### Sampling Finds Wide Support of Sit-in Goals

A random sample of people on College Hall Green Tuesday afternoon found that there was strong support of the women's goals. Among the women's supporters, 60% were in favor of the goals, while 20% were neutral and 20% were against them. The same was found among the men. Among women, 70% were in favor, 10% were neutral, and 20% were against. Among men, 30% were in favor, 40% were neutral, and 30% were against.

The women's demands included equal pay for equal work, the establishment of a committee to review women's employment policies, and the establishment of a support system for women. The men's demands included the implementation of the equal pay law, the establishment of a complaints procedure for women's issues, and the establishment of a support system for women.

###ixon, Thieu

###Vow 'Reactions' On Violations

**KAN CLEMENTE**—President Nixon vowed to send a special envoy to South Vietnam to persuade the Nixon administration to halt the violations.

Nixon said that he would send a special envoy to South Vietnam to persuade the Nixon administration to halt the violations.

### Tonkin's Office Distributes Independent Study Register

The register, which includes the names of all students in the College of Science and Engineering, is available to anyone interested in independent study.

### Group Protests Pepsi-Russia Deal

The students, who are protesting the deal because it violates the arms embargo against the Soviet Union, are calling for a boycott of Pepsi products. The students are also calling for the removal of the distributional requirements for the College of Business Administration.

### Protests Continue

A small crowd of protesters gathered outside the Van Pelt Library on Tuesday afternoon to demonstrate against the deal. The protesters, who were carrying signs that read "Boycott Pepsi!" and "End the arms embargo!", were joined by a number of other protesters who had been arrested earlier in the day.

The protest was organized by the Students for a Democratic Society, which is working with other groups to organize a larger demonstration later this week.

### President for Management Policy

President Pearson said that the decision to support the students was based on the need to maintain the university as a free and open institution.

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### The Daily Pennsylvania

**Founded 1885**

Wednesday, April 1, 1973

### Vol. LXXXII No. 27

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Philadelphia, Pennsylvania
The Northern Hawks
A
Irvine, 7 & 9:30 $1
Penn Students $1,
2 shows 7 & 9:30
Midnite Movies
Sunday April 8
to the Palestra
Coffeehouse
Peter Brook's
Jury aid Oct. departures
Bogart
Sat. Apr. 7

MODERN FURNISHED: 3 bedroom apartment
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FURNISHED MODERN, OAFH $1 35. June 8 September leases MO 4 4733
APARTMENT 40th 8.
6551
baths, 3 fireplaces. Beautifully furnished Call 732
summer sublet High ceilings, kitchen, private
6549
evenings
Available June 1. EV 2 9371
SECLUDED AIR CONDITIONED Summer sublet. 2 bedrooms,
kitchen with garbage disposal. Completely renovated, new ceramic
34th and Locust EV 2 0203
tiles. 3 Bedroom Apts. for June and
WAS $375.00
Pets allowed Call 349 5S4 alter 5 PJW.

Classifieds

Efficiency, 1 & 2 Bedrm.
Apts.
Available immediately or JUNE or SEPT.
300 4th, 4th floor, New University
City Housing Co.

ATTRACTION: Furnished, large
double room, all meals included. (B, L, D)
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SUMMER SUBLET for 6 month, 35th and Vine.

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4504
3 Bedroom Apts. for June and
WAS $375.00

SECLUDED AIR CONDITIONED Summer sublet. 2 bedrooms,
kitchen with garbage disposal. Completely renovated, new ceramic
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4514
SUMMER SUBLET or new lease, 3900 Chestnut, 3
ROOMS including 2 baths-$225

5th and Spruce. Large efficiency $105 mo. 4 room and Bath
4473

SUMMER SUBLET or new lease, 3900 Chestnut, 3
ROOMS including 2 baths-$225

5th and Spruce. Large efficiency $105 mo. 4 room and Bath
4473

SUMMER SUBLET: 1 bedroom, kitchen, bath.

$280. Call 349 5S4 alter 5 PJW.

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Janet H. Coryell, tenor, has won the last great guitarist who has yet to be made big. Coryell will perform at Grendel’s Lair Friday and Saturday night. He is a world-renowned performer who is known for his virtuoso playing and his unique interpretation of classical and contemporary compositions.

Coryell’s performances are praised for their technical precision and artistic expression. He has been recognized as one of the few guitarists who can bring the same level of passion and intensity to both classical and contemporary pieces. Coryell’s repertoire includes works by major composers such as Bach, Beethoven, and Mozart, as well as some contemporary compositions.

In addition to his technical prowess, Coryell is also known for his ability to connect with his audience. His performances are often characterized by a sense of intimacy and immediacy, as he invites the audience into his musical world.

Coryell is a prolific recording artist, with numerous albums to his credit. His recordings have been praised for their technical brilliance and musicality, and are frequently included in lists of the best classical guitar recordings of all time.

Coryell’s performances are not to be missed. His dedication to his craft and passion for music make him a truly exceptional artist. His performances are a testament to the power of music to move and inspire us, and he is sure to leave a lasting impression on anyone fortunate enough to witness him perform.
The Lettuce Referendum

Today and tomorrow, Dining Service contract holders will go to the polls in a referendum on the University's lettuce purchasing policies. The referendum specifically asks the University about whether or not to continue to purchase lettuce from the west-coast lettece grower, a company identified by the Teamsters and growers as having conspired to block the formation of a farm workers union.

The University has contended it cannot take sides with either union until the dispute is legally settled. However, the Teamsters are again claiming clarified, to tighten up on those conspired to block the farm workers union.

The University administration has repeatedly pointed out that the Teamsters and growers had conspired to block the formation of a farm workers union until the dispute is legally settled. However, the Teamsters are again claiming that they should live on the Quad or Hill Hall are still being contracepted on campus. The referendum was put before the student body because it believed that the lettuce workers should be paid more and that the University must pick one side or the other.

The Freshman Residence Policy

In this issue of the Times, we write about the story of the situation of the students who are being housed in the residence halls. We have heard that many students have been housed in smaller halls, and that this is not ideal.

Penn SDS Protests Banfield Course

As Penn SDS protests are expanding, we write about the story of the situation of the students who are being housed in the residence halls. We have heard that many students have been housed in smaller halls, and that this is not ideal.

Referendum on Lettuce: Coercion versus Responsibility

There are some people at Penn who don't know about the lettuce referendum. This is a very important issue, and we feel that everyone should be aware of it.

The issue being decided by the student body is whether or not the University should support the Lettuce Worker's Committee. The Committee is a group of students who work for the Dining Service and are trying to improve working conditions for farm workers.

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Athletic Policy Report

In its report on January 1973, the University Development Commission recommended that the University task force on intercollegiate athletics to be expanded to include the Board of Trustees. This commission was asked to study the University's athletic program and to make recommendations for future programs.

The implementation report which followed acknowledged this responsibility. It recommended that the University take a more active role in the development of the athletic program. The report also recommended that the University task force be expanded to include representatives from all areas of the University community. We write about the story of the situation of the students who are being housed in the residence halls. We have heard that many students have been housed in smaller halls, and that this is not ideal.

As compared to friends of the same age in the Quad or Hill Hall, the number of people who are responding to this referendum is much smaller, and I think that this is a good indication of the importance of the referendum on the University's lettuce purchasing policy. Whether or not we may or may not be able to achieve our goal of co-opting the farm workers union is not important to me.

By W.C. Young

We refer to the story of the situation of the students who are being housed in the residence halls. We have heard that many students have been housed in smaller halls, and that this is not ideal.

I have two Violos in my life. One is my Volvo I 64E, and the other is a Volvo 142E. I can shine in our Volvo I 64E.
**Nixon's Budget Veto**

Wednesday, April 4, 1973

Congressional leaders Tuesday upheld President Nixon's veto of a bill that would have nullified the Administration's ceiling on meat prices.

The vote was 60-36, four short of a two-thirds majority required to override a veto.

In an unusual display of party unity, the Senate Tuesday upheld the veto. It was a staggering defeat for those who supported the administration, but it was too late for those who opposed the ceiling.

**Haldeman Should Resign, Lowell Says**

WASHINGTON—Sen. Lowell P. Weicker Jr., R-Conn., a member of the Senate Watergate Committee, said Tuesday H.R. Haldeman should resign as President Nixon's Chief of Staff because he ultimately was responsible for political espionage against the Democrats.

Sen. Walter F. Mondale, D-Minn., predicted, "If we can't move Haldeman, we can't move on."

"I feel it is quite proper for Mr. Haldeman to take responsibility as Chief of Staff," Weicker told reporters.

"We need to know all of the facts about the Watergate case. It is absolutely essential that Mr. Haldeman be involved in this."

**Senate Vote Upholds Nixon's Budget Veto**

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"We need to know all of the facts about the Watergate case. It is absolutely essential that Mr. Haldeman be involved in this."

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ROLLER GAMES

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Tuesday April 17 8 P.M.
Penn Students $1 Public $3.50
Brought to you by Penn Union Council
Tickets Are Available At Houston Hall Ticket Office

Slavery in Latin America
Dr. Nancy Kettles University of Pennsylvania
Wednesday, April 4, 5:00 pm
Ivy Room, Houston Hall

WHAT'S EATING HIM? Malatesta's ghouls, that's what.
You and your date are invited for dinner at Malatesta's Carnival
If you survive the bizarre evil of these flesh eating demons Night of the Living Dead will seem as soothing as a bromo. Because the extreme terror of this brand new horror film may upset your stomach we ask that you not eat 3 hours before the start of the screening.
Saturday April 7 8 p.m. one dollar
Be there at the eatery, Irvine, if you dare to be scared.

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STUDENTS CROWD around backdoor living rooms available in second row drunk.

Mansfield Says Networks' Action Left Congress in Unequal Position

Commission spokesman said ABC, CBS and NBC had no responsibility
under the fairness doctrine to carry
Muskie's speech, billed as a reply in
the nation last week.

Mansfield's complaint in a Senate
radio speeches.

"For this reason we perceive no
need to at this time for a special
program to be devoted to a particular
rebuttal to the President's address,"
the spokesman said.

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By HOWARD NEWMAN

Billie Jean King, one of the top tennis players in the world, spoke today on tennis as both a sport and a business.

She discussed the relationship between the two, saying that it was important since people separate sports from all else, for no good reason. She should devote the world more to "the parties" and just tennis, she said.

