raymond Coppinger, Director
NS 260 (SS 209)	HUMAN BIOLOGY II: COMMUNITY AS PATIENT - John Foster, Robert von der Lippe, Jacqueline Slater, Directors

SEPARATE COURSES

GEOMETRY AND PROBABILITY MODELS FOR DATA REDUCTION NS 103 (NS 203) SS 136 (SS 229) L&C 146 (L&C 207)	LeTourneau, Sutherland
WORKSHOP: MATHEMATICS AND ELEMENTARY EDUCATION NS 148 (NS 248)	Hoffman
ELEMENTARY SCHOOL SCIENCE NS 196 (NS 296)	Bruno
ANALYSIS NS 228	Kelly
THE CALCULUS WORKSHOP NS 184 (NS 284)	Kelly

BIOLOGICAL AND CULTURAL BASES OF SEX DIFFERENCES
NS 153 Greenstein, Farnham
SS 111

BEHAVIOR GENETICS
NS 216 Farnham, Miller
SS 202

TOPICS IN ORGANIC CHEMISTRY
NS 198 (NS 298) Lowry

PHYSICAL CHEMISTRY
NS 231 Reid

SEMINAR IN THE HISTORY OF NINETEENTH CENTURY SCIENCE
NS 263 Goldberg

NOTE:

All courses and programs are open to Division I and Division II students except the following:

NS 260 (SS 209)
NS 228
NS 216 (SS 202)
NS 231
NS 263

which are open to Division II students only.

SCHOOL OF NATURAL SCIENCE AND MATHEMATICS

Curriculum Statement: Spring 1973

The School of Natural Science and Mathematics organizes itself so as to offer a relatively small number of courses, most of them with unlimited enrollment. We ask students to examine the course offerings as areas of possible interest to them, and to enroll with the expectation that their special needs can be met. Our teaching staff is composed of scientists whose breadth of background leads to a flexible treatment of their instructional tasks. They devise modular units within courses; they work in small teams, cooperating on development and direction of School activities; and they support a variety of modes of teaching (lectures, seminars, problem workshops, laboratory research projects, field studies) with special emphasis on the independent effort of students.

Students should register for course by number, with the expectation that enrollment in specific activities or modular units will occur later. While many courses are open to any student in the college, students should be aware not only of the areas to be covered in a course or program, but also of the level at which it is intended to operate. In order to engage in certain activities, they may be expected to have passed a Division I examination in the School. This question, and all others related to a student's status in the course, should be dealt with in consultation with the director of the course before the beginning of the term.

During our first two years of operation we have evolved some major areas of interest, which are represented by the list of programs which follows. Each program is to be regarded as a general heading, more or less fixed for the time being, under which a variety of activities related to that heading are planned. Students should register for the course number of a program, but should also consult bulletins of the programs, shortly before the term begins, for details on program content and its teaching staff. We have also attempted to construct program elements of interest to students in other Schools as well. Students are encouraged to incorporate such units into inter-School programs of their own devising.

In addition to the major programs we also offer some courses which either are of service to a number of major programs or are not in any compelling way related to one of them in spirit or emphasis. These are listed separately.

NS 123 (NS 223)

THE WORLD OF MATHEMATICS

David Kelly, Director

Students may expect to encounter problems in mathematics and mathematization in a wide range of studies. Hampshire's mathematical community provides short- and long-range support to many of the College's courses and programs and creates an atmosphere in which mathematics is done, shared, and enjoyed.

Course number NS 123 is offered as a convenience to students wishing to formalize a commitment to mathematical activity during a given term. The nature of that activity is subject to great variation. Many of the activities of the program are expected to develop during the term as particular needs and interests are identified. The Math Room (SB 125) bulletin board will provide an up-to-date listing of current and upcoming seminars, minicourses, lectures, classes, problems and proposals.

The following activities are planned for the spring semester:

Math For People Who Count - An Experiment (Kenneth Hoffman)

Over the past 300 years mathematicians, statisticians, and -- more recently -- sociologists, businessmen, etc., have run into a surprising number of situations in which they need to count something. A beautiful collection of tricks and stratagems has evolved to cope with these problems to the point where the field of Combinatorics (as it is called) is now coming into its own as one of the newest branches of mathematics. It is not yet a standard component of the math curriculum at most schools, but several nice textbooks have been produced recently and there is a growing awareness of the subject in many schools. I would propose spending the first half of the Spring semester exploring some of the niftier aspects of combinatorics to see if others find the subject as intriguing as I do. The problems tend to be indescribable in this small a space, but typical results have applications to:

Game Theory

Maximum and minimum flows on transport networks

Graph theory

Map coloring problems

There are no mathematical prerequisites for this course, but a certain delight in fondling and manipulating numbers and other mathematical objects would be helpful.

NS 123 (NS 223)

THE WORLD OF MATHEMATICS (cont.)

David Kelly, Director

The Mathematics of Basic Physics

A series of seminar presentations of the mathematics associated with quantum mechanics. (See NS 130, Quantum Mechanics for the Million. Students in NS 130 need not register for NS 123 to participate in the seminars.)

The Book Seminars

Many important mathematical subjects lend themselves to semi-independent study. The following format will be tried: in consultation with each other and a staff member, small study groups (about five students) will select a text for joint study, set a syllabus, and meet together regularly both with and without the instructor.

The following topics may be handled effectively in this manner:

- Topics in the History of Mathematics
- Topics in the Foundations of Mathematics
- Topics in Applied Mathematics
- Probability
- Differential Equations
- Linear Algebra
- Advanced Calculus
- Number Theory

The Prime Time 17:17 Theorems

A theorem is presented at 5:17 on each prime-numbered class day.

Independent and small group studies in the World of Mathematics will, we hope, involve students in

- . planning, preparation, and presentation of support materials for courses, special lectures, etc.,
- . devising and testing instructional projects,
- . working on the Hampshire College Summer Studies in Natural Science and Mathematics, and
- . teaching and tutoring at Hampshire and elsewhere in the World of Mathematics.

Faculty/Student Problem Seminar

NS 130 (NS 230)

PHYSICAL SCIENCE

Everett Hafner, Director

The course is a set of core lectures, full-term activities, and month-long modules designed for Division I students who wish to come into contact with the physical sciences, and for Division II students mainly concentrating in physics. Certain bridging disciplines (biophysics, history and philosophy of science, and electronics) are also to be found here. There is also overlap with the "Earth and Universe" course, through cross listing of modules and joint lectures.

Especially for students whose interests in science are uncertain or undeveloped, our aim is to provide variety in topics and approaches. Modules are particularly useful for this purpose, and also for the sake of inventing and developing new topics. Students may enter or leave modules at appropriate times, under guidance of their advisers.

Term-Long Activities

Lectures. Forming the core of the course, there is a weekly sequence of hour-long lectures by faculty, students and visitors. Topics of especially broad interest are introduced in such a way as to stimulate further study and discussion. The lectures also occasionally provide incentive for ad hoc modules, as described below. All students in the course attend all lectures.

Basic Physics: Quantum Mechanics for the Million. This is the first term in a revolutionary sequence of three elementary physics courses. The central concepts of quantum mechanics, in full mathematical glory, are exposed. Nevertheless, the mathematical background of students can be very disparate (as it in fact was in the first class, taught in Spring 1972). The most useful mathematical ideas are complex arithmetic, vector spaces and linear algebra, and calculus up to elementary differential equations. Students entering the physics sequence are expected to have contacted these ideas, either in the Calculus Workshop or in independent study. (Herbert Bernstein and staff). Taught spring term only. Two hours twice a week.

Electronics for the People; An entirely practical examination of common electronic devices used in radio, television, audio systems and computers. Students learn to construct simple electronic devices from supplies in kit form. Following that, they study diagnosis and repair of more complex devices. Finally, they design and build new systems of their own. They develop an appreciation of the technology, and liberate themselves from the modern army of technicians whose service tends to be expensive, unreliable, and scarce. (Everett Hafner). This course will meet for a two hour lecture and a three hour lab, once a week.

NS 130 (NS 230)

PHYSICAL SCIENCE (cont.)

Everett Hafner, Director

Vector Mechanics and Introduction to Statistical Mechanics. The third term of Hampshire's revolutionary introduction to physics (following a term of work in the Fall on Electricity and Magnetism). Using a text yet to be chosen, we study advanced Newtonian mechanics, and we attempt to cover the kinetic theory of heat. Prerequisites are lots of mathematical background, two terms of college-level physics, and a willingness to work very hard. If sufficient interest fails to develop, one of the instructors (HB) will form an independent study group to cover this material. (Herbert Bernstein and Stanley Goldberg). About four hours class time per week.

Dependent Study. Depends upon sufficient student interest in a single topic within the broad competence of the instructor. Topics which have been suggested include: Physics for Poets, Physics for People Thinking About Medical Careers, Theoretical Biophysics, and Nature Thrice Weekly. (Staff).

Research in Heavy Metal Poisoning II. The age of technology has often brought with it situations where humans are exposed to levels of heavy metals far higher than primitive man had adapted to. The dirt in city streets and along superhighways contains very high levels of lead from auto exhaust; the lead presents a serious threat to the health of small children who play near the streets. Artificial fertilizers add certain toxic elements, notably uranium, to the soil and ground water. The long term health effects are unknown. Children's deciduous teeth serve as indicators of heavy metal levels in their bodies; we have a growing collection for analysis. The course will involve the design and investigation of some aspect of heavy metal poisoning. A weekly seminar will give an opportunity to describe results, as well as discuss techniques, difficulties, etc. (John Reid).

Month Long Modules

Case Studies in Chemical Philosophy. Three independent modules, historically based, on the following topics:

1. The Overthrow of the Phlogiston Theory and the Rise of Modern Chemistry. In the seventeenth and eighteenth centuries, the Phlogiston theory was widely accepted as explaining the production of metals and their properties. Phlogiston was one of the succession of perfect universe-filling fluids which have had a long and honorable history in natural philosophy. We will concentrate on the period at the end of the eighteenth century when the theory was called into question and eventually repudiated in favor of the oxidation theory of Lavoisier.
2. The Atomic Theory of Matter: The Search for Identity. Atomic theories have a long history in Western Science dating back to the Epicurians. We will concentrate on the period from 1800-1859 when the modern chemical atomic theory was being elucidated by Dalton, Proust, Gay-Lussac, Avogadro and Cannizzaro. It will be our job to understand how the atomic theory could triumph in the face of seemingly overwhelming theoretical and experimental counter-examples. And how, in the end, the

NS 130 (NS 230)

PHYSICAL SCIENCE (cont.)

Everett Hafner, Director

atomic theory, as originally conceived, could at one and the same time win acceptance and be judged a failure.

3. **Structural Chemistry:** From Chemical Structure to Biological Function. While based in historical example, this case study will elucidate the logic of organic chemistry as a kind of chess game. Time permitting, we will examine some of the following examples: the relationship between the origins of organic chemistry, the rise of the chemical dye industry and its impact on world economy and the balance of European power; the relationship between structural chemistry and the notion of spontaneous generation; the relationship between structural chemistry and molecular tailoring -- the rational creation of wonder-drugs; and the relationship between structural chemistry and modern genetics -- molecular biology.

While independent of each other, the modules are closely related and may be taken together for a full term of work. Students may enter whenever a module begins. (Stanley Goldberg). Three hours per week.

Special Relativity (see NS 135, Earth and Universe)

Waves. A sequence of three independent modules devoted to the concept of wave motion: its theory and its applications.

1. Computer Models of Wave Motion. A library of APL programs is available for study of the mathematical theory of waves, and for simulating physical phenomena such as interference, wave propagation, normal modes of vibration, and dispersion. Students expand the library as the module progresses.
2. Sound Waves. Laboratory exercises in acoustics and electronic production of sound, with applications to problems in perception and aesthetics. Students have access to synthesizers and peripheral equipment for production and performance of electronic music.
3. Light Waves. A laboratory in optics, with emphasis on applications of lasers.

These modules are not cumulative in their demands on students. In particular, neither the second nor the third depends heavily on the theory in the first, although it is naturally best for students to engage in the whole sequence as a term-long activity. (Everett Hafner). One hour per week, lecture/ three hours per week, lab.

The Structure of Life. During this six week seminar we will discuss biological structures, their symmetries and patterns, and the ways in which they are created during the growth of animals. D'Arcy Thompson's classic book "On Growth and Form" will supply us with numerous examples from nature. Topics to be discussed include: soap-bubbles and the shape of cells, the honeycomb of bees, snowflakes, and the skeletons of single-celled animals, sea-shells and ram's horns, and structural analysis of skeletons. (Eric Newman).

NS 135 (NS 235)

EARTH AND UNIVERSE

Courtney and Kurtiss Gordon, Directors

We have all been impressed--occasionally mind-boggled--with recent advances in earth, planetary and astrophysical sciences during the past decade. Continental drift, lunar rocks, amino acids in meteorites, giant canyons and calderas on Mars, organic molecules in interstellar space, quasars, pulsars, black holes and cocoon stars, unknown or unimagined ten years ago, are now household words in the scientific community. With our eyes suddenly opened up to these phenomena with dramatic advances in radio astronomy and with the spacecraft exploration of the moon and Mars--and soon to other planets--we suddenly find ourselves confronted with phenomena that have few familiar analogues.

Every discipline within the natural sciences is required to begin to understand how our planet evolved, how we ever came about, and what our place is among the planets and stars. The Viking Mars Lander, planned for 1976, is an example of how biology, astronomy, geology, chemistry, physics and meteorology are all lumped under one roof to attempt to understand an entirely new planetary environment.

The purpose of this course is to explore these new concepts from a cosmic perspective. A series of lectures will form the core of the program. The following modules will probably be offered for spring term 1973:

Astronomy: History and Mythology in Astronomy (Gordons)
Radio Astronomy (Gordons)
Special Relativity (Gordons)

Extraterrestrial Intelligence:
Astronomical Evidence (O'Leary and others)
Animal Communications and Codes/Ciphers (C.Gordon and others)
Exobiology, definition of life, philosophical implications
of extraterrestrial intelligence (a biologist (?), O'Leary)

Earth and Planetary Sciences:
Space Photography (O'Leary)

The following full-term courses will be offered:

Evolution of the Earth II. In the past six years or so, a bit of geological science fiction has proven to be true; the continents have drifted about the earth's surface, oceans have opened and closed, and mountain ranges have been thrown up where continents and ocean floors collide. This revolution in thinking about the earth has created a framework in which the study of the ways rocks form makes unprecedented sense. The course will deal in large part with the study of New England geology, emphasizing independent field work (and laboratory work), and will continually attempt to fit New England into the global picture. (John Reid). Twice a week for 1½ hours each.

NS 135 (NS 235)

EARTH AND UNIVERSE (cont.)

Introduction to Astronomy and Astrophysics. For astronomy majors or others interested in a quantitative introductory course. A description of our present knowledge of the universe and the means by which this knowledge has been obtained. The course considers the properties of the solar system, individual and multiple stars, interstellar matter, our galactic system and external galaxies. Two ninety-minute lectures and one two-hour laboratory per week. (This is the course ASTFC 22 offered by the Five-College Department.) Professor Manchester.

Development of Astronomy. The progress of astronomy is traced from prehistoric petroglyphs to the space age. Emphasis is placed upon the development of important ideas in the field and upon the relation of astronomy to other cultural trends. Supplemented by occasional use of the planetarium and the departmental telescopes. Two ninety-minute lectures per week. Some basic knowledge of astronomy will be assumed. (This is the course ASTFC 34 offered by the Five-College Department.) Professors K. Gordon and Seitter.

Techniques of Modern Astronomy. An introduction to modern methods of astronomical observation and data reduction. Specific techniques of optical astronomy, radio astronomy, and space astronomy will be discussed and analyzed. Laboratory experiments and field observations will also be performed by students during the semester.

Requisite: Knowledge of basic physics (especially electromagnetism) and astronomy. Elective for Sophomores. Second semester. (This is the course ASTFC 38 offered by the Five-College Department.) Professor Huguenin.

Astrophysics II. Continuation of basic topics in astrophysics. Nuclear energy sources. Stellar atmospheres and limb darkening. Electron degenerate configurations. Star formation. Introduction to simple model building. Stellar evolution. Elementary plasma physics. Two ninety-minute lectures per week.

Requisite: Astrophysics I. (This is the course ASTFC 44 offered by the Five-College Department.) Professor Van Blerkom.

NS 135 (NS 235)

EARTH AND UNIVERSE (cont.)

Course descriptions for the modular offerings:

Extraterrestrial Intelligence. The subject of extraterrestrial intelligence has fascinated mankind for ages. We are at last close to the time when extraterrestrial communication may be possible. How can we communicate? Are there other worlds ready to receive our messages? Have other worlds already tried to communicate with us? Our search will lead us to consider

- 1) the astronomical evidence -- the evolution of stars and how it affects the number of planets available for inhabitation and the length of time planets may be suited as abodes of life. (first module)
- 2) animal communications and codes/ciphers -- what kind of a message we must send to show that we are intelligent, and how successful we have been at deciphering the communications of bees, dolphins or other nonhuman species. (second module)
- 3) definition of life and philosophical implications -- the evidence for extraterrestrial life and whether we ought to try to communicate. (third module).

Readings will be taken from Shklovskii and Sagan's excellent book Intelligent Life in the Universe, and from articles in current journals.

The Theory of Relativity. The theory of relativity contains some fascinating surprises concerning: 1) time -- the clock paradox; 2) mass and length at high speed; 3) interstellar travel. We will strive towards a working understanding of special relativity. No previous background is assumed. (first month)

Space Photography. The concept "spaceship earth" is dramatically illustrated by spaceborne photographs of the whole earth. In recent years cameras of every description have been flown in earth orbit, to the moon and to the planets. How do these cameras work and what can we expect to find from space pictures? We will spend a month addressing this question using The View From Space: Photographic Exploration of the Planets by Davies and Murray. (second month)

Radio Astronomy. The basic techniques of radio astronomy will be introduced using the two-element radio interferometer and the Five-College radio telescope at the Quabbin Reservoir. (third month)

Students should register for the core lecture series and for an individual full term course or series of modules.

NS 140 (NS 240)

DE RERUM NATURA

Raymond Coppinger, Director

The biologist wants to understand life, but life, as such, does not exist; nobody has ever seen it. What we call "life" is a certain quality, the sum of certain reactions of systems of matter, as the smile is a quality of reaction of the lips. I cannot take the girl in my right arm and her smile in my left hand and study the two independently. Similarly, we cannot separate life from matter and what we can only study is matter and its reactions. But if we study this matter and its reactions, we study life itself.

--A. Szent-Gyorgi,
The Nature of Life

We adopt this point of view as a framework for the course. The organization of cells is such that each of the life process, such as respiration or metabolism or reproduction, can be studied in isolation from the others, often in systems which are clearly not living. Thus we offer in DRN a series of units, or "minicourses," each of approximately six weeks' duration and each dealing with a specific topic in biology. For this spring semester, most, but not all, of the minicourses in DRN center around Neurobiology. They employ a variety of organisms, use different experimental techniques, and present different points of view. Each is guided by an instructor who provides an experience reflecting his or her own scientific life style: field trip, intensive laboratory work, or abstract theory. Minicourses are designed for Division I or II students, or both.

The course is accompanied by a series of weekly discussions led by the teaching staff. These meetings will center around the theme of EVOLUTION and provide, among other things, opportunity for argument on controversial matters related to the work of the course, and bring unity to the topics discussed in minicourses.

Each unit (minicourse) is designed to be more or less self-contained; a student may participate only in those that interest him. During the registration period, the student signs up for DRN, not an individual minicourse. The first core meeting will be devoted to descriptions and registration for the first set of minicourses. One does not sign up for the second set of minicourses until four weeks into the term when descriptions of the 2nd set of minicourses will be available.

The term is divided into two periods. The following are possible topics to be covered in one of the two periods.

- Evolution of Eukaryotic Cells - Miller
- Evolution of the Central Nervous System - Kriekhaus
- Vision - Bruno
- Strict Anaerobes or Life Without Oxygen - Miller
- Evolution of Behavior - Kriekhaus and Coppinger
- How Muscles Work - Woodhull
- Evolution of Proteins - Woodhull
- Biophysics of Nerve Membranes - Newman and Woodhull
- Animal Physiology - Woodhull
- Menstrual Cycle and the Pill - Newman
- Embryology Lab (full term) - Newman
- Spring Botany - Sears

NS 180 (NS 280)
SS 139 (SS 231)

SCIENCE AND PUBLIC POLICY

Brian O'Leary, Director

Governmental agencies regularly make decisions of enormous economic, social and environmental consequence. How wisely these decisions are made depends in part on the quality of information available to those who make them. Yet the structure of the decision-making process may tend to encourage the presentation of partial or distorted information. Vested interests and promotional bias among leaders of government and industry have often led to multibillion dollar projects which are of questionable value and may have detrimental environmental effects. This situation has created a need for more participation among scientists, lawyers and other citizens to act as adversaries in presenting to decision-makers the costs of such programs and in suggesting alternative courses in which priorities could be shifted more toward the public interest.

We will spend the semester first in defining and describing the concept of adversary science as a technique of technology assessment. This will include readings from a recently compiled bibliography on technology assessment (first month). Next we shall go in depth describing the decision-making process and the role of adversary science in NASA's proposed space shuttle, a program which is estimated to cost tens of billions of dollars (second month). During this time students will embark on projects of their own choice either in teams or as individuals and report on them during the third month. These projects would include analyzing reports and taking field trips to Washington, Boston or other places, while playing an activist role in some issue. Examples of possible projects are energy and power, food additives, sewage treatment, medical technology, communications technology, pollution control technology, space program priorities, and new weapons systems. (Some of these might involve some other faculty members as well.) Those students who have participated in this course in the fall can continue to work on their projects throughout the spring term.

A Wednesday night lecture series on Science and Public Policy will bring to the campus a group of distinguished visitors whose experience and qualifications bear on the questions of the course. They will deliver lectures, lead discussions and contribute to our planning for the future of the course.

NS 190 (NS 290)

ECOLOGY PROGRAM

Raymond Coppinger, Director

Lectures -- Required by all students in the Program

There will be ten lectures from the personal research of R.P. Coppinger in the field of ecology. They will be structured in such a way that when associated with readings they will give the student the basic fundamentals of ecology. 1 hr./week.

Lectures -- Required by all students in the Program

There will be ten lectures given by members of the Hampshire faculty and Five College community centered on the theme of the History of Man's Use of the Connecticut River Valley. This lecture series, to be presented in the evening when the general public may attend, will provide a historical perspective of the environment and the diversity of studies that go on in the field of ecology. 1 hr./week.

Field Trips -- Required by all students in the Program

There will be ten field trips which will be illustrative of the material presented in class. 3 hrs./week.

Projects -- Each student pick one

1. Forestry management or a CCC Camp for Hampshire students (R.P.C.). This semester-long project will concern itself with forest improvement and conservation practices of a natural resource (timber). Students will implement a field studies project done by Jon Sands and Jeff Maguire on a timber lot in Montague. Pruning, culling of large genetically unsound trees, hauling logs to the saw mill will provide plenty of manual labor, but are designed to teach the student to apply the ecological knowledge to the economic problems of the forest industry. 1 day/week
2. A study of the ecological distribution of red maples (Jay Lorenz). Red maple occurs in lowland bogs and upland forests and little work has been done on the ecological distribution of this species. We will consider various sampling methods while learning how an ecologist goes about studying the distribution of a species. 1 afternoon/week
3. An interdisciplinary study of a coastal salt marsh (Ralph Germer). See Ralph's course proposal.
- 4-6. Environmental action projects under the supervision of conservation groups in the Valley. Details to be announced.

NS 190 (NS 290) cont.

7. Wild Canids of New England (Emily Groves).

An as yet unclassified dog-like creature has appeared in New England in the past 30 odd years and it seems that the numbers of this so-called "coy-dog" are increasing. Some work has been done with these animals in captivity involving both behavioral and hybridization studies, but little, if anything is known about the natural habitat of this critter. What type of cover do they live in? How large of a territory do they have? What do they eat?

We will do some library research on this animal and try to collect all possible literature concerning it, enabling us to find out about the history of the "coy-dog" in New England. There will also be field work to study the habitat of the "coy-dog." The field work will involve both day and overnight outings. More serious students could possibly spend a longer time in the field during spring vacation. This will depend on our findings earlier in the term.

This project will not only give you some knowledge about a little-known animal but also supply you with many of the techniques necessary for studying the natural history of another animal.

8. Fresh Water Biology (James Sears)

A study of the Hadley Reservoirs. A complete ecological survey of these reservoirs will be done, analyzing oxygen productivity and successional events in the biota of these reservoirs.

9. Swamps (Michael Sands)

We will do a survey of the plant species in a Northern Hemlock swamp. From this the student will learn to identify the local plants and to use the different ecological sampling methods. 1 day/week

10. Other projects may be added as need and interests develop.

NS 260
SS 209

HUMAN BIOLOGY II: Community as Patient

John Foster, Robert von der Lippe, Jacqueline Slater, Directors

In the fall semester Human Biology and the Sociology of Medicine and Health Care were examined more or less separately. In this semester we will move into the area where these fields overlap. The program will consist of a series of units, varying from the heavily biological to the heavily sociological and political. It will be done under the joint supervision of faculty and students with strong professional interests in biochemistry, medicine, sociology, and public health. Students will work in teams on these units. Each team will have a responsibility to 1) gather input data by interview, questionnaire, laboratory analysis or library research, 2) develop a bibliography of readings for the unit, 3) create a file of material suitable for continuing work by future students, 4) report the results of their efforts back to the rest of the students. Units will take a variety of forms, of which the following are illustrative:

Examination in detail of a local health care delivery system

Case studies of significant public health problems or diseases.

Medical Mysteries

Diagnostic screening projects, on campus or elsewhere

Laboratory studies

"Grand Rounds" will be held once a week to report on progress, present a case, listen to a speaker, or debate a topic of general interest. Detailed descriptions of units and procedures will be available shortly before the semester begins. Lecture/CPC one hour twice a week plus two hours twice a week tutorial/ lab/project.