She gave tennis an example, saying that some participating athletes are not paid and that the "top priority" demand was improvement of the lighting system on campus. The women want to replace the existing streetlights with sodium lights. Emerson agreed that it is not just a question of money, but of the need for instruction. Tennis must be thoroughly taught before being played, she said.

Tennis is the important thing is the important thing, she said. The "top priority" demand was improvement of the lighting system on campus. The women want to replace the existing streetlights with sodium lights. Emerson agreed that it is not just a question of money, but of the need for instruction. Tennis must be thoroughly taught before being played, she said.

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By ODI ABRAMSON
The University of Pennsylvania is looking more than just the Palestra in its sights. Penn's alumni golf tournament Brauer Field yesterday, 11,111, by the Brauer Field Country Club yesterday.

A 75 average is a great score by any means, especially byalignments, Bob Hays as his golf team did not look like a candidate in center fielder Bruce Carter, got annihilated, 10-0. The Profs this year, possess a .4-0 record, and promptly came into the Glassboro contest with NYU was postponed to May 1 due to the soggy conditions of the course. After last year Bob Seddon's diamondmen attempt to get over the .500 mark, they invade Kimberton G.C. this weekend. The Quakers (2-2 in the North) ranking and match info.

BILLY RHEA (Continued)

The match was never in doubt as in most of its encounters versus a Big East team, the Quakers have been outscored. They do not want to see Steve Haagling, who shot a two-under-par 71. Wherever you go in the area, you'll be finding a player by a Penn chromosome. "Rolling Green is a difficult course," said sophomore Bruce Carter, "but it's possible to overcome early nervousness to shoot an under par score."

The fifth man was althy Keith Murphy with a 78. Hints of a late surge were Mark Jenkins and Richard Lott, who shot 79 and 88 respectively. Both players are excellent individually, but may not be quite ready to contribute to the Quakers championship plans.

The Quakers (3) of the Northeast have been made up of one of the best teams in New Jersey, an All-American candidate in center fielder Bruce Carter, and above all, baggage.

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The Quakers (3) of the Northeast have been made up of one of the best teams in New Jersey, an All-American candidate in center fielder Bruce Carter, and above all, baggage.
"We believe that a major effort must now be made to develop independence of thought in our students by considerably increasing the latitude allowed in course planning and obtaining their own education. We believe that such experience may provide them with a powerful means for furthering their intellectual output and assure their continued intellectual growth... We seek to respond to a need for greater flexibility to timely intellectual demands." Committee on the Goals of Higher Education, College of Arts and Sciences, 1970.

The Registry's History and What It Is

On June 1, 1970, the Committee on the Goals of Higher Education of the College of Arts and Sciences here submitted its final report to its faculty. One of the major recommendations of that committee was the promotion of all types of independent study. It recommended a faculty group "prepare a Faculty Register by soliciting from each member of the faculty, not only of the College but of the whole University, on a voluntary basis, a statement describing his (or her) research interests as well as related topics in which he (or she) might supervise undergraduate study, as his (or her) availability to do so."

It recommended that such a register be made available to faculty and students periodically. There have been efforts to do this, principally by Dr. Peter Conn of the College. Many others have been deeply concerned, such as the Independent Study Committee of the College, which handles the College 99 proposals.

The opportunity to do accredited independent study has existed at Penn for some time. The present Independent Study Research Opportunity Registry is an attempt to implement further the proposals of the Committee on the Goals of Higher Education. Quite simply, this is a method of publicizing the possible areas in which students can do independent study, research participation and fieldwork tutorials along with the names of faculty members who are willing to supervise students in those areas. It is meant to help faculty members and students with similar teaching and study interests locate each other.

It is important to keep in mind that faculty members sponsor independent studies on a volunteer basis. Many of them teach a full load, direct research projects, have a patient's advisor, serve on University committees and do various other tasks that are required of them. This means that faculty members who are interested in giving independent study courses will have to limit the number of students they sponsor. Be prepared to take no for an answer, especially if your topic is not one which is not often used on this campus, that is, involving small group of faculty members, an interested faculty member, and a subject of common interest.

Who Is Listed in This Registry?

All faculty members who have listed their names are interested in participating in the registry. Since each listing is numbered correspond to the faculty member's number in the body of the listing. Beside each name is a number that corresponds to the faculty member's number in the body of the listing. Beside each name is a number that corresponds to the faculty member's number in the body of the listing. Beside each name is a number that corresponds to the faculty member's number in the body of the listing.

All faculty who have been listed in the registry are here. But the listings in this part of the registry are not exhaustive by any means. Many more faculty than those listed are willing to work with students whose particular interests coincide with theirs. Many faculty members responded that they had many other independent study students currently, but would be glad to register in future years.

We think this list is especially valuable for its introduction to sources of expertise and interest the student might not otherwise have discovered: in the medical, dental, veterinary, engineering, education, or social work schools, for example. Many faculty members are willing to supervise more than one student, especially the opportunities are many. For those interested in other areas, however, the approaches are also diverse and numerous.

Independent Study, Research Participation, Fieldwork Tutorial: What's the difference?

As far as we can tell there is no pronounced difference among these terms when it comes to accreditation. All of them are accredited under the same study numbers.

Functionally, however, there are differences which we tried to describe in the letter telling faculty members about the registry. There is the way the letter to faculty members described each type of study:

Independent Study. This is usually a reading or research course, offering credit which is decided jointly by the teacher and student(s).

Research Participation. Usually this involves careful supervision of a student who is able to assist you in your research or on a research project which you oversee. In some cases, students combine independent study with a research option. For example, a teacher and student might combine a reading course in biophysics with research participation in that same field.

Fieldwork Tutorial. Such experiences combine work or service outside the University with academic study (e.g., research paper, supervised reading, oral examinations, etc.). For example, if you are a school child in a school setting and you are willing to supervise a student in this off-campus experience, it would come under this option.

These distinctions are purely descriptive ones. It seems much better to leave final decisions to the student(s) and faculty member(s) who work together.

How To Use the Registry

Faculty members are arranged alphabetically under the subject of their interests. The subject index at the beginning is simply a list of the subjects under which faculty are listed. This index is not a political instrument. Rather it is meant to help you find your people. Thus some teachers are not listed under departmental names, but under an arbitrary subject division. (For example, Urban

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Wednesday, April 4, 1973

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University Year for ACTION: 101 Sergeant Hall. Phone: 594-7154

Community Work Study Office: 101 Sergeant Hall. Phone: 594-7154

Newark Urban Studies Work Shop: 125 Fine Arts Bldg. Phone: 594-8330

Thanks Are Due

Several people worked hard to produce this registry: Kathryn Woyd and organized cards, responses, indexes, and various people who worked with her with great care and success; Arnie Eisen organized the subject listings and wrote part of the introductory sections; MaryAnn Solsenberper typed the final copy and proofread; Miriam Boykin also helped; Laurence Knight and Andy Sullivan urged us strongly to publish this registry; hundreds of faculty members responded to our request for registry listings; Vice-Provost Humphrey Tonkin supported this effort strongly with staff time and production costs.

What Do You Think

We hope to update and reuse the registry each year. Please let us know what you think of the registry: is it easy to use, is it worth doing, is a project that you know about omitted, and the like. We want the registry to be useful. If it isn't, it's not worth the effort of so many to produce it. Let us hear your suggestions, and critiques. Write to the Office of the Vice-Provost for Undergraduate Studies, 106 College Hall, or phone 594-6081.

Patricia A. Meyers
Director of Academic Programs
Office of the Vice-Provost
For Undergraduate Studies
**AMERICAN STUDIES**

1. **Hennig COHEN**  
College, Anthropology, 594-8401, 205 Bennett Hall  
**RP -** I am editing the shorter travel writings of Mark Twain. This involves writing footnotes identifying various more or less obscure persons, places, objects, etc. I am willing to try someone as an assistant. If such a person is able and interested I will do what I can to train him/her. But since I had planned to do this job myself, I would be using a research person more to help them than to help me.

2. **Anthony N.B. GARVAN**  
GSAS, American Civilization, 594-6394, 201A Hall  
**IS, RP -** No description.

3. **R. Gordon KELLY**  
GSAS, American Civ., 594-7395, 301 Hall  
**IS -** Popular culture, mass culture studies, popular literature. Children's literature.

**ANTHROPOLOGY**  
**(including Archaeology)**

4. **Jacques BORDAZ**  
College, Anthropology, 594-7461, 427 University Museum  
**IS, RP -** Near Eastern history; paleobotany.

5. **Mary Ellen DIDIER**  
College, Anthropology, 594-6989, 416 University Museum  
**IS, RP -** Archeological research, studying museum collections, working with materials from several sites in New Jersey. Researching old documents that might give thought to the history of a new site we are planning to excavate. I am open to a wide variety of research and travel-oriented (archaeological) projects. I am particularly interested in helping women students, but certainly do not exclude men.

6. **Robert H. DYSON**  
University Museum, Anthropology, 594-6915, 538 Museum (new wing)  
**IS, RP -** Archaeology, Ancient Near East. Materials in Mesopotamia or Iran in the Museum collections. Reading on any area. Any period from Palaeolithic to historic periods.

7. **Ward H. GOODENOUGH**  
College, Anthropology, 594-6835, 507 University Museum  
**IS -** Languages and-or cultures of the Pacific Islands.  
**Solomon KATZ (description under PSYCHOLOGY)**

8. **Robert A. KRAFT**  
College, Religious Thought, 594-5827, Box 36 Hall  
**IS, RP -** Work on the papyri and related ancient fragments of documents (mostly unpublished) in the University Museum. Religion in the Hellenistic (Greek-Roman) period, particularly Judaism and Christianity from about 300 B.C. to 325 C.E.

9. **Anthony F. C. WALLACE**  
College, Anthropology, 594-2088, University Museum  
**IS -** Languages and-or cultures of the Pacific Islands.

**ART & ARCHITECTURE**

**Backstraw DOWNS (description under FINE ARTS)**

10. **Charles J. MINOTT**  
College, History of Art, 594-8327, G-29 Fine Arts  
**IS -** History of Art and Architecture.

11. **David T. VAN ZANTEN**  
College, History of Art, 594-8375, G-29 Fine Arts  
**IS, RP -** My field of study is (modern) architecture seen in a critical-historical perspective. My specific interest is that side of architecture which might be called conceptual, that is, architecture not as engineering but rather as the creation of cultural images, essentially abstract and unbuildable. I have been at work some time on this subject and hope, in the next few years, to produce a lengthy study of it.

12. **Paul F. WATSON**  
College, History of Art, 594-3337, G-29 Fine Arts Building  
**IS -** The history of art civilization, especially in medieval and Renaissance painting and sculpture; mythology, iconography, and the relationships between texts and images.

**ASTRONOMY**

13. **Samuel C. VILLA**  
College, Astronomy, 594-8178, 414D DRLL  
**RP -** Evolution of stars and related topics.

**BIOCHEMISTRY**  
**(see also: Chemistry)**

14. **Phoebe LEBOY**  
Dental, Biochemistry, 594-8353, 545 Levy  
**RP -** Biochemical studies such as: Comparisons of nucleic acid modifying enzymes in normal and tumor tissues. Separation of nucleic acid modifying enzymes. Isolation of bacterial mutants having defects in nucleic acid metabolism.

15. **Julian MARSH**  
Dental, Biochemistry, 594-8386, 546 Levy  
**RP -** Studies of the relationship of the cholesterol containing plasma lipoproteins to atherosclerosis: aspects of the biosynthesis of lipoproteins in the rat.

16. **Joel ROSENBLUM**  
Dental, Biochemistry, 594-8802, 341 Levy  
**IS, RP -** My area of interest is in the biosynthesis and structure of connective tissue, particularly the proteins elastin and collagen. The research is related to diseases of blood vessels and arthritis.

**BIOLOGY**  
**(see also: Medicine, Dental Medicine, Veterinary Medicine)**

17. **Ralph L. BRUMFIELD**  
Reproductive Biology  
**Veterinary Medicine, Animal Biology, 594-8000, 330 Lippincott Hall**  
**IS -** The area of interest in our lab is reproductive biology and the regulation of development. The research deals with the solutions of problems regarding the mechanisms of ovulation, fertilization, embryo development, and the implantation in mammals. The independent study opportunity is available only in certain time periods which should be arranged as far in advance as possible.

18. **Allan H. BROWN**  
General Biology  
**College, Biology, 594-7807, 318 Biology Building**  
**IS, RP -** Effects of gravity on plant development and physiology. Seasonal changes in the water of certain streams in the New Jersey Pine Barrens.

19. **Beth BURNSIDE**  
Developmental Biology  
**Medicine, Anatomy, 594-0179, 291 Anatomy-Chemistry Building**  
**IS, RP -** Developmental biology; cell biology of cell motility and cell shape determination; biochemistry and electron microscopy.

20. **Orville DAHL**  
Palynology  
**College, Biology, 594-7805, 306 New Biology Building**  
**IS -** Palynology (Research on pollen; cytology, morphology, atmospheric analysis, etc.)

21. **Arthur B. DUBOIS**  
Physiology  
**Medicine, Physiology, 594-8725, B-201 Richards Medical Building**  
**FT -** In the summer I work on fish at the Marine Biological Laboratory in Woods Hole, Massachusetts. If a student could pay for the cost of a place in the lab ($250.00) and is self-supporting, I would consider letting the student work with me during the summer, if he or she is otherwise acceptable. This sort of work is suitable for promising biology students. Like other members of the medical faculty, I recognize several problems in scheduling regular courses for college students, and will work with some in individual cases, but I do not wish to make a prior commitment toward this activity.

22. **Gordon ELLIS**  
Biophysical Cytology  
**College, Biology, 594-7378, 317 Leidy Lab**  
**RP -** Biophysical Cytology. The application of physical methods, usually non-destructive optical or mechanical, to the analysis of problems in cell function or development, current problems involve structural analysis of mechanisms of motility in individual living cells.

23. **Alan EPSFETN**  
Neurobiology  
**College, Biology, 594-7870, 326 Leidy Lab**  
**RP -** Neurobiology, brain mechanisms of behavior particularly feeding and drinking.

24. **Ralph O. ERIICKSON**  
**College, Biology, 594-8603, 425 Biology Building**  
**RP -** This duplicative class is the content presented by Biology 300, which is open to Biology majors, and which I sometimes participate (Growth and Development in higher plants).

25. **Warren J. EWENS**  
Population Genetics  
**College, Biology, 594-7190, 327 Leidy Lab**  
**IS -** Mathematical problems in population genetics. Statistics of the neutral allele theory.

26. **Philip GEORGE**  
Bioenergetics  
**College, Biology, 594-7125, 401 Biology Building**  
**IS, RP -** Bioenergetics - the background that is necessary would restrict participation to seniors and some juniors.

27. **Bernard GERBER**  
**Protein Self-Assembly**  
**College, Biology, 594-8390, 341 Biology Building**  

28. **David GODDARD**  
**General Biology**  
**GSAS, Biology, 594-5864, 223 Leidy Lab**  
**IS -** General Biology, Sciences and public policy.
28. Richard C. HEROLD: Developmental Biology
Dental School, Histology & Embryology, 594-8993, 415 Levy
IS, RP - Developmental biology of hard tissues, bone and teeth.

Michael LEVIN (description under ENVIRONMENTAL STUDIES)

29. Hui-Lin Li: Botany
College, Biology, Ch 7, 37777, Morris Arboretum
IS, RP - Botany.

Paul MONTGOMERY: Microbiology - Immunology
Dental School, Microbiology, 594-9118, 218 Levy
IS, RP - Immunology (Immunoochemistry) - Induction and characterization of homogenous antibodies. Structural modifications of an antibody combining site through alteration of antigen structure. Immune response - the mechanism of induction of secretory antibody. In the past we have taken one student per year either from the biology or biochemistry program. Space requirements impose limits on the number of students we can sponsor.

30. Burton ROSAN: Microbiology
Dental Medicine, Microbiology, 594-8086, 401 Spruce Street
IS, RP - Microbiology - particularly in the field of bacterial surfaces, their structure, immunochemistry and functional properties.

31. Robert RUTMAN: Molecular Biology
Veterinary Medicine, Animal Biology, 594-8396, 146 Veterinary
IS, RP - Molecular Biology - Cancer. Opportunities for minority students in professions.

32. Ingrid WALDRON: Stress
College, Biology, 594-8096, 222 Leidy Lab
IS, RP - I am interested in working with students on research related to my own work on stress among undergrads at Penn. I am mainly interested in working with students who have background in physiology and/or psychology and who have the technical skill in either operation of electronic equipment or computer programming that will enable them to work relatively independently.

33. Charles E. WILDE: Developmental Biology
Dental School, Histology & Embryology, 594-8994, 442 Levy
IS, RP - Research participation in problems of developmental biology of vertebrates using both classical and molecular biological techniques. Access to current literature in the field.

BLACK STUDIES
William R. MEEK (description under URBAN STUDIES)

BUSINESS STUDIES
(including Accounting, Finance, Management, Organization, Industry, and Marketing)

36. Jay G. ANYON: Management
Wharton, Management, 594-7726, W-158 Dietrich Hall
IS, RP - Entrepreneurial management theory and practice.

37. Scott J. ARMSTRONG: Marketing
Wharton, Marketing, 594-8253, W-366 Dietrich Hall
IS, RP - Research in forecasting in the social sciences. Empirical research on social responsibility in business.

38. Robert H. BREHNOL: Management
Wharton, Management, 594-7760, W-188 Dietrich Hall
IS, RP - No description.

39. David J. CUMMINS: Insurance
Wharton, Insurance, 594-5644, W-157 Dietrich Hall
IS, RP - Casualty actuarial science, risk theory, risk management, econometric analysis of financial intermediaries.

40. Robert H. EDELSTEIN: Finance
Wharton, Finance, 594-6015, W-602 Dietrich Hall
IS, RP - Risk analysis in the following areas: determinants of value in the land market; tax assessment policy of property in Pennsylvania.

41. William GOMBORG: Management
Wharton, Management, 594-7722, W-199 Dietrich Hall
IS, RP - No description.

Independent Study Register

32. Edward S. HERMAN: Finance
Wharton, Finance, 594-7633, W-310 Dietrich Hall
RP - Conflict of Interest in Government Service in the United States - in particular, the patterns of flow of personal between government (legislative bodies and administrative agencies) and private business, the relation to conflict, and the nature and limits of the law and law enforcement.

33. William T. KELLEY: Marketing Communications
Wharton, Marketing, 594-8265, W-222 Dietrich Hall
IS - Marketing Communications: Advertising ethics, economic effects, social aspects, advertising control, with special reference to FTC, FCC, FDA, advertising media effectiveness, evaluating models for budgeting and appropriations, assessing new consumer movement (consumers), problems of organizing for the advertising and promotional program, other current problems in the advertising and promotion area.

34. Frederick KEMPIN: Business Law
Wharton, Business Law, 594-8659, W-343 Dietrich Hall
IS - Law: Legal history, English or American corporate, technical, insider trading, public responsibility; or legal topics by mutual agreement for specific interests.

35. William H. KNAPP (description under ENGINEERING AND COMPUTER SCIENCES)

36. Howard L. MORGAN: Management; business and society
Wharton School, Management, 594-7731, W-160 Dietrich Hall
IS, RP - Development of computer systems to handle extremely large masses of data. Both the technological and societal implications are of interest, e.g., computer networks, problems of privacy and security, technological change impacts.

37. Robert W. NASON: Marketing
Wharton, Marketing, 594-8253, W-305 Dietrich Hall
IS - Business and sociology courses of executive behavior, business conflict with the public interest and control and modification of market operations.

38. Herbert R. NORTHRUP: Marketing
Wharton, Management-Industrial Research Unit, 594-7726, Vanece Hall, 3rd Floor
IS - Industrial relations.

41. Bruce L. OLIVER: Accounting
Wharton, Accounting, 594-7775, W-299 Dietrich Hall
IS, RP - Initially the students would have to do some reading to learn about the framework of accounting. Then the students would each develop a paper, say about 30 pages, on accounting reports as cultural artifacts (or something along that line). A solid background in anthropology (particularly cultural) is a must.

42. George M. PARKS: Management
Wharton, Management, 594-7730 or 594-7800, 111 Vance Hall
IS, RP, FT - Entrepreneurship, small business management, venture capital, venture initiation.

41. Howard V. PERLMUTTER: Multinational Enterprise
Wharton, Multinational Enterprise, 594-7707, W-153 Dietrich Hall
IS, RP - Research on multinational enterprise.

43. Daniel RIE: Finance
Wharton, Finance, 594-7634, W-160 Dietrich Hall
IS, RP - (Seniors only) - Finance - Securities Markets. The student must have had advance courses in statistics and experience in computer programming.