SEPARATE COURSES

NS 103(203) GEOMETRY & PROBABILITY MODELS FOR DATA REDUCTION
 SS 136(229)
 L&C 146(207) Jack LeTourneau & Michael Sutherland

This is a highly modular course. The modules will consist of:

1. "Getting into APL" -- The basics of the language, getting to know your operators, using your skills to some advantage, i.e., typical data analytic problems, statistics and their development in terms of APL.
2. "Linear Algebra or Finite Dimensional Vector Spaces as a Way of Life" -- The basics of vector spaces with emphasis on the geometry of vector spaces. Basics include independence, dependence, bases, dimension, orthogonalization, inner products, subspaces, projections, etc.
3. "Data Reduction for Fun, Profit and Understanding" -- Data as points in individual space, as points in variable space, the geometry of data reduction, inner products as correlations and other subjects. Doing data reduction using APL. Problems, problems -- students may use own data.
4. "Geometry in APL/Advanced APL" -- Using APL to accomplish data reduction, advanced programming for standard data reducing techniques -- means, variances, correlations, regressions, analysis of variance, factor analysis, principal component analysis, projections, etc.
5. "Probability Modeling" -- the usual basic probability models - binomial, hypergeometric, multinomial, Poisson, exponential, uniform; models as the intrinsic part of exploratory data analysis; modeling as a smoothing procedure when data is sparse. Independence and randomness as the baseline of inference. Some Markov chains.

Students are not necessarily expected to participate in all five sections. Students are expected to be responsible for going well beyond the core lectures' material in terms of their understanding and ability to apply the ideas presented. We will spend a good deal of our time participating in/directing students' semi-independent activities.

SEPARATE COURSES

NS 148(248) WORKSHOP: MATHEMATICS AND ELEMENTARY EDUCATION

Kenneth Hoffman

There are a number of aspects of elementary math education I feel need to be covered in a workshop such as this, which can be roughly broken down into three categories:

1. Mathematical. What kinds of mathematics are being and should be taught? We will discuss in detail the basic concepts of modern elementary mathematics, such as set theory, geometry, number, etc., making sure we understand them and how they and the way they are taught came to occupy the central position in the curriculum.
2. Pedagogical. What are we really trying to do in the teaching of mathematics and how can we do it most effectively? A lot of time will be spent on these questions. We will play around with Cuisenaire rods, attribute blocks, geo-boards and other nice teaching aids.
3. General. It is impossible to consider the teaching of mathematics in isolation from the broader problems of education. What constitutes a decent education? How does mathematics fit in? Does one teach the same kind of mathematics in the same way to the underprivileged as to the overprivileged? How do children develop, and are there different techniques and subjects which are more appropriate at different stages in their development?

NS 196(296)

ELEMENTARY SCHOOL SCIENCE

Merle Bruno

We now have a classroom in House IV to use as a resource center, experimental classroom and teacher workshop. This room is now empty. One of the assignments for the class will be to collect cheap materials which can be used for a variety of elementary school science activities and to furnish a classroom that is cheap, practical and stimulating to work in. We must avoid the trap of believing an open looking classroom is necessarily being taught openly. We will read some of Piaget's experiments on learning theory to see if and how well these theories are applied in science education today. Full term course, meets two times a week, two hour classes.

SEPARATE COURSES

Division II
NS 228

ANALYSIS

David Kelly

While relishing juicy facts (like $\frac{3}{4}, \frac{5}{8}, \frac{7}{12}, \frac{11}{16}, \frac{13}{20}, \dots = \pi$), we'll study the mathematical theory of limits; our analysis will be applied to the foundations of the calculus (which students are expected to have seen) and its extension to functions of two or more variables, to the theory of approximation (including power series and trigonometric series), and to the solution of several important differential equations. We'll do imaginary numbers, too.

The class will meet for four hours each week and participants will be expected to assist in conducting the Calculus Problem Sessions.

NS 184 (284) THE CALCULUS WORKSHOP (Taming Infinity)

David Kelly

Offered each term, the lectures, classes, and problem seminars of the Calculus Workshop are designed to serve a variety of needs and to accommodate students with a wide range of backgrounds. For some, the techniques of the calculus will provide a powerful tool for investigations in the sciences; others may be more interested in the conceptual development of the calculus. We expect to provide a working knowledge of the calculus in one semester.

The Calculus Lecture Series (1 hour/week) will focus on the central themes of the calculus, mathematical, historical, philosophical, and technological.

The Calculus Classes (2 hours/week) will introduce the student to the art of doing calculus; two sections are anticipated in the Fall-- one for students a little nervous about beginning college mathematics. These sections will be repeated in the Spring and a continuing section will be offered.

The Calculus Problem Seminars will enlist the assistance of experienced math students to help calculus students acquire proficiency with the tools of the subject.

SEPARATE COURSES

NS 153 BIOLOGICAL AND CULTURAL BASES OF SEX DIFFERENCES
 SS 111

Masha Greenstein, Louise Farnham

There is much current feeling that sex roles are predominantly determined by social and environmental factors. Yet there are obvious biological factors, such as hormones, that influence the formation of sex-typed behaviors. We are going to try to delimit these biological factors from the social factors by asking the following questions:

First, does the reproductive system directly influence psychological states? In other words, are some differences between the sexes directly related to the physiology of the male and female reproductive systems rather than to the attitudes about the systems? To investigate this problem, we will study the genetics of sex determination and will review the male and female endocrine systems. Of particular interest will be possible psychological effects of hormone changes in these systems.

Second, are there differences between male and female brains? Recent evidence suggests that sex hormones influence the shaping of neural circuits in the central nervous system. In exploring this problem we will review experiments in which the injection of hormones into animals at crucial stages of development results in sex reversal; we shall also study a related problem in humans -- the phenomenon of the transsexual. Finally, we will study six differences in infant responses to stimuli, differences that appear to be innate.

While the emphasis of the course as described above is clearly biological, particular attention will be given to psychosocial and cultural influences which interact with the biological substrates.

This course will meet twice a week for two hours.

SEPARATE COURSES

NS 216
SS 202

BEHAVIOR GENETICS

Division II

Louise Farnham and Lynn Miller

The study of behavioral genetics will focus upon the origins of individual differences in important human characteristics such as intellect and personality. Race and social class will be discussed as genetic constructs. The course will be concerned with the interaction of heredity and environment in determining behavior, although the contribution of heredity will be emphasized. Analogs of human traits will be studied in other organisms as well; for example, genetic aspects of infrahuman learning will be discussed as they relate to individual differences in intellect in humans.

Basic readings will be found in such sources as Dobzhansky's Mankind Evolving, Carter's Human Heredity, and Fuller and Thompson's Behavior Genetics. The reading materials will also include research articles and theoretical papers by such contributors as Vandenberg, Gottesman, Rosenthal and Kety, and readings from Manosevitz, Lindsey, and Thiessen's Behavioral Genetics: Method and Research.

The principal goal of the course is to attain familiarity with the tools and the progress made in applying basic concepts from genetics to social science problems. The course also aims to integrate material from the behavioral sciences, particularly psychology, will be related to concepts from the biological sciences by means of the methods, designs, and concepts of genetics. The course will be jointly taught by a member of the School of Natural Science and Mathematics and a member of the School of Social Science.

The class will meet twice weekly for two hours each meeting. All the students will be expected not only to participate in discussions but also to present their work orally or as a paper to the class. The class is designed primarily for Division II students.

SEPARATE COURSES

NS 198(298)

TOPICS IN ORGANIC CHEMISTRY

Nancy Lowry

We will deal with organic and/or physical phenomena from an organic chemist's point of view. Possible topics might include steroids, terpenes, symmetry in organic molecules, biosynthesis. The text Morrison and Boyd, "Organic Chemistry" will be used, as well as extensive outside reading materials.

There will be two sections, one for Div. II students and those students who have had a semester or more of organic chemistry, and one for Div. I students. No previous experience in chemistry is necessary for the Division I section.

NS 231

PHYSICAL CHEMISTRY

Division II

John Reid

A detailed knowledge of the principles of chemical equilibrium lies at the heart of branches of natural sciences as diverse as animal metabolism, the conditions of explosive algae growth in ponds, and how diamonds might form in the earth's interior. A large part of the course will deal with the implications of the 2nd Law of Thermodynamics -- the generalization from experience that perpetual motion is impossible -- including its implications for the relationship between energy consumption and environmental protection. (Twice a week, 1½ hours each.)

SEPARATE COURSES

NS 263

SEMINAR IN THE HISTORY OF NINETEENTH CENTURY SCIENCE

Stanley Goldberg

This seminar is open to students who are doing or have done Division II work in Natural Science or its equivalent. We will examine the general features of nineteenth century science and the transition from "natural philosophy" -- the sport of the idle rich -- to "science," an integral institution of modern society. In addition, each student in the seminar will be expected to produce a major piece of work and lead at least one session of the seminar on the basis of that work.

Because of the nature of the seminar, enrollment is limited to twelve students.

SCHOOL OF SOCIAL SCIENCE

ANTHROPOLOGICAL PERSPECTIVES ON DEATH AND CULTURE
 SS 103 P. McKean

BIOLOGICAL AND CULTURAL BASES OF SEX DIFFERENCES
 SS 111 (NS 153) M. Greenstein and L. Farnham

CULTURE AND POVERTY
 SS 112 B. Yngvesson

SEMINAR IN CONSTITUTIONAL LAW: THE FIRST AMENDMENT
 SS 114 B. Carroll

THINKING ABOUT THE UNTHINKABLE: ENCOUNTER WITH THE HOLOCAUST PART II
 SS 118 SS 219 Sponsored by the School
 of Social Science

GODS, BEASTS, AND MEN: THE BEGINNINGS AND THE END OF POLITICAL THEORY
 SS 122 (HA 121) R. Meager

INEQUALITY
 SS 124 J. Koplin, B. Linden, and
 F. Weaver

MAN, THE ADVENTURER
 SS 125 L. Farnham

PROBLEMS IN PHILOSOPHY OF THE SOCIAL SCIENCES
 SS 134 SS 228
 (LC 129 LC 206) M. Radetsky

LOVE IN THE WESTERN WORLD
 SS 132 M. Faulkner

GEOMETRY AND PROBABILITY MODELS FOR DATA REDUCTION
 SS 136 SS 229
 (LC 146 LC 207)
 (NS 103 NS 203) J. LeTourneau and M. Sutherland

SCIENCE AND PUBLIC POLICY
 SS 139 SS 231
 (NS 180 NS 280) B. O'Leary

THE CULTURAL LIFE STYLES OF MINORITIES AS A FACTOR IN SCHOOL PERFORMANCE
 SS 141 G. Joseph

SCHOOL OF SOCIAL SCIENCE

THE PERSON - A DEVELOPMENTAL APPROACH SS 144	T. Holman
THE POLITICAL NOVEL: THE POLITICS OF ART SS 149 (HA 123)	M. J. Lunine
THE SELF IN SOCIETY SS 152	M. Faulkner
WOMEN AND THE AMERICAN EXPERIENCE: A POLITICAL AND SOCIAL HISTORY SS 153 SS 235	P. Glazer, G. Hollander, M. Slater and P. Kleindienst
THE TWENTIETH CENTURY CARIBBEAN SS 156 SS 237	A. Phillips
SOCIOLOGY OF FILM SS 157	B. Linden
MODERN PSYCHOLOGY SS 191	R. Birney
BEHAVIOR GENETICS SS 202 (NS 216)	L. Farnham and L. Miller
COMMITMENT AND MEANING IN COMMUNITY SS 203	J. Meister, B. Turlington and R. Goldstein
CULTURE, NATIONALISM, AND IDENTITY SS 207 (HA 207)	R. Marquez, P. McKean and L. Glick
HUMAN BIOLOGY II: COMMUNITY AS PATIENT SS 209 (HB 200)	J. Foster, R. von der Lippe, and J. Slater
INTRODUCTION TO COGNITIVE PSYCHOLOGY SS 211 (LC 213)	J. Koplin and N. Stillings
LEARNING IN EARLY CHILDHOOD SS 213	M. Cole
PROBLEMS IN THE PHILOSOPHY OF LAW AND JUSTICE SS 214	L. Mazor

SCHOOL OF SOCIAL SCIENCE

METHODS IN CURRICULA BUILDING: DEVELOPMENT OF CURRICULA WITH A MULTI-ETHNIC,
CROSS CULTURAL BASE
SS 217 G. Joseph

PLANNING AND NON-PLANNING
SS 219 B. Linden, K. Rosenthal
and J. Resnick

PROFESSIONS
SS 221 L. Mazon and R. von der Lippe

SOCIAL PROBLEMS AND PUBLIC POLICY: READING AND FIELD WORK
SS 223 R. Alpert

SPECIAL PROBLEMS IN SOCIAL SERVICE FIELD WORK
SS 224 W. Wilson

THE INTELLECTUAL AND SOCIAL HISTORY OF SPANISH AMERICA
SS 225 (HA 211) R. Marquez and F. Weaver

TUDOR STUART ENGLAND: A CASE STUDY APPROACH TO HISTORICAL PROBLEMS
SS 226 M. Slater

SCHOOL OF SOCIAL SCIENCE

Curriculum Statement: Spring 1973

Most of us in the School of Social Science are trying to offer courses that focus on problems of enduring concern and that emphasize the value of approaching such problems from a variety of disciplinary perspectives. We know that there is no single all-embracing social science, but we do approach our work with the conviction that understanding human problems and acting on them intelligently requires something in addition to good sense and good intentions. So whether you find yourself studying poverty, communications, women, death, inequality, or love, we trust that you will come away from the course with fresh insight into how complex all human situations are and how much better they can be understood by honest efforts at disciplined inquiry.

Division I courses are intended to be generators: ideally they convert you from passive receiver to active semi-independent learner. Having demonstrated in an exam that you have acquired that basic skill, you're ready for the more intensive and comprehensive study offered in Division II courses.