44. Franz R. RITOR: Finance
Wharton, Finance, 594-7624, W-228 Dietrich Hall
IS, RP - No description.

45. Jerry WIND: Marketing
Wharton, Marketing, 594-8267, W-256 Dietrich Hall
IS, RP - No description.

CHEMISTRY (see also: Biochemistry)

55. James P. BIRK: Inorganic
College, Chemistry, 594-8070, 257 E. F. Smith Chemical Lab
IS, RP - Inorganic chemistry; kinetics and mechanisms, co-ordination compounds.

56. Barry S. COOPERMAN: College, Chemistry, 594-8330, B-16, E.F. Smith Chemical Lab
IS, RP - Mechanism of enzyme action, allosteric enzymes, biological receptor atire probes, nuclear magnetic resonance.

57. Donald D. FITTIS: Physical College, Chemistry, 594-8328, 222 E.F. Smith Chemical Lab
IS, RP - Theoretical physical chemistry.

58. Madeleine M. JOUILLIE
College, Chemistry, 594-8334, 100 E.F. Smith Chemical Lab
IS, RP - - -

59. Knut A. KRIEGER
College, Chemistry, 594-5672, 100 E.F. Smith Chemical Lab
RP - This could be done under our Chem 399 course option. My field of study is heterogeneous catalyst.

60. John G. MILLER: Physical College, Chemistry, 594-8320, 139 Chemistry Building
IS, RP - Physical chemistry, especially spectroscopic and kinetic studies.

61. Donald YUET: X-ray Crystallography
College, Chemistry, 594-6457, B-4 E.F. Smith Chemical Lab
IS, RP - X-ray crystallographic determinations of the structures of biological interest such as nucleic acid components, coenzyme model compounds and drugs. In addition we are carrying out the x-ray structure determination of the yeast enzyme pyrophosphatase.

IS, RP - Independent study and research on the chemistry of metals (Chem 299 or 399)

63. David WHITE: Molecular Spectroscopy
College, Chemistry, 594-8317, 108 E.F. Smith Chemical Lab
IS, RP - Molecular spectroscopy and structure. I would like to select students.

CLASSICAL STUDIES

64. Henry M. HOENGESWALD
College, Languages, 594-7473, 607 Williams Hall
IS, RP - Students interested in linguistics or in the linguistic aspect of classical studies would be welcome. Research participation would consist of work with facsimiles of inscriptions, etc. No specific technical prerequisites.

65. Michael JAMESON
College, Classical Studies, 594-7426, 711 Williams Hall
IS, RP - Greek history, religion, mythology, archaeology.

66. Donald LATEINER
College, Classical Studies, 594-5137, 716 Williams Hall
IS - Study by individuals or by small groups of Greek or Latin in ancient texts. Reading, translation and imitation, and discussion.

COMMUNICATIONS

dan BEN-AMOS (description under FOLKLORE AND FORKLIKE)

Erving GOFFMAN (description under SOCIOLOGY)

William T. KELLEY (description under BUSINESS STUDIES)

67. Seymour MANDELBAUM
College and GSAS, History and City Planning, 594-8339, 701 Fine Arts
IS, RP - Communications analysis and planning; urban history.

DENTAL MEDICINE (see also: Biology, Medicine)

68. L. W. BURKET
Dental School, Oral Medicine, 594-8558, 4001 Spruce Street
IS - No description.

Credit will be given on an individual basis.

69. Isaiah J. FIDLER: Pathology
Dental Medicine, Pathology, 594-6807, 345 Levy Building
IS, RP - Mechanisms of cancer spread (metastasis) and manipulation of the immune response toward the
therapy and arrest of primary and secondary cancer growths. We are currently an active group; two graduate and postdoctoral students and a senior student might find the area of cancer immunology-immunotherapy stimulating and rewarding. However, it is hard work and demanding!

70. Martin S. GREENBERG: Oral Disease Dental Medicine, Oral Medicine, 594-6267, 400 Spruce Street IS, RP - I am now supervising an undergraduate student in Biology 300, who is working on immunity of kerpes simplex infections. I am willing to supervise students interested in research concerning oral disease.

Richard C. HEROLD: (description under BIOLOGY)

Solomon KATZ: (description under PSYCHOLOGY)


Paul MONTGOMERY: (description under BIOLOGY)

Burton ROSAN: (description under BIOLOGY)

Donald SCOTT: (description under MEDICINE)

Joseph L. SHANFELD: (description under MEDICINE)

72. Rosemarie VALENTINE: Dental Hygiene Dental Medicine, Dental Hygiene, 594-8854, W-4 School of Dental Medicine IS, FT - The faculty of the department of dental hygiene are very willing to offer independent study courses in the area of health education, personal disease control for liberal arts majors. An introductory course in the clinical characteristics of the oral cavity would be of interest to pre-med and dental students.

ECONOMICS

73. Jere BEHRMAN Wharton, Economics, 594-7794, 334 McNeil Building IS - Specific interests in areas of economic development in Latin America (Latin American countries) but I expect any student wishing to do independent study to have a fairly well defined notion of his or her interests.

74. Richard A. EASTERLING Wharton, Economics, 594-4844, 524 McNeil IS, RP - Comparisons between newly settled and older established agricultural areas in the nineteenth century of demographic characteristics (fertility, marriage, etc.) and economic characteristics (farm size, productivity, etc.) based chiefly on census data.


76. Michael L. WACHER Wharton, Economics, 594-7719, 528 McNeil IS, RP - My work is in the field of labor economics - including: inflation, fertility, labor force participation of women and poverty. I require, however, for a student doing independent study in these areas, an undergraduate labor economics course, Economics 31.


EDUCATION

78. Andrew B. BAGGaley Graduate School of Education, 594-7368, D-28 GSE IS - Personality and attitude measurement, particularly in educational settings. I have no project presently underway but a student interested in testing some of his own hypotheses in this area, I would be glad to help him design and conduct a research project.

79. James R. CAMPBELL Graduate School of Education, Science Education, 594-7214, C-55 GSE IS, RP - I do educational research with teachers and students in interaction analysis and in sex education. This experience would be most worthwhile to those planning teaching careers.

80. William B. CASTETTER Graduate School of Education, 594-7387, D-4 GSE IS, FT - Research study on intermediate school districts in Pennsylvania.

81. Frederick B. DAVIS Graduate School of Education, Meter Program, 594-5670, D-11 GSE IS, RP - Measurement of school abilities and achievements; investigations of individual differences.

82. Rita T. Denny Graduate School of Education, Science Education, 594-6803, B-12 GSE FT - Science education. Field research in the teaching of science in elementary school. A student should have biology, chemistry, and physics background. At least one of these three areas should be in a college level course. Student would enroll for ED 530, with permission of the instructor.

83. Aase ERIKSEN Graduate School of Education, 594-5684, C-44 GSE IS, RP - Alternative programs and structures in education research in anthropology and education - reference to alternatives in architecture and education - specifically learning environments. Limited space because of large number of independent studies already underway.

84. Allan GLATTHORN Graduate School of Education, 594-7370, C-7 GSE IS - Secondary education, special strength and interest in the teaching of English.


86. James LARKIN Graduate School of Education, 594-5683, C-26 GSE IS - Social sciences, elementary education, early childhood education.

87. Richard L. MANDEL Graduate School of Education, 594-7394, D-7 GSE IS, RP, FT - I would be willing to work with a student who has a specific idea of what he or she wants to do in the areas of educational policy, educational law, implementing planned changes in educational organizations, or the impact of the courts on schools. I will not work with a student who wants an ill-defined reading course in some area of education.

88. Albert I. OLIVER Graduate School of Education, Curriculum & Instruction, 594-7389, C-9 GSE IS - Innovations in education.

89. Jeanette L. PACKER Nursing, Graduate, 594-7797, 305 South 34th Street IS, RP - Classroom behavior, i.e. teacher-student interaction, microteaching, use of video for analysis of teacher behavior. Specific to health progressions teaching - dentistry, medicine, nursing, veterinary medicine, and allied health.

90. Ryda D. ROSE Elementary Education, 594-5686, C-21 GSE IS, FT - I am interested in implementing new curricula in science education in elementary schools; also in open-classroom settings; all the while observing teacher behavior and tactics - comparing them with traditional approaches. I am also interested in getting students to realize affective value of teaching science in elementary schools; ultimate goal to develop model of effective teaching under different variables (grade, type of student, population, sex parameters, etc.). Independent study might include a complete experience in microteaching techniques with videotaping sessions, etc., in areas other than science education.

91. Paul ROZIN College, Psychology, 594-7713, 3815 Walnut Street IS, FT & FT COMBINED - Work with experimental elementary reading curriculum in city schools. Possible other projects.

92. Octavio SALATI

Engineering School, 594-8410, 299 Towne Building IS, RP - (1) The use of television as a teaching aid in the classroom. (2) Developing course material for musical acoustics and electronics.

93. Hugh SHAFER Graduate School of Education, Education Media, 594-7309, A-46 GSE IS, FT & COMBINATION PREFERRED - Educational technology - its utilization in various school settings where teaching and learning are of primary concern. Or providing optimum learning environments.

94. Norma L. THOMPSON Graduate School of Education, 594-7375, D-23 GSE IS, RP - Socialization with an emphasis on the development of sex differences and the development of internal controls.

95. Joanna WILLIAMS Graduate School of Education, Education, 594-7143, D-29 GSE IS, FT COMBINATION PREFERRED - Educational technology - its utilization in various school settings where teaching and learning are of primary concern. Or providing optimum learning environments.

ENGINEERING & COMPUTER SCIENCES (see also: Science and Technology)


97. John G. BRAINER: (description under SCIENCE AND TECHNOLOGY)

98. Stuart W. CHURCHILL: Chemical Engineering Chemical Engineering, 594-5679, 392 Towne Building IS, RP - Chemical engineering. A number of projects dependent on the pre-preparations of the students.


101. Steven W. GITZER: Computer Moore School, Engineering and Applied Science, 594-8607, 378 Moore School IS, RP - Computer experiments involving the time evolution of dynamical systems such as galaxies, plasmas or fluids. Also computer Films of these systems.


103. Ronald L. KLAUS: Computers Engineering, Chemical Engineering, 594-6289, 375 Towne Building IS, RP - Computer applications. Students would assist in the development of programs or systems for information storage and retrieval, interactive computing, automatic (machine) documentation, automatic program generation, etc.