SS 103

ANTHROPOLOGICAL PERSPECTIVES ON DEATH AND CULTURE

Philip McKean

Early pioneers in anthropology (Tylor, Fraser, Van Gennep, Malinowski) were fascinated by the customs which "natives" followed when a member of their group died. Indeed, this final rite de passage still remains one of the mysteries which invites scholars from a wide range of disciplines to touch on it, and which encourages anthropologists to think in comparative ways: "What do the Navaho or the Todas or the Balinese do - and why?" Starting with an examination of some theories about religion and death, we will study the work of contemporary anthropologists who have touched on the ceremonies surrounding death, and the attendant beliefs and myths. We will also consider recent writing about death in the "modern" world: literary, ethical, and social-scientific, including medical and psychological views. We shall also view films and make efforts to engage in field work locally on mortuary customs, beliefs and rituals. The initial materials are to be examined together, then students will be expected to conduct independent research and report on it.

The course will have two hours of lecture/discussion, one hour for tutorials and 1½ hours for films.

Enrollment is limited to 50.

SS 111 (NS 153) BIOLOGICAL AND CULTURAL BASES OF SEX DIFFERENCES

Masha Greenstein and Louise Farnham

There is much current feeling that sex roles are predominantly determined by social and environmental factors. Yet there are obvious biological factors, such as hormones, that influence the formation of sex-typed behaviors. We are going to try to delimit these biological factors from the social factors by asking the following questions.

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Second, are there differences between male and female brains? Recent evidence suggests that sex hormones influence the shaping of neural circuits in the central nervous system. In exploring this problem we will review experiments in which the injection of hormones into animals at crucial stages of development results in sex reversal; we shall also study a related problem in humans -- the phenomenon of the transsexual. Finally, we will study sex differences in infant responses to stimuli, differences that appear to be innate.

While the emphasis of the course as described above is clearly biological particular attention will be given to psychosocial and cultural influences which interact with the biological substrates.

This course will meet twice a week for two hours.

Enrollment is limited to 32.

SS 112

CULTURE AND POVERTY

Barbara Yngvesson

It has been suggested that "poverty in modern nations is not only a state of economic deprivation, of disorganization, or of the absence of something. It is also something positive in the sense that it has a structure, a rationale, and defense mechanisms without which the poor could hardly carry on. In short, it is a way of life, remarkably stable and persistent, passed down from generation to generation along family lines. The culture of poverty has its own modalities and distinctive social and psychological consequences for its members. It is a dynamic factor which affects participation in the larger national culture and becomes a subculture of its own" (Oscar Lewis).

This statement suggests that the poor as a group, irrespective of national or ethnic background, have a distinct culture of their own: They share a particular complex of understandings and of strategies for dealing with each other, on the one hand, and with those who are not poor, on the other. The statement suggests that this culture is valued and is self-generating; and it implies that cultural factors are at least as important as, for example, economic factors, in maintaining the conditions of poverty.

Is this a valid perspective on poverty, and what are its implications? What alternatives might be proposed to this view? In this course we will examine these problems using ethnographic and sociological studies (such as Oscar Lewis' La Vida, Clark's Dark Ghetto, Kiel's Urban Blues, Liebow's Tally's Corner), as well as novels, autobiographies, and other reports. A key work for the course will be Valentine's Culture and Poverty.

Students taking this course should plan for a field-work time commitment that is approximately equivalent to another course.

This course is coordinated with Michael Cole's course, Learning in Early Childhood. Students wishing to enroll in both courses should speak to the instructors. The course will meet twice a week for 1½ hours plus field work tutorials.

Enrollment is limited to 16 students plus students from Michael Cole's course.

SS 114

SEMINAR IN CONSTITUTIONAL LAW:
THE FIRST AMENDMENT

Bruce Carroll

Many controversies have arisen involving alleged violations of the First Amendment of the Constitution. Conflicts concerning freedom and establishment of religion (e.g., school prayers, busing to parochial schools, Sunday closing laws) freedom of assembly (e.g., the Communists, the Weathermen, the Black Panthers), freedom of press (e.g., obscenity and pornography, libel and slander), and freedom of speech (e.g., labor picketing, demonstrations to prevent speech, public versus private speech) have become virtually commonplace.

The First Amendment is explicit in its command that "Congress shall make no law . . . abridging the freedoms of speech, press, religion and assembly. Yet in the face of this prohibition many laws have been passed restricting the Constitutionally protected freedoms. For example, federal laws proscribe the distribution of pornography through the United States mails, and many states prohibit their youth from possessing pornography. The First Amendment, however, makes no age distinctions and does guarantee a free press, thus setting the stage for Constitutional litigation. Similarly, in the face of what appears to be the absolute right of free speech, the Supreme Court has held that one may not shout "fire" in a crowded theater.

This seminar will examine some of these controversies surrounding the First Amendment. Supreme Court opinions will be read, supplemented with some secondary source materials, to learn just what the First Amendment means to the members of the Court. Emphasis will be placed upon class analysis and discussion of those opinions and decisions. From this, we should obtain understanding of some of the complexities confronting American society today.

The seminar will meet once each week, but additional meetings will be scheduled as appropriate. If possible, a trip to the Supreme Court will be undertaken in conjunction with an issue being studied.

Enrollment is limited to 16.

SS 118 SS 219

THINKING ABOUT THE UNTHINKABLE:
ENCOUNTER WITH THE HOLOCAUST PART II

Sponsored by the School of Social Science

This course is a continuation of Encounter with the Holocaust from the first semester (see Fall catalog). Having dealt with historical antecedents and the nature of the destruction itself. We shall examine the effects of the Holocaust on participants, survivors, Jews, Gentiles; those who lived through it and those of us born later. We shall examine the question of Jewish resistance to the Nazi threat and the response and inaction of the nations, America included, to the genocide. The question of how much our leaders did or did not know about the Final Solution will be looked at very closely. We shall also consider the Church as collaborator or resistor. A unit on literature of the Holocaust will be covered to be followed by the philosophic and theological problems and response of a post-Holocaust world to the unprecedented destruction. Finally we shall examine the extent to which the modern world has inherited the legacy of the Holocaust.

The class is a national pilot project in teaching the Holocaust in the university. It is taught by a consortium of Five-College and outside faculty and coordinated by the student planners. Rabbi Yechiael Lander and Leonard Glick, Dean of the School of Social Science, will serve as moderators.

Students wishing to join the course should be advised that there will be only a small number of available places. Interested students should make an appointment for an interview with Dean Glick before registering. Students accepted will be expected to have a good familiarity with the syllabus and at least a few of the books used in the first semester, most notably the eight hundred page plus book, The Destruction of the European Jews, by Raul Hilberg.

The course will meet twice a week for two hours each session.

SS 124

INEQUALITY

James Koplin, Barbara Linden, and Frederick Weaver

The course will begin with a discussion of the classical literature on stratification and mobility theories, focusing in part on recent studies of education. Two to three week modules will then be formed for the study of four general populations: The Rich, White Collar, Blue Collar, and Everyone Else.

The course will meet twice a week for 1½ hours each session.

Enrollment is open.

SS 125

MAN, THE ADVENTURER

Louise Farnham

What types of people are likely to seek stress by challenging nature, by engaging in dangerous sports, by intense competition? Why do some individuals seek danger, or difficult problems, or in other ways promote their personal feelings of stress? What social arrangements are made which promote and facilitate stress-seeking behavior? How is stress-seeking behavior controlled and regulated by society? What does stress mean physiologically? Are there sex differences in stress-seeking?

This seminar will be concerned with such questions in an attempt to understand the motivations and phenomenology of fliers, sky divers, mountaineers, explorers, sailors, and other adventurers. In preparation for this psychological analysis, the seminar would achieve some understanding of the physiological response to stress and of assessment of human motives.

Materials for the course could include such works as Selye's The Stress of Life, Radloff and Helmreich's Groups Under Stress: Psychological Research in Sealab II, James Ullman's Americans on Everest, Wilfrid Noyce's The Springs of Adventure, Klausner's Why Man Takes Chances and The Quest for Self-Control, as well as articles from the psychological literature and biographical accounts of adventurers.

The course will meet twice a week for 1½ hours each session.

Enrollment is limited to 20.

SS 134 SS 228 PROBLEMS IN PHILOSOPHY OF THE SOCIAL SCIENCES
(LC 129 LC 206)

Michael Radetsky

"Oh, the monster!" exclaimed the
Reverend Doctor Folliott, "he has
made a subject for science of the
only friend he had in the world."

Peacock, Crotchet Castle
(cited by A. J. Ayer)

The particular problems in the philosophy of the social sciences which we will consider center around their relation to the physical sciences, in light of their taking, as objects of study, purposive human action. It will be necessary and useful to start by considering some questions for philosophy of science in general; primarily concerning the nature of explanation and the relation between explanation, prediction, and causal laws. We will also discuss the notions of "description," "theory," and "model," and some suggestions as to how these fit into the idea of scientific explanation.

After all too little time on this, we will go on to discuss explanation in history and in psychology, the role of theory in such explanations, and the problems raised for considering such theories as scientific explanations by the notion of "causal laws." We will be led to consider the alternative approaches of "Verstehen" and teleological explanation, the latter in some detail with respect to the notions of purpose and function.

Should we make some progress with these considerations, we will spend some time on a couple of interesting difficulties for the social sciences: the problem of values, frameworks, and objectivity; and the problem of the relation between social facts and individuals.

This course will involve extensive difficult readings -- so far I'm pretty sure I'll want to use May Brodbeck's Readings in the Philosophy of Social Sciences and probably several supplementary works -- and group discussion.

Division I students will be better prepared for this course if they have already had some experience with studies in social science. The course will meet twice a week for 1½ hours each session.

Enrollment is limited to 16.

SS 132

LOVE IN THE WESTERN WORLD

Monica Faulkner

This course focuses on sociological conceptions of couple relationships. We will begin by discussing historical and literary analyses of western conceptions of love, sex and marriage; readings would include, among others, Love in the Western World, The Second Sex, and The Natural History of Love. We will then turn to an examination of the structure of marital cultures among contemporary Americans by reading and analyzing a number of case studies such as Tally's Corner, Sex and the Significant Americans, The Urban Villagers, Soulside, Behind Chetty Walls, Blue Collar Marriage, Workingman's Wife, The Affair and Open Marriage. Students will be expected to develop and carry out some kind of field work relevant to the course.

The course will meet once a week for 2½ hours.

Enrollment is limited to 25.

SS 136 SS 229
(LC 146 LC 207)
(NS 103 NS 203)

GEOMETRY AND PROBABILITY MODELS
FOR DATA REDUCTION

Jack LeTourneau and Michael Sutherland

This is a highly modular course. The modules will consist of:

1. "Getting into APL" -- The basics of the language, getting to know your operators, using your skills to some advantage, i.e., typical data analytic problems, statistics and their development in terms of APL.
2. "Linear Algebra or Finite Dimensional Vector Spaces as a Way of Life" -- The basics of vector spaces with emphasis on the geometry of vector spaces. Basics include independence, dependence, bases, dimension, orthogonalization, inner products, subspaces, projections, etc.
3. "Data Reduction for Fun, Profit and Understanding" -- Data as points in individual space, as points in variable space, the geometry of data reduction, inner products as correlations and other subjects. Doing data reduction using APL. Problems, problems...students may use own data.
4. "Geometry in APL/Advanced APL" -- Using APL to accomplish data reduction, advanced programming for standard data reducing techniques -- means, variances, correlations, regressions, analysis of variance, factor analysis, principal component analysis, projections, etc.
5. "Probability Modeling" -- the usual basic probability models - binomial, hypergeometric, multinomial, Poisson, exponential, uniform; models as the intrinsic part of exploratory data analysis; modeling as a smoothing procedure when data is sparse. Independence and randomness as the baseline of inference. Some Markov chains.

Students are not necessarily expected to participate in all five sections. Students are expected to be responsible for going well beyond the core lectures' material in terms of their understanding and ability to apply the ideas presented. We will spend a good deal of our time participating in/directing students' semi-independent activities.

SS 139 (SS 231)
NS 180 (NS 280)

SCIENCE AND PUBLIC POLICY

Brian O'Leary, Director

Governmental agencies regularly make decisions of enormous economic, social and environmental consequence. How wisely these decisions are made depends in part on the quality of information available to those who make them. Yet the structure of the decision-making process may tend to encourage the presentation of partial or distorted information. Vested interests and promotional bias among leaders of government and industry have often led to multibillion dollar projects which are of questionable value and may have detrimental environmental effects. This situation has created a need for more participation among scientists, lawyers and other citizens to act as adversaries in presenting to decision-makers the costs of such programs and in suggesting alternative courses in which priorities could be shifted more toward the public interest.

We will spend the semester first in defining and describing the concept of adversary science as a technique of technology assessment. This will include readings from a recently compiled bibliography on technology assessment (first month). Next we shall go in depth describing the decision-making process and the role of adversary science in NASA's proposed space shuttle, a program which is estimated to cost tens of billions of dollars (second month). During this time students will embark on projects of their own choice either in teams or as individuals and report on them during the third month. These projects would include analyzing reports and taking field trips to Washington, Boston or other places, while playing an activist role in some issue. Examples of possible projects are energy and power, food additives, sewage treatment, medical technology, communications technology, pollution control technology, space program priorities, and new weapons systems. (Some of these might involve some other faculty members as well.) Those students who have participated in this course in the fall can continue to work on their projects throughout the spring term.

A Wednesday night lecture series on Science and Public Policy will bring to the campus a group of distinguished visitors whose experience and qualifications bear on the questions of the course. They will deliver lectures, lead discussions and contribute to our planning for the future of the course.