Independent Study Register

College, English, 594-7384, 15 Bennett Hall
IS - History and structure of the English language.

129. Jason ROSENBLAT
College, English, 594-7756, 119 Bennett Hall
IS, RP - The Hebraic factor in English literature; problems in Milton.

130. Richard A. RIKOSKI
College, Electrical, 594-7338, 316 Bennett Hall
IS, RP - Microprocessors in design and manufacture; contemporary literature. Literature; psychology; Shakespeare and- or Renaissance literature.

131. Richard A. RIKOSKI
College, Systems Engineering, 594-8081, 458 Moore Hall
RP - The normal and abnormal cardiovascular system.

132. Michael H. LEVIN
GSAS, Landscape Architecture and Regional Planning, 594-6901, 317 GSFA
RP - Plant ecology.

133. Michael MOSES
Wharton, Management, 594-7722, W-189 Dietrich Hall
RP - How to allocate electricity in an optimal manner on a nationwide basis.

134. Edward B. THORNTON
College, Chemistry, 594-8330, 333 Chemistry Building
IS, RP - While laboratory experiments can be undertaken, the primary objective is development of "reports" or "white papers" dealing with the capabilities of molecular-chemical knowledge for enhancing the "quality of human life"; i.e., the tuning-up of the environment and the enhancement of the human person's health. Areas to be explored may include: pollution, ecology, ethics and law, philosophy of science, unique problems of the Third World, literary treatment of science, role of women in science, biosynthetic pathways, neuro-chemistry. Teams of more than one person are encouraged. Such projects would generally start in the somewhat "popular" literature and proceed to analyze in depth the role of chemical science good and-or bad. Generally, the work might include extensive reading, interviewing experts in related fields, development of questionnaires, testing public attitudes, inspections (and perhaps photographs) of various related facilities. The goal is to formulate recommendations or designs for humanistic uses of science in shaping the future of the world.

135. Samuel P. MARTIN
SAMP, Occupational Therapy, 594-8186, 206 SAMP
IS, RP - The delivery of health care. Specifically, impact of nurse practitioners on the delivery of health care to the elderly in hospital wards, nursing homes, and private homes. Qualitative approaches, e.g., focus groups, case studies, are appropriate. This project is designed for students interested in working with seniors, with a special emphasis on the elderly and their families. Students may also be involved in the development of new programs for the elderly, such as day care, home care, or consultation services.

136. Rebecca EDMONSON
SAMP, Occupational Therapy, 594-8186, 206 SAMP
IS - Occupational therapy, physical rehabilitation, effects of disability, physical dysfunction, neurophysiological basis of treatment.

137. Alexander HEISH
School of Social Work, 594-5516, 3701 Locust Street
IS, RP, FT - Mental Retardation Services. Also could arrange for students to do some work with cerebral palsied, day care center, mental health clinic, mental retardation workshop in community, etc. (all subject to prior discussion with prospective students)

138. Anne KEANE
School of Nursing, Med-Surg Grad Div, 594-8289, 205 S. 34th Street
IS, RP, FT - Nursing in the adult, in the general area of medical-surgical disorders. Would also be interested in chronic illness, health assessment, cardio-pulmonary.

139. Margaret A. KEEN
School of Nursing, Maternal-Child Health, 594-6532, 9
IS, RP, FT - Nursing in the area of maternal child health, emphasis on maternity.

140. Martha LAMBERTON
School of Nursing, Family Nurse Practitioner Program, 594-8289, 205 S. 34th Street
IS - Delivery of health care. Specifically, impact of nurse practitioners on the economics and quality of care. Would be most appropriate for those students contemplating advanced study in health care administration.

141. Barbara LOWERY
School of Nursing, Grad. Psych. Nursing, 594-8282, 106 Morgan
IS, RP - Psychiatric nursing, psychological aspects of illness.

142. Robert L. WIDMANN
College, English, 594-6332, 119 Bennett Hall
IS, RP - English Romantic and Victorian literature, images of nature in literature.
Independent Study Register

School of Medicine, Physiology, 594-8726, 209 Richards Building

175. Jerry L. KAZDAN
College, Mathematics, 594-6972, 434A David Rittenhouse Lab
IS, RP - Differential equations and classical analysis.

176. Joseph OSTER
College, Mathematics, 594-8406, 434A David Rittenhouse Lab
IS - Special topics in mathematics, particularly geometry and number theory.

MEDICINE

(see also: Biology, Dental Medicine, Health Care and Community Medicine, and Veterinary Medicine)

177. Toshihiko ASAKURA: Biophysics
School of Medicine, Biophysics, 594-6473, B-506 Richards
IS, RP - Biophysical and biochemical studies on sickle cell hemoglobin. (Unless laboratory space is provided, not many students are acceptable at present.)

178. David BERKOWITZ: Biochemistry
School of Medicine, Biochemistry, 594-804, 317 Anatomy-Chemistry
IS, RP - Biochemistry, bacterial genetics.

179. E. Paul BIANCHI: Pharmacology
School of Medicine, Pharmacology, 594-8211, 123 Med.
RP - Cell physiology and pharmacology. Coupling mechanisms in excitable cells.

180. Peter F. BINNION: Digitalis Metabolism
School of Medicine, Cardiology, Pennsylvania Hospital, 820-2303
IS, RP - Digitalis metabolism. Mobile Coronary Care Unit. Fibrinolyse therapy in acute myocardial infarction.

181. William S. BLAIKEMORE: Surgical Research
School of Medicine, Surgery, Graduate Hospital, KI 6-4300, Ext. 540
IS, RP - Surgical research; tumor immunology; cardiopulmonary physiology; infections and their control.

182. Herbert BLUGH: Virology
School of Medicine, Ophthalmology, 606 Scheie Eye Inst., 663-6536
IS, RP - Virology, cell membrane biogenesis with specific reference to lipid chemistry and electron microscopy: structure and arrangement of macromolecules and lipids which make up the virus envelope. Synthesis and turnover of lipid molecules in cells in vitro (tissue culture). The use of artificial membranes to study receptors of cell surfaces, e.g., virus receptors.

183. Alfred BONGIOVANNI: Steroid Metabolism
In Man
School of Medicine, Pediatrics, Children's Hospital, KI 6-2706
IS, RP - Laboratory procedures in the elucidation of steroid metabolism in man. An opportunity is afforded to correlate work at the laboratory bench with problems in clinical medicine. Biochemistry with particular reference to sexual differentiation and sexual maturation in man.

184. Stella BOTELHO: Physiology
School of Medicine, Physiology, 594-6725, 207 Richards Building
IS, RP - Physiology: mammalian and human.

185. Benjamin G. BRACKETT: Reproductive Biology
School of Medicine, OB-Gyn & Reproductive Biology, 594-5754, 314 Med.
IS, RP - Research in reproductive biology. My work involves gene expression in the gametes in mice, rabbitts, rhesus monkeys and man in efforts to develop in vitro conditions that favor gamete union. The ultimate goal is to learn the molecular and behavioral capacities and fertilization to be able to control these processes. I can accommodate one (1) student at all times.

186. Gerald CARLTON: Physiology - Contractile Activity
School of Medicine, Physiology, 594-8773, 3403 Richards Building
RP - Gastrointestinal contractile activity: myoelectric basis for contractile activity; physiological (and hormonal) and mechanical factors regulating contractile activity. Studies are performed in unanesthetized animals (dogs and rhesus monkeys) chronically implanted with devices for monitoring intestinal contractile activity. Students should be interested in working with animals and assisting in animal surgery.

187. Britton CHANCE: Biophysics
School of Medicine, Biophysics, 594-7125, D-501 Richards Building
RP - No description.

188. Ronald F. COBURN: Physiology
School of Medicine, Physiology, 594-6725, 207 Richards Building
RP - Physiology of airway smooth muscle. Effects of drugs, changes in ionic composition of extracellular fluid, mechanisms in a student who participates in research during the school year the option of working full time during the summer at a stipend of $600 is available.

189. Joseph CORRIERE: Urology
School of Medicine, Urology, EV 2-3333, 310 White Pavilion, HUP
RP - Research in: smooth muscle physiology; pathophysiology of urinary tract infections.

190. Stanley CHUNG: Orthopedics
School of Medicine, Orthopedics, Children's Hospital, KI 6-2706
RP - Family and case studies in children with pediatric orthopedic diseases.

School of Medicine, Anatomy 594-7357, Rm. 215, 216 Anatomy-Chemistry
RP - Biophysical requirements for the development of striated muscle in tissue culture.

192. Julius J. DEREN: Medicine
School of Medicine, Medicine, 662-2049, 503 Johnson Pavilion
IS, RP - Studies on intestinal absorption, alteration in intestinal function in response to different stimuli (i.e., fasting, partial intestinal resection, hormone, etc.) development of the intestine.

193. Arthur DUBOIS: (description under BIOLOGY)
Rebecca DUBOIS: (description under HEALTH CARE AND COMMUNITY MEDICINE)

194. Nancy B. ELLIS: Human Development
SAMP, Occupational Therapy, 594-8511, Room 105 SAMP
IS, FT - Human development, especially formative years (birth to five years). Emotional, physical and cognitive aspects of development throughout life.

195. Walter ENGLANDER: Biochemistry - Structure of Protein Molecules
School of Medicine, Biochemistry, 594-8042, 338 Anatomy Chemistry
RP - The student would participate in a research project on structure and possible changes in structure of protein molecules in membranes. The research uses as a major tool the methods of hydrogen-tritium exchange developed in this laboratory and also other physical-chemical techniques.

196. Stanley FAHN: Neurochemistry
School of Medicine, Neurology, 594-6470, 404 Johnson Pavilion
IS, RP - Neurochemistry, particularly neurotransmitters such as catecholamines, serotonin and GABA. Neuropsychopharmacology, particularly drug metabolism in patients with diseases of the basal ganglia, such as L-dopa in Parkinsonism.

197. James J. FERGUSON: Enzyme Purification; Hormone Action
School of Medicine, Biochemistry, 594-8025, 356 Anatomy-Chemistry
RP - Research in new techniques in enzyme purification suitable for scale-up processes. Research in molecular mechanisms of hormone action.

198. George FLICKINGER: Reproductive Biology
School of Medicine, OB-Gyn, 663-2945, 581 Duldles, HUP
RP - Biology (Biochemistry) of reproduction.