SS 141 THE CULTURAL LIFE STYLES OF MINORITIES AS A FACTOR IN
SCHOOL PERFORMANCE

Gloria I. Joseph

This course will concentrate on distinct cultural configurations and patterns of social behavior that persists in minority communities. (Puerto Rican, Chicano, Blacks, Native Americans). The social organizations and cultural life styles of these minority groups in America will be studied and analyzed in terms of their influence and relationship to the traditional classroom experience. Middle class values that are predominant in most public institutions have frequently been said to be in conflict with the values that minority youngsters bring to the classroom. Consequently, a central question that will be dealt with in the course will be: To what extent, (if any), do differences in cultural life styles interfere with the learning process in school.

Topics to be covered will include:

1. Existing Patterns in Minority Communities -- family composition, religion, norms, values and folkways.
2. Values of educational institutions, values of teachers, the curriculum as a reflection of these values.
3. Discipline practices at home and in school.
4. Who passes and who fails -- What is it that they have passed, and what have they failed.

In addition to a required text reading list, there will be numerous educational research experiments to be read.

The class will meet once a week for two hours and the third hour will be arranged. The third hour will be for guest lecturers, films, and field visits.

Enrollment is open to all students.

Thomas Holman

An introduction to developmental psychology with an emphasis on key concepts, theories of development, and the stages of growth from birth to maturity. In dealing with key concepts we will focus on such things as socialization, growth and maturation, modelling effects, the nature/nurture controversy, etc. Theories would include Erik Erikson (Freudian), Piaget (cognition), Sears and Bandura (learning). The emphasis on stages would focus on the definition of childhood, adolescence and adulthood and some of the tasks involved at these stages.

The course is to be divided into three or four areas. One would be a key lecture held once a week; the second would be a list of assigned readings; the third would be a weekly tutorial session in smaller groups; the fourth could be independent research on a topic of choice, depending on the individual students motivation. It would not be absolutely necessary for the areas of the course to overlap as much as it is to complement each other, the amalgamation would most likely come in the tutorial sessions.

Enrollment is unlimited.

SS 149 (HA 123)

THE POLITICAL NOVEL:
THE POLITICS OF ART

M. J. Lunine

A theoretical exploration of certain political values, ideas, and movements by means of analysis of selected novels.

Three intertwined themes will pervade the course: (1) What is Politics? (2) What is Art? (3) What is the relationship between the two?

One colloquium-style session per week will be supplemented by individual tutorial meetings. There will be a term paper required. There will be two short papers -- one longer than the other; each allowing a maximum of individual choice and flexibility.

The following conceptual scheme and list of books describe the course's approach:

I. The Politics of Introspection

Bernanos, The Diary of a Country Priest; Silone, Bread and Wine; Pasternak, Doctor Zhivago.

II. The Politics of Aspiration

Forster, A Passage to India; Achibe, Man of the People; Fuentes, Death of Artemio Cruz

III. The Politics of Instrumentation

Warren, All the Kings Men; Wright, Native Son; Doctorow, The Book of Daniel.

Enrollment is limited to 20.

SS 157

SOCIOLOGY OF FILM

Barbara Linden

This course will deal with the social history of the film industry; content analysis as a methodological tool; films as "sociological data"; and the general problem of movies as reflecting or generating cultural change. Three weeks will be spent on each of the above areas, and students will be required to present papers and lead discussions in three of the four areas.

Students should expect to produce approximately 40-50 pages of writing for the course. At least one paper will be assigned on problems of content analyses.

This course will meet once a week for 1½ hours plus an hour tutorial to be arranged.

Enrollment is limited to 20.

SS 191

MODERN PSYCHOLOGY

Robert Birney

The course will combine Keller Plan teaching techniques with a core lecture series to acquaint the student with major research areas in modern psychology. The aim will be to introduce fundamental problems of human behavior, basic methodologies now in use, as well as illustrate applications to current social problem areas.

The basic format will be two one hour lectures, several hours during the week when self-testing will be available, and occasional discussion group meetings.

Enrollment is unlimited.

SS 202 (NS 216)

BEHAVIOR GENETICS

Louise Farnham and Lynn Miller

The study of behavioral genetics will focus upon the origins of individual differences in important human characteristics such as intellect and personality. Race and social class will be discussed as genetic constructs. The course will be concerned with the interaction of heredity and environment in determining behavior, although the contribution of heredity will be emphasized. Analogs of human traits will be studied in other organisms as well; for example, genetic aspects of infrahuman learning will be discussed as they relate to individual differences in intellect in humans.

Basic readings will be found in such sources as Dobzhansky's Mankind Evolving, Carter's Human Heredity, and Fuller and Thompson's Behavior Genetics. The reading materials will also include research articles and theoretical papers by such contributors as Vandenberg, Gottesman, Rosenthal and Kety, and readings from Manosevitz, Lindsey, and Thiessen's Behavioral Genetics: Method and Research.

The principal goal of the course is to attain familiarity with the tools and the progress made in applying basic concepts from genetics to social science problems. The course also aims to integrate material from the behavioral sciences, particularly psychology, will be related to concepts from the biological sciences by means of the methods, designs, and concepts of genetics. The course will be jointly taught by a member of the School of Natural Science and Mathematics and a member of the School of Social Science.

The class will meet twice weekly for two hours each meeting. All the students will be expected not only to participate in discussions but also to present their work orally or as a paper to the class. The class is designed primarily for Division II students.

Enrollment is unlimited.

SS 203

COMMITMENT AND MEANING IN COMMUNITY

Joel Meister, Barbara Turlington and Robert Goldstein*

The aim of this course is to bring students in contact with the theoretical concepts of community and their practical use and applications, such as community as a social structure; community as a process of interpersonal relationships; community as a life style; and community as a focus for social change. Within the realm of these perspectives we hope to deal with questions that rise both from the readings and from the students' own experiential knowledge. How does one define the term community? How does a group define itself as a community? How does one become committed to a community, and what is the meaning of "The College as a community?"

The course will emphasize both the theoretical and historical development of the concept, through the study of actual communities and through reading such works as Whyte's Street Corner Society, Gans' Urban Villagers, Goodman's Community of Scholars, Kanter's Commitment and Community, Nisbet's Quest for Community, and Zablocki's The Joyful Community. The spectrum of possibilities for study is great, ranging from intentional communities (e.g. communes), to the unintentional urban community; from the "forced" communities of the ghetto to the "planned" communities of the suburbs, and the educational communities of schools and colleges.

Through the comparison of these communities we will attempt to form answers to the questions we have raised and give students the insight to apply the theoretical definitions to themselves and to a community of which they are a part.

The course will meet twice a week for two hours.

Enrollment is unlimited.

*Robert Goldstein is a Hampshire Fellow doing work in Social Science.

SS 207 (HA 207)

CULTURE, NATIONALISM, AND IDENTITY

Robert Marquez, Philip McKean, and Leonard Glick

Cultural and ethnic identity is a major theme in social and political history as well as an important element in the self-concept of most individuals. In some nations, a common cultural tradition molds and reinforces a sense of national identity. In others a dialectic exists between the needs of various cultural groups to maintain their identity as such and the need of the nation for unity and cohesion. In this course we intend to study these problems from a comparative perspective, with particular attention to nations in the Caribbean and Southeast Asia but ranging more widely as time permits. We intend to cross disciplinary boundaries regularly as we explore the subject through literature and the arts, through the work of historians, anthropologists, and other social scientists, through discussions with people focusing on their own cultural traditions and the problems of their nations, and through personal encounters with people of various cultural backgrounds.

The course will meet twice a week for 1½ hours each session.

Enrollment is unlimited.

SS 209 (NS 260)

HUMAN BIOLOGY II:
COMMUNITY AS PATIENT

John Foster, Robert von der Lippe, and Jaqueline Slater*

In the fall semester Human Biology and the Sociology of Medicine and Health Care were examined more or less separately. In this semester we will move into the area where these fields overlap. The program will consist of a series of units, varying from the heavily biological to the heavily sociological and political. It will be done under the joint supervision of faculty and students with strong professional interests in biochemistry, medicine, sociology, and public health. Students will work in teams on these units. Each team will have a responsibility to 1) gather input data by interview, questionnaire, or library research, 2) develop a bibliography of readings for the unit, 3) create a file of material suitable for continuing work by future students, 4) report the results of their efforts back to the rest of the students. Units will take a variety of forms, of which the following are illustrative:

- . Examination in detail of a local health care delivery system.
- . Case studies of significant public health problems or diseases.
- . Medical mysteries.
- . Diagnostic screening projects, on campus or elsewhere.
- . Laboratory studies.

More detailed descriptions of units and procedures will be available shortly before the semester begins.

The course will meet one hour twice a week for lecture/CPC and two hours for tutorials/lab/projects.

Enrollment is unlimited.

*Miss Slater is a third year student at Hampshire College

SS 211 (LC 213)

INTRODUCTION TO COGNITIVE PSYCHOLOGY

James Koplin and Neil Stillings

This course is an intensive introduction to the experimental study of language, thought, memory and perception. The aims of the course are

1. An understanding of the metaphor that has dominated modern cognitive theory -- the view of man as an information processing system.
2. A thorough study of three research problems, illustrating the relationship between psychological theory and experiment. Some questions we might study are, Is a memory anything more than a faded internal tape recording or film strip? How are the sound waves of speech converted into meanings? Why are problems with easy solutions sometimes very hard to solve?
3. The design, performance and analysis by the class of two or three experiments related to the three research problems.
4. A survey of the major results of cognitive psychology through assigned readings from textbooks and reviews.

Readings will be drawn from journals and from books such as P. H. Lindsay and D. A. Norman, Human Information Processing: An Introduction to Psychology; Ulric Neisser, Cognitive Psychology; Herbert Simon, The Sciences of the Artificial.

The course will be of particular interest to students working in experimental psychology, computer science, neurobiology and linguistics. There will be two class meetings per week for 1½ hours each session. Roughly equal numbers of meetings will be devoted to lectures, discussions of readings on the topics or the survey, and the class experiments.

Enrollment limited to 50.

SS 213

LEARNING IN EARLY CHILDHOOD

Michael Cole

This course will be open to nine students and will consist of the following components:

- . Seminars and tutorials on the Hampshire campus commencing on Sunday, February 18 and meeting at times scheduled jointly by myself and the students. These seminars will introduce students to basic concepts of cognitive psychology and the application of these ideas to understanding cognitive development.
- . A one month practicum based at Rockefeller University in New York. During this month students will spend their time doing research under my guidance and the immediate supervision of a trained specialist in early childhood language. The research will be done in educational setting (a Head Start Nursery School) and will concern the situational constraints on the manifestation of intellectual skills. Students will carry out both observational and experimental work.

The course is intended primarily for Division II concentrations, but other applicants will be considered. During their time in New York, students will live in an apartment across from Rockefeller campus where they may cook their meals if they choose. Payment for the apartment has been arranged, but students are responsible for daily maintenance costs.

In order to facilitate the arrangement of students' schedules, Michael Sutherland will coordinate a class in introductory statistics and data analysis with my course to supplement students' experience with real-life research while providing a flexible format in terms of timing. To complete their schedules, students should seek other courses with flexible scheduling possibilities* and independent study possibilities. I am willing to offer independent study, as well as the practicum, in such areas as learning theory, culture and cognition, theories of compensatory education.

*Some courses which can be coordinated with this one include: Natural Science modular "mini" courses; HA electronic music course; SS112, Culture and Poverty, SS191, Modern Psychology, SS221 Professions.

SS 214

PROBLEMS IN THE PHILOSOPHY OF LAW AND JUSTICE

Lester Mazor

What is the nature of law? What is the meaning of justice? These two questions have figured in the works of most of the major philosophers from Plato to the present day. This course will explore their ideas and seek to determine the significance of them for a number of topics of current concern.

The principal object of the course will be to examine the difference one's philosophic position makes to the resolution of practical problems. This emphasis will be reflected in the manner in which the course will be taught. After an introductory exploration of the history of legal philosophy, members of the class will be asked to select the work of a particular philosopher for intensive study. During most of the remainder of the term each student will speak on behalf of that philosopher in general class debates on a series of issues, including civil disobedience, equality, the sanctity of life, the growth of the law, the capacities of international law to contribute to world order, the relationship of law and language, the impact of science and technology upon law, and the limits of the legal order.

No previous work in philosophy or law is presupposed.

Materials for the course will include Friedrich, Philosophy of Law in Historical Perspective, Hart, The Concept of Law, Fuller, The Morality of Law, and problem materials prepared by the instructor.

The class will meet once a week for two hours, plus an hour weekly tutorial to be arranged.

Enrollment is unlimited.

SS 217 METHODS IN CURRICULA BUILDING:
DEVELOPMENT OF CURRICULA WITH A MULTI-ETHNIC, CROSS CULTURAL BASE

Gloria I. Joseph

Work in this course will be focused on developing curricula for the public schools, (private and parochial schools can use them as well), that will provide the students with a broadened perspective of the critical issues in society today. Academics will not be separated from critical social issues. Curricula should be intellectually liberating, challenging and exciting at all levels (K thru 12). Curricula will be developed on the assumption that learning takes place best not through the coercive lecture, reading assignments and exam, but through the increasing involvement of the student through the process of inquiry.

Existing curricula in math, science, social studies, reading, literature, etc. will be studied in order to make appropriate modifications and innovations. The majority of class time will be spent in actually planning and writing such curricula. It will be necessary to begin with an understanding of what is meant by a multi-ethnic cross-cultural approach in education. (The terms have been misused so frequently that we may have to coin a new term to express our intentions.)

An interdisciplinary approach will be utilized in building the curricula. The class will meet two hours a week in the classroom and a third hour will be spent in the "field".

Class size is limited to 20 students. Open to Division II students unless a student has had a previous education course or equivalent experience.

SS 219

PLANNING AND NON-PLANNING

Barbara Linden, Kenneth Rosenthal and Johanna Resnick *

This seminar will be concerned with the planning processes in the United States and in a few European countries, by focusing on several case illustrations from both a legal and sociological point of view.

The first few weeks of the course will be spent in gaining an overview of the problems in regional and city planning, basing this in part on R. Goodman's After the Planners; Whyte's The Last Landscape; various HUD reports ("Housing and Urban Development by Localities", "Housing Construction Statistics", etc.); Babcock's The Zoning Game; Wilner's The Housing Environment and Family Life; Frieden's Urban Planning and Social Policy; Schorr's Slums and Social Insecurity; and some of Abrams' works.

Two modules of three weeks each will then be given sequentially:

- Legal aspects of planning (problems of ownership and control, legal limitations and loopholes, roles of local, state and federal governments, financing problems). Each student (or teams of students) will present summaries of specific cases, one case dealing with the United States, and one with another country.

- Behavioral research and environmental design (new contributions of social scientists / or hoped-for contributions / to planning and design processes.) Again, presentations from each student will be made illustrating the use of or need for behavioral information, using cross-cultural cases.

Two required field trips will be made (Harrisville, New Hampshire; Reston, Virginia). An optional field trip might be made to Disneyland (Florida or California - either would suffice).

The final three weeks of the term will be devoted to evaluations and criticisms of student studies, and discussions of the cases.

The course will meet once a week for 1½ hours with a second weekly meeting to be arranged.

Enrollment is unlimited.

*Miss Resnick is a second year student at Hampshire College

SS 221

PROFESSIONS

Lester J. Mazor and Robert von der Lippe

Who becomes a lawyer in America today and why? When does one decide to study medicine and how is the choice made as to which specialty to enter? Where does professional power come from? Do Doctors and Lawyers care about society? When they do, why do they? When they don't, why don't they. In all these questions, what part does society play, or the professional school, or the professional associations? All these questions will be addressed in this course and where it is impossible to answer them we will suggest methods and approaches which may help. The course will study the professions from the sociological perspective, focusing upon Law and Medicine as specific cases. Questions of definition and the socialization process will serve as guidelines to study the rights and responsibilities of the professions -- the freedom and/or control that is or needs to be exercised -- and what the future of the professions may be. Efforts will be made to study and spend field work time both in professionalizing institutions as well as with the observation of the professions in practice.

Readings will include: Eliot Freidson, Profession of Medicine; Erwin Smigel The Wall Street Lawyer; Howard M. Vollmer and Donald L. Mills, Professionalization; Elton Rayack, Professional Power and American Medicine; Daedalus, "The Professions" Fall, 1963; Jerome Carlin, Lawyers on Their Own; and Mayer's, The Lawyers.

The class will meet twice weekly for two hours each.

Enrollment is unlimited.

SS 223

SOCIAL PROBLEMS AND PUBLIC POLICY:
READING AND FIELD WORK

Richard M. Alpert

This course will introduce students to the nature and range of social problems associated with life in the central cities of the United States. We will analyze the causes and dynamics of these problems and then focus on the attempts of various levels of government, from federal to local to "solve" them. Particular attention will be given to special, innovative approaches to the problems of urban poverty. We will draw heavily on the experience of the Holyoke Model Cities Program and its staff.

Students will be expected to do either some independent, but closely supervised field work, or a research paper, or both, analyzing a public policy approach to solving an urban social problem.

Enrollment is by permission of instructor. Class hours are to be arranged.

SS 224

SPECIAL PROBLEMS IN SOCIAL SERVICE FIELD WORK

Whitelaw Wilson

The purpose of this course is to provide students interested in social service an opportunity to explore some theoretical and conceptual frameworks of such work. Specifically the course is for students who want to enlarge their understanding of social service field experience.

The course will be devoted to individual or small group tutorials supplemented by classes. Class sessions will consider such topics as

- relationships - how to help without hurting
- viewing an agency - as a consumer, or provider
- community organization and disorganization
- research for the beginning social scientist

Individual readings and papers will be arranged. The course is limited to 12 students who should meet with the instructor prior to enrollment.

Class hours are to be arranged.

S 226

TUDOR STUART ENGLAND:
A CASE STUDY APPROACH TO HISTORICAL PROBLEMS

Miriam Slater

This course is an attempt to introduce a relatively new approach, which has already been used successfully in other disciplines, to the study of history. The overarching goal of the course is to help students develop critical facility as well as substantive knowledge of historical problems, using England in this period as a particularly good case study. The course will be an intensive study of sixteenth and early seventeenth century England with special emphasis on sociological developments.

The semester will be divided into two six-week phases. During the first six week period the material will be offered in the form of "personalized instruction", an approach which is intended to allow each student to proceed at his/her own pace. Successful completion of this phase allows the student to proceed to the problem oriented seminars of the last six weeks with a firm background of factual knowledge of the period. In addition, there will be a series of weekly events (lectures, films, etc.) during the first half of the term which will provide additional information and material. The small group seminars will focus on the problem of Puritanism from a variety of angles, depending on group interest; e.g., Puritanism as a Revolutionary ideology, Puritanism and the Rise of Science, Puritanism and the Family, etc. The seminar reading assignments will reflect these interests in terms of substance and will differ in quality from the narrative, chronological studies which will be used in the first part of the course. Each student should expect to offer a paper based on the seminar work.

The course will meet once a week for two hours.

Enrollment is unlimited.

FOREIGN LANGUAGE INSTRUCTION

CURRICULUM STATEMENT: SPRING 1973

The Spring Term will offer students a variety of ways to exercise their interest and skill in French and Spanish. Students interested in pursuing the study of either language should consult with Professor James Watkins in Academic Building 201. For the wide array of courses offered by the Five Colleges in some fifteen foreign languages and literatures, students should consult the college bulletins and, for further assistance, confer with Mr. Watkins.

Within the Five College program for the Spring of 1973, the following studies can be carried out at Hampshire College. It is not necessary to register for such work, though successful completion of a term's work in foreign language will be acknowledged in your College transcript.

*Supervised self-instruction in French, Spanish, or Portuguese:
James Watkins and Seymour Pollock

This course of study is for beginning and intermediate students and for advanced students who wish to act as proctors. Advanced students in language are encouraged to use their proficiency in teaching others. When enrolling, such students should add the word Proctor after the title, and they should arrange to see Mr. Watkins or Mr. Pollock sometime during the week preceding the start of classes.

A first period will serve for intensive exercise in phonology, for acquaintance with method, materials and standards, and for the setting of individual paces. Students with previous training in the language will also use this period to place themselves at the appropriate level.

Thereafter, meetings will be in the form of personal appointments made for particular needs and of small groups organized for oral practice. Total class and preparation time may well run over fifteen hours weekly.

Students should plan and make every effort to spend the following summer or January Term in a French-, Spanish-, or Portuguese-speaking country.

*La Table Ronde: James Watkins

A seminar for advanced students of French. By advanced is meant those who have acquired a ready, accurate facility in both the written and oral language. This usually implies previous foreign residence or study.

The books chosen for discussion will change each term, allowing students to enroll more than once. In the fall, the titles will be varied in subject; in the spring, they will be to some degree ordered around a common theme. In both cases, they will have been selected because of the recognized influence of their authors and because of their general appeal. A sample selection for the fall might be:

Laurent:	<u>Lettre ouverte aux étudiants</u>
Etiemble	<u>Parlez-vous français?</u>
Fauvels	<u>Lettre ouverte aux Français</u>
Hazard	<u>la Crise de la conscience européenne - I</u>

The seminar will be conducted in French, organized around written and oral assignments, limited to five students. It will meet for one and one-half hours twice a week.

*The teaching of English as a second language to Spanish-speakers:
Seymour Pollock

This course is for advanced students of Spanish. By advanced is meant those who have acquired a ready, accurate facility in both the written and oral language. This usually implies previous foreign residence or study.

Careful contrastive analysis of Spanish and English, an introduction to the culture of the Spanish-speaking child, and actual experience in a real teaching situation will offer a basis for preparation of instructional materials, the planning of language courses, and the development of actual classroom techniques. Students will, therefore, be encouraged to undertake independent research along these lines.

An important part of the course consists of field work with Spanish-speaking children in Holyoke. Students serve as teaching aids in the ESL program at the West Street School, working with teachers in the school. The amount of time which a student wishes to give to field work will be worked out with the instructor. (Such field work could constitute an Independent Study project for the January or Spring Terms.) Class meetings will be held once a week for two hours.

*Sens et Contresens (James Watkins) and Sentido y Contrastido
(Seymour Pollock)

These courses are for advanced students of French or Spanish. By advanced is meant those who have a ready, accurate facility in both the written and oral language. This usually implies previous foreign residence or study.

Incessant reference to a foreign language dictionary is at best a tedious exercise. At worst, it is misleading. This is especially the case when the level of language concerned is literary, when meaning derives from a created context, metaphor, and personal style, when it derives from an original, often inimitable, usually untranslatable use of words.

These seminars, then, will exercise the search for meaning inside, not outside, the text. The mastery of such an exercise is indispensable to literary perception in a foreign language and prerequisite to any advanced work in a foreign literature.

The courses will be given and taken in French or Spanish. Seminar size will be limited to 12 students. Meetings will be once a week for two hours.

They will be offered in the Spring Term only.

James Watkins, Director

THE HUMAN DEVELOPMENT PROGRAM

CURRICULUM STATEMENT: SPRING 1973

If I am not for myself, who will be?
 If I am for myself alone, what am I?
 If not now, when?

--Ethics of the Fathers 1:14

The Human Development Program in the Spring Term 1973 consists of a collection of workshops exploring modes of personal growth and aspects of the individual life process. The Program's principal goal is to help its participants toward their own awakening--toward fuller consciousness of themselves, the issues of growth as persons that most affect them, the crafts of encounter and relationship and aloneness and symbolization that may offer better access to living well with themselves and others. Individual workshops will differ widely in the directness and the styles with which these goals are addressed. Several workshops will be offered by faculty members as part of the regular Spring Term curriculum. Others, indeed the majority of workshops, will be organized as House courses or informal programs, drawing leadership from all sectors of Hampshire's community--students, staff, faculty--and from outside the College. In addition, the Human Development Program will sponsor a series of events--discussions, films, lectures, demonstrations, and festive occasions--open to the College community. A separate catalog for the Human Development Program will be issued at the beginning of the Spring Term.

John R. Boettiger, Chairman

GROUP INDEPENDENT STUDY PROJECT - EDUCATIONAL STUDIES

Faculty Adviser: Van R. Halsey
Student Representative: Peter Bloch

This is an experimental pilot project, a continuation of what was called "Modular Group Study Units" this past fall.

This project is designed for Division II students who are sure that their concentration will be in educational studies. The purposes of the project are:

1. to develop understanding and excitement about a broad range of topics in education.
2. to help each member of the project to further define his field of concentration, and to perceive the relationships between that field and others.
3. to stimulate wide-ranging discussions throughout the Hampshire community on various questions and topics within education.

The project involves an integration of classroom activities with field experience. Every member of the project must be doing some "hands-on" work. Most often this will be achieved through practice teaching in local school but many other possibilities could be explored.

The classroom component of the project will be mostly student-run seminar discussions and will cover during the semester three or four topical units. The two units which are planned so far as Humanistic Education and Minority and Inner-City Education. Also contemplated is a unit on testing and evaluation. The responsibility for organizing each unit will be taken by a small group of students within the project. The responsibility for developing meaningful discussions will be taken by every participant in the project.

The project is designed so that it is possible to participate in one or two of the units. Information on the scheduling of the units will be available by registration period. The project will meet for two hours twice a week.

Interested students should fill out independent study forms to be signed by Van Halsey.

HAMPSHIRE COLLEGE FACULTY
SCHOOL OF HUMANITIES AND ARTS

William Arnold, adjunct assistant professor of photography, has a B.A. from San Francisco State College and an M.F.A. from the San Francisco Art Institute. His photographic works have been widely exhibited, and he has collections at a number of museums including the Museum of Art in New York City.

Janet A. Boettiger, assistant professor of human development, has a B.A. from the University of Maryland at College Park and an M.S. from the University of Pittsburgh. Interested in the teaching of movement and movement therapy, she has worked as a movement analyst at the psychiatric department of Massachusetts General Hospital and as a staff member of the Psychological Services Center within the clinical psychology department at the University of Massachusetts at Amherst.

John R. Boettiger, assistant professor of human development, joined the Hampshire planning staff in 1967, and has devoted himself particularly to exploring experiential and self-reflexive approaches to personal growth. He has taught at Amherst College, from which he has a B.A., and pursued research at the RAND Corporation in California.

James C. Haden, professor of philosophy, holds a B.S. from Haverford College and a Ph.D. from Yale where he later served as chairman of the Directed Studies Program. He has taught at the University of South Carolina and at Wesleyan, and was chairman of the philosophy department at Oakland University, Michigan. His published works include essays in the history of science and translations of Kant and Cassirer.

Van R. Halsey, Jr., director of admissions and associate professor of American Studies, was associate director of admissions at Amherst College from 1956 to 1969. His special interests include teacher training and the production of new history materials for secondary schools. His B.A. is from Rutgers University and his Ph.D. from the University of Pennsylvania.