199. Robert FORSTER: Physiology: Biophysics
School of Medicine, Physiology, 594-8726, 4301 Richards Building
RP - Biophysics of CO2 and O2 exchange with blood. (Kinetics of reactions of CO2 and O2 within body: membrane exchange.)

School of Medicine, Pathology, 594-8254, 204 Med.
IS - Enzymology of cell division, differentiation and neoplastic transformation. Purification and properties of RNA polymerase of calf thymus and bovine lymphoma.

201. Eileen GERSH: Genetics
School of Veterinary Medicine, Animal Biology, 594-7873, 430 Vet.

202. Donald GILDEN: Virology
School of Medicine, Neurology, Wistar Institute, 222-6700,
Ex. 248
RP - Virus infection of the nervous system. Virology.

203. Mary Catherine GLICK: Surface Membranes of Mammalian Cells
School of Medicine, Pediatrics-Div. of Biochem. Dev. & Mol. Dis., Children's Hospital, KI 6-2700, Ext. 233
RP - Surface membranes of mammalian cells - structure and function. Biochemical and chemical approach to this problem.

204. Howard GOLDFINE: Microbiology: Membranes of Micro-organisms
School of Medicine, Microbiology, 594-8042, 338 Anatomy Chemistry
IS, RP - A major field of study in molecular biology with emphasis in the area of bacterial genetics. We are concentrating on problems related to recombinant, regulatory and modification of DNA, and the mechanisms of bacterial transformation. In addition I have a project going involving differentiation and the nature of the light sensory response in the fungus Phycomyces.

205. Sol H. GOODGALL: Molecular Biology
School of Medicine, Microbiology, 594-8753, 237 Johnson Pavilion
RP - A major project is the study of the cell by molecular biology with emphasis in the area of bacterial genetics. We are concentrating on problems related to recombinant, regulatory and modification of DNA, and the mechanisms of bacterial transformation. In addition I have a project going involving differentiation and the nature of the light sensory response in the fungus Phycomyces.

206. Dov GORESH: Hematology
School of Medicine, Hematology, 51 N. 39th Street, 662-8594
IS, RP - Use of radionuclide injection into red blood cells as an indication of red blood cell production.

207. Joseph S. GOTS: Microbiology
School of Medicine, Microbiology, 594-8753, 238 Johnson Pavilion
IS, RP - Research and experiments in biochemical genetics of micro-organisms.

208. John HALLE: Radiology
Medical Engineering, Radiology, 662-3081, Gr. floor Duldles, HUP
RP (one only) - Radiology physics: the application of physics and engineering to problems of patient care in the Radiology Department of HUP.

209. Tzvee N. HARRIS: Immunology, Serology, Transplantation
School of Medicine, Pediatrics, Children's Hospital, KI 6-2700
IS, RP - Immunology, serology, transplantation. A biology or bio-chemistry major, upperclassmen would be appropriate.

210. Marilyn HESS: Pharmacology
School of Medicine, Pharmacology, 594-6631, 114 Med.
IS, RP - We are studying the relationship between myocardial metabolism and cardiac function, with particular reference to the influence of hormones on cardioactive drugs.

211. John HEPSTEIN: Viral Oncology and Tumor Immunology
School of Medicine, Pediatrics, Children's Hospital, KI 6-2700
IS, RP - Viral oncology and tumor immunology. I am studying the immune mechanisms during the course of infectious mononucleosis. Humoral and cellular immune mechanisms associated with selected childhood tumors is also being investigated.

212. Joan C. HIRZECK: Physical Therapy
School of Nursing, Graduate Division, 594-8381 - 594-8388, Morgan
IS, RP - Teaching, human physiology.

213. Narel HOLST: Surgery
School of Medicine, Surgery, 662-2940, 1000 Rardin, 3400 Spruce
RP - Plastic surgery. Fruen tissue preservation.

214. Howard HOLTZER: Cell Differentiation
School of Medicine, Anatomy, 594-8090, 263 Anatomy-Chemistry
IS, RP - Aspects of cell differentiation; more specifically the relationship between cell replication and the synthesis of such molecules as myosin and hemoglobin.
School of Medicine, Microbiology, 594-828, 250 Johnson Pavilion
IS. RP - Studies on protein biosynthesis.

Soleman KATZ (description under PSYCHOLOGY)

118. Nicholas A. KEPALIDES School of Medicine, Med., Pgh 823-7117, Clinical Research Center, HUP
RP - I am in charge of the connective tissue laboratories at Penn. Service at PGH. We are studying the chemical structure, development and differentiation, and synthesis of collagens, elastin, cartilage and basement membranes. We design experimental models of disease (e.g., arthritis, hypertension) and try to correlate functional changes with chemical abnormalities.

119. Seung U. KIM: Pathology 
School of Medicine, Pathology, 594-6507, 414 Johnson Pavilion
RP - Tissue culture of nervous tissue. To study morphological and biochemical development of embryonic avian or mammalian nervous system (both central and peripheral) isolated and maintained in tissue culture conditions.

120. Arnoel KLEINZELLER: Physiology: transport of solutes 
School of Medicine, Physiology, 594-8003, D-265 Richards Bldg.
RP - Transport of solutes (sugars, electrolytes and water) across cell membranes.

121. Sukhamay LAHIRI: Physiology 
School of Medicine, Physiology, 662-317, 975 Maloney, HUP
IS, RP - Physiology in general but a research project would involve physiology of respiration.

122. Nallana LAKSHMINARAYANAIAH: Transport phenomena in membranes 
School of Medicine, Pharmacology, 594-4621, 67A Med.
IS - Transport phenomena in membranes. This involves application of physico- and, or electro-chemical principles to study membrane phenomena.

123. Christian J. LAMBERTSEN: Environmental Medical Sciences 
School of Medicine, Environmental Medicine, 594-4092, Room 14 Med.
IS, RP - Environmental stress, physiological and toxic effects of oxygen, decompensation sickness, control of respiration.

124. James LASH: Anatomy-tissue culture, embryology School of Medicine, Anatomy, 594-6738, 236 Anatomy-Chemistry
IS - The culture of tissue culture.

125. Harold L. LECKS,illian P. KRAVIS, David W.
WooD School of Medicine, Pediatrics, MO-4-733, 142 Matron's Bldg. 
IS - Observation in the treatment of the allergic child in clinical and private practice.

126. Thomas W. LONDON School of Medicine, Clinical Res. Div., F-2-1000, 701 Burhome Ave., Fox Chase, Philadelphia, Pa. 19111
RP - I do studies in clinical research at the Institute for Cancer Research in Fox Chase. These involve lab studies, mostly immunological but also get into areas of protein chemistry and virology. The student should have had some work in biology.

127. Richard MAYNE: Anatomy School of Medicine, Anatomy, 594-6019, 10 Anatomy-Chemistry
IS, RP - Cell differentiation, biological effects of modifications of DNA structure, cell culture techniques, synthesis of collagen, etc.

128. Donald MCEVoy: Pathology School of Medicine, Pathology, 662-9242, 7 W Gates, HUP
RP - Application of chemical lab tests (mostly endocrinological) to medical problems.

129. Leena MELA: Work with Subcellular Particles School of Medicine, Surgery, 662-2070, 1228 Haviland, HUP
IS, RP - Isolation procedures of subcellular particles such as lysosomes. Assays of specific enzymes activities in lysosomes of the human liver. The isolation of the various mitochondrial functions in fragmented mitochondria. This involves becoming familiar with simple instrumentation such as recording oxygen and FI electrodes and spectrophotometers.

222. William MELLMAN: Human Genetics School of Medicine, Genetics, 594-5137, B-120 Richards Building
RP - Human Genetics, the distribution and expression of hereditable variables that may or may not be related to diseases in the population.

223. Girgis MIKHAIL: Endocrinology of Reproduction School of Medicine, OB-Gyn, 662-2940, 10 Dulles, HUP
RP - Endocrinology of reproduction.

224. Paul S. MOORHEAD: Human Genetics School of Medicine, Human Genetics, 594-6756, B-4 Richards Building
IS - Cytology of chromosomes of humans and other mammalian cells.

225. Harry E. MORTON: Microbiology School of Medicine, Microbiology, 594-8574, 222 Richards Building
IS - Cytology of chromosomes of humans and other mammalian cells.

226. S. Grant MULHOLLAND: Work on Hospital Infections School of Medicine, Surgery, KI 6-1511, Graduate Hospital 
RP - Investigation of hospital infections and pyelonephritis; two research projects are currently in progress. The investigation of hospital infections (e.g., cancer, causative antibiologic sensitivities, drug usage, results of treatments, analysis of epidemics, etc.). The second project is an investigation of pyelonephritis and urinary tract infections which is now centering around the bladder defense mechanism. Urinary bladder and urethral cells are placed in tissue culture medium and challenged in vitro with bacteria. This project has been designed to demonstrate the anti-bacterial properties of the lower urinary tract. The research environment is one of opportunity for work in microscopy, microbiology, and tissue culturing.

227. S. NARASIMHULU: Cellular Metabolism School of Medicine, Harrison Dept. Surg. Res., 594-6585, D-07 Richards
IS, RP - Cytochrome P450 function in cellular metabolism - involves studies on the mechanism of hydroxylation of steroids and drugs and some carcinogens. For these studies facilities of Johnson Research Foundation are available.

228. Paul NemIR JR.: Pulmonary Embolism School of Medicine, Surgery, KI 6-2224, Graduate Hospital 
RP - A research project on pulmonary embolism.
Abraham NOODERGRAAF (description under ENGINEERING)

Jeanette L. PACKER: Health Professions Teaching (description under EDUCATION)

231. David PLEASURE: Neurochemistry School of Medicine, Neurology, 45-Mills Building, PGH, 823-2100
IS, RP - My particular field of research interest centers on biochemical studies of myelin membrane biosynthesis and degradation. I would be delighted to have a student work in my lab or to supervise independent study of a variety of biochemical topics. I will be at Children's Hospital beginning January, 1974.

232. George POLGAR: Physiology School of Medicine, Pediatrics, Physiology, Children's Hospital, KI 6-2790, Ext. 287
IS - Reading, general in comparative respiratory physiology of young animals.
PT - Collection of information on school absenteeism related to respiratory diseases in children.

233. A. J. RAWSON: Lymphocytes School of Medicine, Pathology, 594-8001, 226 Med.
IS, RP - Lymphocytes.

234. Alan C. ROSENQUIST and Larry PALMER: Sensory Perception School of Medicine, Anatomy, 383-3007, 128 Anatomy-Chemistry
IS, RP - Neuroanatomical and neurophysiological bases of sensory perception, especially vision and visuo-motor. Summer and fall semesters only.