Arthur Hoener, professor of design, was formerly chairman of the design department at the Massachusetts College of Art. He holds a B.F.A. and M.F.A. from Yale University and a certificate from Cooper Union in New York City. His sculpture and design work have been widely exhibited, and he has served as graphic design consultant for the Boston Society of Architects and the Boston Architectural Center.

Sheila A. Houle, associate professor of English, was chairman of the English Department at Clarke College, Iowa, and a founder and director of the Iowa Association of Small College English Departments. She holds a B.A. from Mundelein College and a Ph.D. from the University of Iowa.

Clayton A. Hubbs, assistant professor of literature, is interested in modern drama, twentieth century Anglo-American literature, and eighteenth century English literature. He received a B.S. in journalism from the University of Missouri at Columbia and a Ph.D. from the University of Washington at Seattle.

Joanna Hubbs, assistant professor of history, received a B.A. from the University of Missouri and a Ph.D. in Russian history from the University of Washington. She is fluent in French, German, Polish, Russian, and Italian.

Norton Juster, associate professor of design, is a practicing architect, designer, and writer whose books include The Phantom Tollbooth, a children's fantasy, and The Dot and the Line, a mathematical fable made into an Academy Award-winning animated film. His B. Arch. is from the University of Pennsylvania, and he studied at the University of Liverpool on a Fulbright scholarship.

Timothy Landfield, faculty associate in theatre, came to Hampshire as a Fellow from Amherst College and received a B.A. in June, 1972. He has acted in several plays at Smith and Amherst Colleges and while at Hampshire, taught classes in dance technique and a theatre workshop, directed several plays, and choreographed a dance for a January dance concert.

Jerome Liebling, professor of film studies, has produced several award-winning films, and has exhibited at the Museum of Modern Art, George Eastman House, and other museums. He has taught at the University of Minnesota and State University College at New Paltz, N.Y.

Richard C. Lyon, professor of English and American Studies, was chairman of the American Studies curriculum at the University of North Carolina at Chapel Hill and Hampshire's first Dean of the College. He holds a Ph.D. from the University of Minnesota and is editor of Santayana on America. He has a joint appointment with the School of Language and Communication.

Robert A. Mansfield, assistant professor of art, received a B.A. from Saint Cloud State College, Minnesota and an M.F.A. from the University of Massachusetts where he later taught. He was also on the faculty at Smith College. His interests are in sculpture, painting, architecture and three-dimensional design.

Robert Marquez, assistant professor of Hispanic American literature, has worked for the World University Service in Peru and Venezuela; served as area coordinator of the migrant education program of Middlesex County in Massachusetts; and published translations of Latin American poetry. He holds a B.A. from Brandeis and an M.A. from Harvard.

Elaine Mayes, assistant professor of film, has a B.A. in art from Stanford. She did graduate study in painting and photography at the San Francisco Art Institute and taught film and photography at the University of Minnesota. Her photographs have appeared in many exhibitions and publications.

Francia R. McClellan, assistant professor of dance, received a B.S. from the Julliard School of Music and was a member of the Joan Kerr Dance Company and the Anna Sokolow Dance Company. She has studied with the National Ballet School of Canada and Hatha and Raja Yoga.

Randall McClellan, assistant professor of music, received his B.M. from the University of Cincinnati and his Ph.D. from the University of Rochester. He has taught musical theory and composition at West Chester State College, Pennsylvania, where he was also director of the electronic music studio.

James W. McElwaine, assistant professor of music, has a B.M. from North Texas State University at Denton and an M.M. from Yale University, where he has been assistant conductor of the Yale Band and the Yale Symphony Orchestra. His interests include both performance and composition; he has played in many symphonies, orchestras, laboratory and jazz bands, and chamber music ensembles, and setting to music the poetry of Richard Brautigan.

Robert E. Meagher, assistant professor of the philosophy of religion, has a B.A. from the University of Notre Dame and an M.A. from Chicago. His publications include Personalities and Powers, Beckonings, and Toothing Stones: Rethinking the Political. He has taught at the University of Notre Dame and at Indiana University.

Earl Pope, associate professor of design, holds a Bachelor of Architecture degree from North Carolina State College at Raleigh and has been design and construction critic for Pratt Institute in New York City. He has been engaged in private practice since 1962.

David S. Roberts, assistant professor of literature and director of the Outdoors Program, holds a B.A. from Harvard University and a Ph.D. from the University of Denver. He is the author of The Mountain of My Fear, a book about mountain climbing, and Deborah: A Wilderness Narrative.

Gladden Schrock, faculty associate in theatre, graduated from Manchester College in Indiana and received an M.F.A. from the School of Drama at Yale University, where he was later playwright in residence. He founded a professional summer stock company in Indiana, the Enchanted Hills Playhouse, and helped to establish the Long Wharf Theatre in New Haven, where he has acted, directed, and had a play produced.

Kenneth Scott, adjunct assistant professor of art, holds a B.A. from the School of the Art Institute of Chicago and an M.F.A. from the University of Massachusetts. Primarily interested in sculpture, he has had work displayed at the New York Cultural Center and the University of Massachusetts, where he formerly taught.

David E. Smith, professor of English and Master of Merrill House, holds a B.A. from Middlebury College and a Ph.D. from the University of Minnesota. He has taught at Indiana University, and his interests include colonial American writing, nineteenth century American literature, and American intellectual and religious history.

Francis D. Smith is Dean of the School of Humanities and Arts and professor of humanities and arts. A Harvard graduate, he has taught in high schools and colleges, directed federal community relations programs for Massachusetts, and has published as a sociologist, playwright, and novelist.

Eugene Terry, assistant professor of literature, has taught at Southern University in Baton Rouge, Johnson Smith University in Charlotte, North Carolina, Grambling College in Louisiana, and at Saint Augustine's College in Raleigh, North Carolina. He has a B.A. from Howard University and is completing his Ph.D. at the University of Massachusetts at Amherst.

SCHOOL OF LANGUAGE AND COMMUNICATION

Stephen A. Gilford, faculty associate in public communication, is a graduate of Yale University in anthropology, holding the B.A. degree. Since 1963 Mr. Gilford has been active as a producer of television programs at WGBH in Boston and for NET, EEN, and PBS.

David W. Kerr, assistant professor of mass communication, has a B.A. from Miami University, Ohio and is completing his Ph.D. at Indiana University. His teaching experience includes courses in radio-tv, journalism, and English.

James H. Koplin, associate professor of psychology, received his B.A., M.A., and Ph.D. from the University of Minnesota, and taught at Vanderbilt University before coming to Hampshire. His special interests are psycholinguistics and cognitive psychology. He has a joint appointment in the School of Language and Communication and the School of Social Science.

John J. LeTourneau, associate professor of logic, came to Hampshire from Fisk University. He has taught at the University of California at Berkeley (where he received his Ph.D.) and was a mathematics consultant to the Berkeley Public Schools. His B.S. is from the University of Washington.

Maija Lillya, assistant professor of sociolinguistics, received her B.A. from Kalamazoo College and her M.A. from Radcliffe. She has also held Woodrow Wilson and Harvard Teaching Fellowships. A native of Smiltene, Latvia, she is preparing her doctoral thesis on the development of Latvian as a national standard language.

Richard C. Lyon holds a joint appointment with the School of Humanities and Arts.

William E. Marsh, associate professor of mathematics, was chairman of the mathematics department at Talladega College in Alabama. His B.A., M.A., and Ph.D. are from Dartmouth, and his special interests include the foundations of mathematics and linguistics. He is serving as coordinator of the School of Language and Communication.

Stephen O. Mitchell is director of management systems and associate professor of computer science. He has been director of the Computer Center at Lehman College

in New York City and director of the Freshman English Program at Syracuse University. His B.S. is from Purdue University and his Ph.D., from Indiana University.

Richard L. Muller is acting director of the Library Center, director of educational technology and assistant professor of communication science. He was formerly director of instructional communications at the State University of New York Upstate Medical Center at Syracuse. He holds a B.A. from Amherst College and a Ph.D. from Syracuse University. His appointment is shared by the School of Language and Communication and the School of Social Science.

Michael Radetsky, faculty associate in philosophy, received a B.A. from Cornell University, an M. A. from the University of California at Berkeley, and is working on his doctorate at Berkeley. A Woodrow Wilson Fellow, his special interests are philosophy of action and philosophy of psychology. His spring term appointment is held jointly in Language and Communication and Social Science.

Robert B. Rardin, II, assistant professor of linguistics, received a B.A. from Swarthmore College and is a candidate for the Ph.D. at M.I.T. He has traveled widely in Europe, especially in the Soviet Union and Scandinavia. He speaks six languages, and his interests include international affairs and peace work.

Neil A. Stillings is assistant professor of psychology in the School of Social Science and the School of Language and Communication. He has a B.A. from Amherst and is working toward a Ph.D. in psychology from Stanford. His current research involves the semantics of natural language. Mr. Stillings is coordinator-elect of the School of Language and Communication.

Janet E. Tallman, assistant professor of anthropology, received a B.A. from the University of Minnesota at Minneapolis and is completing her doctorate at the University of California at Berkeley. She has conducted field work in Yugoslavia on social interaction patterns in rural and urban Serbia and has worked in an editorial capacity for the Kroeber Anthropological Society Papers.

Thomas Wasow, assistant professor of linguistics, has published several papers in his field and prepared his Ph.D. dissertation under the supervision of Noam Chomsky. Recipient of a B.A. from Reed College and a Ph.D. from the Massachusetts Institute of Technology, he brings a mathematical background to the study of linguistics.

Christopher G. Witherspoon, assistant professor of philosophy, has a B.A. from Arkansas Polytechnic College and is currently completing his Ph.D. at the University of California at Berkeley. He was a Danforth Graduate Fellow and at Berkeley was a teaching assistant and fellow. He has taught at Knoxville College and at Berkeley.

SCHOOL OF NATURAL SCIENCE AND MATHEMATICS

Herbert J. Bernstein, assistant professor of physics, has been a visiting scientist at Brookhaven National Laboratory, a member of the Institute for Advanced Studies at Princeton, and a visiting professor at the Institute for Theoretical Physics in Louvain, Belgium. His B.A. is from Columbia University and his Ph.D., from the University of California at San Diego.

Nancy L. Bird, visiting associate professor of biology, holds a B.S. from West Virginia State College, and an M.S. and Ph.D. from Ohio State University. She was a faculty member at West Virginia State College and chairwoman of the Division of Natural Sciences and Mathematics there.

Merle S. Bruno, assistant professor of biology, holds a B.A. from Syracuse University and a Ph.D. from Harvard. Her work on crustacea and vertebrate sensory neu- physiology has been supported by the National Institutes of Health and the Grass Foundation. She is the author of several teachers' guides for elementary science studies.

Raymond P. Copping, associate professor of biology, has worked at the Woods Hole Oceanographic Institution, the Smithsonian Astrophysical Observatory in Cambridge, the United States Fish and Wildlife Service, and the Beebe Tropical Research Station in the West Indies. He holds a B.A. from Boston University and a Four-College Ph. (Amherst, Smith, Mount Holyoke and the University of Massachusetts).

John M. Foster, Acting Dean of the School of Natural Science and Mathematics and professor of biology, previously taught biochemistry at the Boston University School of Medicine and was a director of the Science Curriculum Improvement Program for the National Science Foundation. He holds a B.A. from Swarthmore College and a Ph.D. in biochemistry from Harvard.

Stanley Goldberg, associate professor of history of science, taught at Antioch College and was a senior lecturer at the University of Zambia. He has a National Science Foundation grant for a study of early 20th century reactions to Einstein's relativity theory. His B.A. is from Antioch College and his Ph.D. is from Harvard.

Courtney P. Gordon, assistant professor of astronomy, holds a B.A. from Vassar College and an M.A. and Ph.D. from the University of Michigan. Her work has included studies at the Royal Greenwich Observatory in England and the Harvard College Observatory, as well as observing time at the Kitt Peak National Observatory.

Kurtiss J. Gordon, assistant professor of astronomy, obtained his B.S. from Antioch College. He holds an M.A. and Ph.D. from the University of Michigan, and has been a research associate and visiting assistant scientist at the National Radio Astronomy Observatory in Virginia. He also studied at the University of Tübingen, Germany, and at Amherst.

Masha E. Greenstein, visiting assistant professor of biology, obtained her B.A. from Antioch College, and her M.S. and Ph.D. degrees from Yale. She also studied at the

Université de Besançon in France. She was a post-doctoral Fellow at Albert Einstein College of Medicine.

Everett M. Hafner, professor of physics, was an associate physicist with the Brookhaven National Laboratory, a National Science Foundation Fellow at Cambridge University, and a faculty member at the University of Rochester, from which he received his Ph.D. His B.S. is from Union College and his special interest is the physics of electronic music. He served as the first Dean of the School of Natural Science and Mathematics at Hampshire.

Kenneth R. Hoffman, associate professor of mathematics, has a B.A. from the College of Wooster and an M.A. from Harvard, where he also served as a teaching fellow. He was chairman of the mathematics department at Talladega College in Alabama during 1969-70.

David C. Kelly, assistant professor of mathematics, has taught at New College in Florida, Oberlin and Talladega Colleges, and Boston University. He holds a B.A. from Princeton University, an M.S. from M.I.T. and his Ph.D. is in progress at Dartmouth College. He directs an NSF summer program for talented secondary school students in natural science and mathematics.