235. David T. ROWLANDS JR.: Immunology School of Medicine, Pathology, PGH, B-7 Medical
IS, RP - Immunology. Development of the immune response, cell receptors.

236. Donald SCHULTZ: Electron Cytochemistry of Human Skeletal Muscle

School of Medicine, Neurology, 662-2070, B-45 Gibson, HUP
IS - Electron cytochemistry of human skeletal muscle.

237. H. Ralph SCHUMACHER: Pathogenesis of Arthritis School of Medicine, Medicine, 594-6311, 530 Johnson Pavilion
IS, RP - Electron microscopic and other morphologic studies into the pathogenesis of arthritis.

Jacob SCHUT: Drug Dependency (description under HEALTH CARE AND COMMUNITY MEDICINE)

240. Donald SCOTT JR.: Physiology - The Tooth School of Medicine, Physiology, 594-8770, B-306 Richards Building
IS - RP - The mechanism of arousal of the sensation of pain in the tooth. We have several years experience with this problem and now wish to determine the specific effect of excitants such as Capsaicin (red pepper derivative) or inhibitors such as Aspirin and the probable sensory mechanism (electrical or chemical) of specific kinds of pain isolated from all other sensations and provides the best possible model for a study of the basic physiological changes which result in our sensation of pain.

241. Stanton SEGAL: Study of Human Inherited Diseases School of Medicine, Pediatrics, Children's Hospital, KI 6- 2790, Ext. 561 or 562
RP - Laboratory projects in metabolism, enzymology and membrane transport related to human inherited diseases.

242. Edward SEWELL: Pediatrics School of Medicine, Pediatrics, 500 N. 21st Street, 448-3112
IS, RP - Pediatrics, public health (in a school setting).

243. Joseph L. SHANFELD: Pharmacology Dental Medicine, Pharmacology, School's Hospital, 200 N. 21st St., 214 Med.
IS - RP - 1. Effects of drugs on cardiac metabolism. 2. Effect of orthodontic tooth movement on cyclic AMP levels in bone. 3. Or, any other related topic in the field of pharmacology (including drug use-abuse).

244. Irwin SINGER: Renal-Electrolytes School of Medicine, Renal-Electrolytes, 654-5150, 560 Johnson Pav.
IS - RP - Drs. Irwin Singer and William R. Benjamin: Renal salt and water transport. Investigation of salt and water transport across toad bladder by physicochemical techniques is designed to clarify the physiological structure of the membrane and the basis for hormone and drug action. Results will be used to develop models for renal salt and water transport.

245. Roger SOLOWY School of Medicine, Medicine, 662-2756, Gates East, HUP
RP - We are interested in factors affecting the composition of bile and the formation of pigmented gallstones. Such factors are increased in patients with anemia such as sickle cell disease and are increased in patients with hemoglobin abnormalities without anemia such as those with sickle cell trait. We have a variety of laboratory and clinical projects available for examination by student researchers. These include: correlations between cholesterol gallstone appearance and X-ray findings with the type of stone found, measurement of bilirubin production and correlation with the amount of both cholesterol and pigment stones secreted in bile.

RP - Physical Biochemistry. Project is the study of the action of uncoupling agents on mitochondrial oxidative phosphorylation. Laboratory work and reading.

247. Ronald G. THRUMAN: Drug and Alcohol Metabolism School of Medicine, Biophysics, Johnon Pk., 594-7571, 607 Bio.
IS, RP - Generally, my research involves the area of control of drug and alcohol metabolism from the biochemical viewpoint. The model is the perfused rat liver. Independent study or research participation would be an excellent experience among our patients with anemia such as sickle cell disease and are increased in patients with hemoglobin abnormalities without anemia such as those with sickle cell trait. With the approval of the department chairman.

248. Joseph TOUCHSTONE: Reproductive Biology School of Medicine, OB-Gyn, 662-2091, 574 Dulles, HUP
RP - Research in biochemistry and biology of reproduction. The student could learn some of the methodology. We have had students in the summer but have not done this on a formal basis. It would be easy to set this up with the approval of the departmental chairman.
ORIENTAL & ASIAN STUDIES

256. Roger ALLEN
GSAS, Oriental Studies, 594-6377, 847 Williams Hall
IS - Arabic literature; classical or modern in translation.

257. Mark J. DRESDEN
GSAS, Oriental Studies, 594-6437, 813 Williams Hall
IS - History, languages, literature, and religion of Iran or Persia.

Alan HESTON (description under ECONOMICS)

258. Clifford R. JONES
GSAS, South Asia Regional Studies, 594-7468, 820 Williams Hall
IS - Indian (India) art history; canonical and folk traditions (classical, medieval, contemporary traditions) in architecture - sculpture - ritual art of hinduism - or related aspects of the above. Particularly ethnological approaches to the subject of art traditions as communication of traditional culture.

Michael PEARSON (description under HISTORY)

259. Adele A. RICKETT
GSAS, Oriental Studies, 594-6432, 849 Williams Hall
IS - Chinese literature, both traditional and modern.

260. W. Alya RICKETT
GSAS, Oriental Studies, 594-7468, 848 Williams Hall
IS - Various aspects of classical Indian civilization.

261. Ludo ROCHER
GSAS, Oriental Studies, 594-7468, 849 Williams Hall
IS - No description.

262. Rosane ROCHER
GSAS, South Asia Regional Studies, 594-7475 or 7416, 818 Williams
IS - RP - Indian languages and linguistics, history of Oriental studies.

263. Barbara RUCH
GSAS, Oriental Studies, 594-7667, 847 Williams (mailing), 503 Williams (office)
IS - Women writers in Japan (pre-modern & modern).

264. Jeffrey TIGAY
GSAS, Oriental Studies, 594-6339, 601 Williams Hall
IS - Biblical studies (old testament).

PEACE RESEARCH & CONFLICT RESOLUTION

265. Bruce FITZGERALD
Wharton, Peace Science, 594-4644, 506 Hollenback Center
IS, RP - 1. Why do people make war? 2. What are the effects of nature and culture on attitudes of men and women toward conflict and violence?

Janice MADDEN (description under WOMEN'S STUDIES)

PHYSICS

266. Sidney BLUMDAN
College, Physics, 594-8131, 2N3 David Rittenhouse Lab
IS - Particle physics; astrophysics; physics & society.

267. Max CARPARI
College, Physics, 594-8131, 2E13 David Rittenhouse Lab
IS, RP - Investigation of solid state and surface phenomena by nuclear techniques.

268. Herry FORTUNE
College, Physics, 594-8482, Tandem Lab-JNC4 David Rittenhouse Lab
IS, RP - Nuclear physics.

269. Sherman FRANKEL
College, Physics, 594-8146, 3N8E David Rittenhouse Lab
IS - No description.

270. Anthony GARITO
College, Physics, 594-8510, 2N18 David Rittenhouse Lab
RP - Solid state physics; growth of conducting or magnetic solids and measurements of their physical properties.

Thomas E. THOMPSON (description under ENGINEERING)

271. Robert W. ZURMÜHLE
College, Physics, 594-8633, Tandem Lab
RP - Projects relating to our nuclear structure research in the Tandem Accelerator Lab. These experiments involve the use of advanced counting techniques (solid state counters, scintillation counters, etc.), sophisticated electronics and an on-line computer that is programmed to carry out the data accumulation and analysis.

POLITICAL SCIENCE & GOVERNMENT

272. Russell HARDIN
Wharton, Political Science, 594-6156, E-122 Dietrich Hall
IS, FT - Organization theory.

Edward HERMAN (description under BUSINESS)

273. Chang-Sik LEE
Wharton, Political Science, 594-7601, E138 Dietrich Hall
IS - RP - International politics in East Asia (research).

274. Morton LUSTIG
Wharton, Fels Center, 594-8311, Fels Center, 39th & Walnut
IS - Members of course PA 609-660, projects in policy analysis. Work on variety of problems in government such as abandoned housing, tax assessment, court practices in setting bail, etc. Purpose of course is to get experience in working on something of interest for a full semester or two semesters, alone or in teams. Try to arrange direct contact with appropriate government agency.

275. Norman D. PALMER
Wharton, Political Science, 594-7863, E-130 Dietrich Hall
IS, RP - American foreign policy: selected aspects. South Asia, Middle East and foreign policy (India, Pakistan, Bangladesh, Nepal, Ceylon (Sri Lanka)); Political development: theory and practice. Special topics for research in foreign policy and political development; elections in developing countries; elections and political development.

276. Alvin Z. RUBINSTEIN
Wharton, Political Science, 594-5656, E-36 Dietrich Hall
IS - My areas are Soviet and Communist studies, and Third World developments. I will only offer an independent study to a student who has already taken some work with me in formal courses.

277. Donald E. SMITH
Wharton, Political Science, 594-6497 or 7641, E-133 Dietrich Hall

278. Henry WELLS
Wharton, Political Science, 594-7604, E-46 Dietrich Hall
IS - Latin American politics; inter-American relations.

PSYCHIATRY

279. Oliver BJORKSTEN
School of Medicine, Psychiatry, 225-7574, Room 210, 4025 Walnut
IS - Laboratory investigation of eating behavior and energy balance in man. Investigation of new forms of therapy for obesity.

280. E. HERBS (description under HEALTH CARE AND COMMUNITY MEDICINE)

281. Henry H. JORDAN
School of Medicine, Psychiatry, 823-7550, Room 206, Piersol R. C.
IS - RP - Early human behavioral development. Effects of maternal narcotic addiction on newborn behavior. Effects of prematurity (and other perinatal risk factors) on infant attachment, and in-utero alcohol exposure. Supervision is from Oliver Bjorksten, M.D., Dept. of Psychiatry.

Alexander HERBS (description under HEALTH CARE AND COMMUNITY MEDICINE)

282. Louis E. KRON
School of Medicine, Psychiatry, 823-7550, Room 206, Piersol R. C.
IS - RP - Laboratory investigation of eating behavior and energy balance in man. Investigation of new forms of therapy for obesity.

283. Reuben E. KRON
School of Medicine, Psychiatry, 823-7550, Room 206, Piersol R. C.
IS - RP - Laboratory investigation of eating behavior and energy balance in man. Investigation of new forms of therapy for obesity.