J. E. Kriekhaus, visiting associate professor of biology, holds a B.A. from Williams College and a Ph.D. from the University of Illinois. He has taught at Yale, the University of California at Davis, and the University of Massachusetts. His current interests include the evolution of the nervous system and behavior, and the body-mind problem.

Nancy M. Lowry, assistant professor of chemistry, has a B.A. from Smith College and a Ph.D. from M.I.T. She has taught at Smith College and the Cooley Dickinson Hospital School of Nursing in Northampton and has been a research associate at M.I.T., Amherst, and Smith. She has coordinated the chemical analysis laboratory as part of the Mill River Project in Northampton.

Lynn Miller, associate professor of biology, has taught at the American University of Beirut and at Adelphi University. He has a B.A. from San Francisco State College and a Ph.D. from Stanford. He has held post-doctoral fellowships in microbiology at Stanford's Hopkins Marine Station and in genetics at the University of Washington.

Eric A. Newman, faculty associate in biology, has a B.S. from the Massachusetts Institute of Technology and the work for his master's degree in psychology completed at the same institution. He has done research at the laboratories of the Museum of Natural History in New York and the Laboratory of Electronics at M.I.T.

Brian T. O'Leary, assistant professor of astronomy, has a B.A. from Williams College and a Ph.D. from the University of California at Berkeley. A former NASA scientist-astronaut, he continues to be involved in U.S. space efforts and has written The Making of an Ex-Astronaut. He has taught at Cornell University, San Francisco State College, the California Institute of Technology, and the University of California at Berkeley.

John B. Reid, Jr., assistant professor of geology, has pursued his lunar surface and earth's interior research interests at the Smithsonian Astrophysical Observatory in Cambridge, the Geochronology Laboratory at M.I.T. and Rensselaer Polytechnic Institute. Recipient of a B.A. from Williams College and a Ph.D. from the Massachusetts Institute of Technology, he previously taught in three high school physics programs.

James R. Sears, assistant professor of botany, holds a B.A. from the University of Oregon at Eugene and a doctorate from the University of Massachusetts at Amherst. His research interests include marine algae and physiological ecology; he has worked at the Marine Biological Laboratory in Woods Hole and the University of Massachusetts Marine Station in Gloucester.

Michael R. Sutherland, assistant professor of statistics, holds an interschool appointment in the School of Natural Science and Mathematics and the School of Social Science. He has been a consultant with the Systems Management Corporation in Boston and has worked on several problems involving applications of statistics to the social sciences. His B.A. is from Antioch College and his Ph.D. is in progress at Harvard University.

Ann M. Woodhull, assistant professor of biology, has a B.A. from Swarthmore and earned her Ph.D. at the University of Washington. Her teaching experience includes high school mathematics in Nigeria as a Peace Corps volunteer and substitute teaching in the school system in North Haven, Connecticut. She is interested in doing behavioral research on prosimians and experiments with the control of protozoan movements.

SCHOOL OF SOCIAL SCIENCE

Richard M. Alpert, assistant dean for academic development and assistant professor of political science is also special assistant to the Director of the Model Cities Program in Holyoke, Massachusetts. He has served on the research staff of the Urban Institute in Washington, D.C. His B.A. is from Hobart College and his Ph.D., from Harvard.

Robert C. Birney, Vice President of Hampshire College and professor of psychology, was a member of the Four College Committee which helped plan Hampshire College. He served as the first Dean of the School of Social Science and before that was chairman of the psychology department at Amherst College. Holder of his B.A. from Wesleyan University, he earned his Ph.D. from the University of Michigan.

R. Bruce Carroll, Director of Field Studies and associate professor of political science, has taught at Middlebury and Smith Colleges, where he also directed Washington summer internship programs. His B.A. is from the University of Vermont and his Ph.D., from the University of Chicago.

Michael Cole, adjunct associate professor of psychology, is also professor of ethnopsychology and experimental anthropology at Rockefeller University. He

holds a B.A. from the University of California at Los Angeles and a Ph.D. from Indiana University.

Louise J. Farnham, associate professor of psychology, has worked in child guidance and mental hygiene clinics in Minnesota and California, and has taught psychology at Yale, Stanford, and San Francisco State College. She holds her B.A. and Ph.D. from the University of Minnesota.

Monica I. Faulkner, assistant professor of sociology, is a specialist in the sociology of higher education. Other areas of her interest, in which she taught at the University of Rochester, include sex roles and family interaction, and the sociology of science and the arts. Her B.A. and Ph.D. are from the University of California at Los Angeles.

Nina M. Glazer, assistant professor of history, has a B.A. from Douglass College and a Ph.D. from Rutgers University where she held the Louis Bevier Fellowship. Her special interests include American intellectual history with emphasis on radical left wing movements in the United States during the 1940's.

Leonard B. Glick, Dean of the School of Social Science and professor of anthropology, holds an M.D. from the University of Maryland School of Medicine and a Ph.D. from the University of Pennsylvania. Formerly an associate professor at the University of Wisconsin, he has done anthropological studies in St. Lucia, West Indies for a public health program and a study of ethnomedicine and social organization in the New Guinea Highlands.

Gayle D. Hollander, assistant professor of political science, holds a B.A. from Syracuse University, an M.A. from Harvard, and a Ph.D. from M.I.T. She has recently published a book entitled Soviet Political Indoctrination: Developments in Mass Media and Propaganda Since Stalin, and is currently doing research on political communications and dissent in the Soviet Union, and women in the Soviet and East European political systems.

Thomas R. Holman, associate professor of psychology and Master of House IV, has been extensively involved in counseling. At Augsburg College, Minnesota, he served as Director of Psychological Services and later as Vice President for Student Affairs and Director of the Center for Student Development. Recipient of a B.S. from the University of Wisconsin at Madison and a Ph.D. from the University of Minnesota at Minneapolis, he taught at Augsburg and Earlham Colleges before joining Hampshire College.

Gloria I. Joseph, associate professor of education, has a B.S. from New York University and a Ph.D. from Cornell University. At the University of Massachusetts where she was associate professor of education, she served as co-chairman of the School's Committee to Combat Racism, and at Cornell she was assistant dean of students, director of the Committee on Special Educational Projects' counseling service, and associate professor in the Africana Studies and Research Center.

James Koplin holds a joint appointment with the School of Language and Communication.

Yechiael Lander, adjunct associate professor of religion, is also associate chaplain at Smith College. He holds a B.A. from the University of Manitoba and an M.A. from the Cincinnati School, Hebrew Union College-Jewish Institute of Religion.

Barbara Harrison Linden, assistant professor of sociology, has a B.A. from Syracuse University and a Ph.D. from Columbia, where she also taught and served as architectural consultant for problems in college housing at the University. Her academic interests include urban blight and the sociology of education.

Myron J. Lunine, Dean of the College and professor of political science, is interested in the political ideologies of both developed and underdeveloped nations, and in social issues such as "the good society." While holding teaching positions at the University of Colorado at Boulder, Fisk University, Kent State University, and the University of Istanbul, Turkey, he worked on academic organizational problems such as interinstitutional cooperation and honors programs. His B.A. and Ph.D. are from the University of Iowa.

David E. Matz is assistant dean for academic development and assistant professor of law. He received his B.A. from Brandeis University and his LL.B. from Harvard Law School. He taught law at the University of Liberia in West Africa as a member of the Peace Corps, and is chairman of the Hampshire County Civil Liberties Union. During the academic year 1972-73, he is on leave as research scholar at the Harvard Law School.

Lester J. Mazor, Henry R. Luce Professor of Law, has a B.A. and LL. B. from Stanford, served as law clerk to the Hon. Warren E. Burger, and has taught at various law schools. His special concerns include the limits of the legal process and the role and status of women in society.

Philip F. McKean, assistant professor of anthropology, received a B.D. from Yale Divinity School and an M.A. from Brown University. He has served as a university chaplain in Jakarta, Indonesia, and at Brown, and as a clergyman in Rhode Island. His most recent research and publications examine cultural change and modernization in Bali.

Joel S. Meister, assistant professor of sociology and Master of House III, holds an A.B. from Stanford University and an M.A. from Berkeley, where he is a candidate for the Ph.D. He has worked as an urban community organizer with the Peace Corps in Peru and as a secondary school social studies teacher and counselor at Palo Alto, California.

Richard Muller holds a joint appointment with the School of Language and Communication.

Anthony D. Phillips, foreign curriculum consultant and faculty associate in Caribbean history, holds a B.A. from University College of the West Indies and an M.A. from the University of London. He has taught at the University of West Indies in Barbados.

Michael Radetsky holds a joint appointment with the School of Language and Communication.

Kenneth Rosenthal, Treasurer of the College and assistant professor of law, graduated from Amherst and holds an LL.B. from Yale Law School. He served as a law clerk of the Appellate Division, New Jersey Superior Court and practiced law in Newark, New Jersey prior to his appointment at Hampshire.

Miriam Slater, assistant professor of history and Master of Dakin House, received a Ph.D. from Princeton University where she held the first Woodrow Wilson Fellowship designed to allow a woman with children to attend graduate school half-time. Her undergraduate work was completed at Douglass College.

Bill Stillings holds a joint appointment with the School of Language and Communication.

Michael Sutherland holds a joint appointment with the School of Natural Science and Mathematics.

Barbara Turlington, associate dean of the college for academic administration and assistant professor of political science, has taught at Connecticut College and Mount Holyoke College. She received a B.A. from the American University of Beirut in Lebanon, and did doctoral work at Columbia.

Robert P. von der Lippe, associate professor of sociology, was director of the National Institute of Mental Health graduate training program in the sociology of medicine and mental health at Brown University. He has also taught at Columbia University and at Amherst College. His B.A., M.A., and Ph.D. degrees are from Stanford University.

Frederick Stirton Weaver, associate professor of economics, has a B.A. from the University of California at Berkeley and a Ph.D. from Cornell University. He has done research in Chile as a Foreign Area Fellow and has taught economics at Cornell and the University of California at Santa Cruz. His special interest is the historical study of economic development and underdevelopment.

Whitelaw Wilson, assistant dean for counseling and assistant professor of sociology, has been a psychiatric social worker in mental health clinics and family service agencies. He received his B.A. and M.A. in social work from Syracuse University.

Barbara B. Yngvesson, assistant professor of anthropology, received her B.A. at Barnard College and her Ph.D. at the University of California at Berkeley. She specializes in the anthropology of law and social organization, and has done field work in Peru and Sweden. She has also worked for the Department of Native Affairs in Papua, New Guinea.

FOREIGN STUDIES

Seymour Pollock, visiting assistant professor of Spanish, has taught English as a foreign language in Brazil, Somalia, Madagascar, Tunisia, and Spain. His A.B. and A.M. were awarded by Middlebury College and his Ph.D. is in progress at the University of Massachusetts, where he also holds a teaching position.

James M. Watkins, director of foreign studies and professor of languages, served at Middlebury College as director of the Language Center and associate professor of French. He was also Middlebury's director of studies in Paris. His M.A. is from the Middlebury Graduate School of French in France, and his other graduate degrees are from the University of Paris, Sorbonne.

ADMINISTRATIVE OFFICERS

Charles R. Longworth, President.

A graduate of Amherst College, Mr. Longworth holds an M.B.A. from Harvard University and an L.H.D. from Amherst. He is a member of Phi Beta Kappa. From 1961 to 1965 he was assistant to the president of Amherst College. His association with Hampshire began in 1965, when he became chairman of the Hampshire College Educational Trust, which had responsibility for the initial formation of the College. He served as secretary to the Trustees from 1965-71, and as Vice-President of the College from 1966 to June, 1971, when he was elected President. With Franklin Patterson, he wrote The Making of a College.

Robert C. Birney, Vice President.

(see School of Social Science.)

Ed F. Berth, Director of Development and Public Relations.

Berth holds a B.S. and M.S. from Worcester Polytechnic Institute and did similar work at Cornell in educational and business administration and social sciences. He was formerly assistant dean of engineering at Cornell University, was responsible for the publications and public information program as well as underclass advising and counseling center. His teaching interests center on the implications of technology in society. He also serves as secretary of the Hampshire College Board of Trustees and its Executive Committee.

John Rosenthal, Treasurer.

(School of Social Science.)

Ray H. Woodall, Business Manager.

A graduate of Amherst College, Mr. Woodall holds an M.B.A. from the University of Pittsburgh. He came to Hampshire College from Westinghouse Electric Corporation, where he was manager of financial control.

Edward E. Paul, Director of Physical Plant.

A graduate of Long Island Technical Institute (now SUNY at Farmingdale), Mr. Paul served as construction supervisor for Hampshire College since 1968. He has supervised major construction for Scholastic Magazine in New Jersey and Detroit Metropolitan Airport.

SPECIAL NOTE

In addition to preliminary and final course descriptions catalogs for Fall and for Spring terms, the College publishes a complete Register of Courses at the conclusion of the academic year in which they were offered. It also prepares an announcement of January Term offerings. Approximate publication dates are:

Preliminary Course Descriptions - Fall Term	April 1
Final Course Descriptions - Fall Term	August 1
January Term Offerings	December 1
Preliminary Course Descriptions - Spring Term	December 1
Final Course Descriptions - Spring Term	January 1
Register of Courses (summary of offerings for academic year)	August 1

of the above publications may be obtained without charge by writing to:

Office of Admissions
Hampshire College
Amherst, Massachusetts 01002

Students on campus may obtain them at the Central Records Office in the Science Building.