284. Philip MECHANICK
School of Medicine, Psychiatry, 662-3831, 918 Gates Building, HUP
IS - Introduction to the basic concepts in psychoanalysis: theory of drives, psychic structure, ego function,
adoption, and the interpsychic conflict. Included will be relations in the life cycle and related developmental issues. Reading and discussion will evolve in relation to the historical development of psychoanalytic theory.

MaryAnn MORGAN (description under HEALTH CARE AND COMMUNITY MEDICINE)

294. Frederick L. NEWMAN
School of Medicine, Psychiatry, Eastern Pennsylvania Psychiatric Institute, Henry Ave. & Abbeford Road, Phila., Pa. 19129, 241-6900
IS, FT - Evaluation of mental health programs. We have developed a specialty in understanding the limits of inference (rational decision making) that may develop from using particular procedures of mental health program evaluation. These studies require an integration of knowledge in statistics as well as the behavioral and the biological sciences. We would start the student with reading assignments and then branch the student into some field research project according to his or her interests.

295. Harold PERSKY
School of Medicine, Psychiatry, 823-7049, 465 Stouffer Building, PGH
IS, RP - Psychopharmacology: this subject is concerned with the relationships of mood and hormone levels and production rates. All experimental work is performed on humans or animals. However, reading is much broader and covers other mammals including rodents and non-human primates. Experimental work includes administration and assessment of moods using a variety of hormones in plasma (testosterone, progesterone, estradiol, cortisol, aldosterone, etc.) and their respective production rates and statistical analysis of the resultant data analysis of variance multiple regression analysis, etc.

PSYCHOLOGY
(see also: Education, Biology)

Andrew R. BAGGaley (description under EDUCATION)

296. Henry GLEITMAN
College Psychology, 594-7166, 3815 Walnut Street

297. Leo M. HURVICH
College Psychology, 594-7334, D-1 3815 Walnut Street
IS, RP - No description.

298. Solomon H. KATZ
College Dental School, Anthropology, 594-6980 or PE 5-9652, 341 University Museum
IS, RP - Have offered independent study Anthro. 199 to approximatley 30 undergraduates over the last four years. However, I would prefer to closely interview and evaluate any student before they have been accepted into my research group. This has been an extremely rewarding program for many of the students involved and in many cases has shaped their future careers.

PT - Includes various problems concerned with anthropology, medicine, dentistry, psychology and other sciences, as they apply to research in child growth and development.

A. Leo LEVINE: (description under LAW)

299. Jerre LEVY
College Psychology, 594-7131, 3815 Walnut Street
IS, RP - Cognitive psychology, lateral specialization of function in the human brain.

300. Jacob NACHMIAS
College, Psychology, 594-7310, 3815 Walnut Street
IS, RP - Visual and auditory perception.

301. Burlers S. RUSNER
College, Psychology, 594-6230, 3815 Walnut Street
IS, RP - Psychosensory research. Both areas involve experimental lab work.

302. Richard L. SOLOMON
College, Psychology, 594-7392, 3815 Walnut Street
IS - Fear conditioning, addiction.

303. Allan I. TEGER
College, Psychology, 594-7385, Room 115, 3815 Walnut Street
IS, FT - Laboratory research on the escalation of conflict: this is my major research interest. It involves running experiments on conflict, intergroup rivalry, etc.

Independent Study Register

304. Thomas E. WEBB
College, Psychology, 594-6273, 3815 Walnut Street
IS - Visual-spatial attentional processes in mental retardation.

RELIGIOUS THOUGHT

Robert KRAFT (description under ANTHROPOLOGY)

ROMANCE LANGUAGES

Jean V. ALTER (description under LITERATURE)
Frank P. BOWMAN (description under HISTORY)

Robert BBSHOP (description under LITERATURE)
Clifton CHERPAC (description under LITERATURE)

306. Lance DONALDSON-ERVIN
College, Romance Languages, 594-5128, 530 Williams Hall
IS, RP - French literature in general but specifically of the Renaissance.

307. Carlos LYNES
College, Romance Languages (French), 594-6634, 566 Williams Hall
IS - Twentieth-century French literature, especially the following areas: (1) Proust and the modern novel, (2) surrealism, (3) poetry from Apollinaire to some presentday "anti-poets", (4) from the "Nouveau Roman" of the 1960's to the "Roman Tel Quel" from the mid-1960's to the present.

SCIENCE & SOCIETY

SCIENCE & TECHNOLOGY

(History, Philosophy, Sociology of)

308. Robert MADDIN: Metal and Materials Science College School of Metallurgy & Materials Science, Metals & Materials Science, 594-4931, 223 LAUM
IS, RP - History of metallurgy - archaeology and metallurgy of ancient Iran and Sumaria.

309. Arnold THACKRAY
GSAS, History and Sociology of Science, 594-6400, 117 EFSCIL
IS, RP - The growth of scientific knowledge as ideas: technique, methodology, and communal enterprise. Science and modernization; science and technology, science and society.

Edward THORNTON (description under ENVIRONMENTAL STUDIES)

SLAVIC STUDIES

310. Maria Z. BROOKS
College, Slavic, 594-7238, 627 Williams Hall
IS, RP - Russian folklore, Slavic linguistics, history of the Polish language.

Alexander RIASANOVSKY (description under HISTORY)

SOCIOLOGY

311. Ann BEUF
Wharton, Sociology, 594-7863, 583 McNeil Building
IS, FT - Socialization of children with regard to formation of racial images, especially the American Indian. Social class differences in women and achievement motivation.

312. Kevin J. CLANCY
Wharton, Sociology, 594-6726, 585 McNeil Building
IS, FT - Research in several areas: 1. measurement of psychiatric disorders; 2. monitoring changes in attitudes and values of U. S. population; 3. beliefs of Catholics, Jews and Protestants.

313. Erving GOFFMAN
GSAS, Anthropology, 594-8807, 412 Museum
IS - Face to face interaction.

314. Edward P. HUTCHINSON
Wharton, Population Studies Center, 594-7686 or 6441, McNeil Building
IS, FT - Studies of immigrant or ethnic groups.

315. Ole POLLAK
Wharton, Sociology, 594-6712, 113 McNeil Building
IS - No description.

316. Philip SAGI
Wharton, Sociology, 594-7678, 250 McNeil Building
IS - Demographic - historical study of morbidity and mortality in Philadelphia and New England.

317. Jan S. SMITH
Wharton, Sociology, 594-6719, 507 McNeil Building
IS, RP - Interpersonal influence: the set of theories which attempt to describe and explain how people influence each other, and the structure of interpersonal influence in groups.

Franklin SOUTHWORTH (description under LINGUISTICS)

318. Jerald M. STARR
Wharton, Sociology, 594-6717, 519 McNeil Building
IS, RP - No description.

319. Marvin WOLFGANG
Wharton, Sociology, 594-7111, 276 McNeil Building
IS, RP - Criminalology, social deviance, delinquency research.

STATISTICS & OPERATIONS RESEARCH

220. Shv K. GUPTA
Wharton, Statistics & Operations Research, 594-4607, E-228 Dietrich
IS, RP - No description.

221. Donald F. MORRISON
Wharton, Statistics & Operations Research, 594-4229, E-227 Dietrich
IS - Mathematical statistics and statistical methodology (beyond a year's first course in statistics which presupposed the calculus), particularly as applied in the life, behavioral, and social sciences.

Hasan OZBEKHAN (description under URBAN AND REGIONAL STUDIES)

UNIVERSITY STUDIES

Peter JESSEL (description under ENGINEERING)

Franklin SOUTHWORTH (description under LINGUISTICS)

Ingrid WALDRON (description under BIOLOGY)

URBAN & REGIONAL STUDIES

(including social service delivery)

322. George HOSHINO
School of Social Work, 594-5208, D-4 School of Social Work
IS, RP - Research library or empirical - in an area of social welfare policy of mutual interest including welfare policy, juvenile justice, income maintenance, housing.

Janice MADDEN (description under WOMEN'S STUDIES)

Seymour MANDELBaUM (description under COMMUNICATIONS)

Bruce FITZGERALD (description under PEACE RESEARCH AND CONFLICT RESOLUTION)

Seymour MANDELBaUM (description under COMMUNICATIONS)

Janice MADDEN (description under WOMEN'S STUDIES)

Seymour MANDELBaUM (description under COMMUNICATIONS)

Janice MADDEN (description under WOMEN'S STUDIES)
Independent Study Register

324. Howard MITCHELL
GSFA, City & Regional Planning, 594-7818, 3810 Walnut Street
RP, FT - A variety of action - research related projects in the area of the social aspects of urban affairs.

325. John S. MORGAN
School of Social Work, 594-5518, School of Social Work, 3701 Locust
IS - Social welfare policy - local, national and international.

326. Hasan OZBEKHAN
Wharton, Statistics & Operations Research, 594-7801, 412 Vanc Hall
IS, RP - Planning - corporate, community, research, institutional, national, etc. Theory and practice (applications). Systems theory.

327. Eleanor L. RYDER
School of Social Work, 594-5503, 3701 Locust Walk
IS, FT - Reading course in Introduction of Social Work in which students could explore through literature, field observation, and discussion of social policy and practice issues, their interest in this profession.
RP - Principles of practice - a fieldwork tutorial in a social agency setting to be worked out with the student in relation to his interest. I could do one or the other, not both in one year.

328. Sidney SHORE
IS, RP - Low cost housing. Can house "abandonment" be checked?

Alan SOLER (description under ENGINEERING AND COMPUTER SCIENCES)

329. Jack STERNBACH
School of Social Work, 594-5534, 3701 Locust Walk
IS, FT - Correction: prisons and community. Consciousness - exploration of and into (e.g., altered states, feminint, etc.). Group processes. All of above is what I am and have been doing with undergraduates. And I'm happy to continue.

330. Anthony R. TOMAZINIS
GSFA, City Planning, 594-8441, 3400 Walnut Street
IS - City planning - urban systems. How urban social service delivery systems work.

VETERINARY MEDICINE
(see also: Medicine, Biology)

331. Robert S. BRODEY
Veterinary Medicine, Clinical Studies, 594-8655, 210 Vet. Med.
RP - Supervised research on host factors in parasitism along with a selected reading course.

332. Richard O. DAVIES
Veterinary Medicine, Animal Biology, 594-8614, Lipp
IS, RP - Comparative physiology of vertebreate respiration. Neural control of breathing.

333. Semih ERHAN
Veterinary Medicine, Animal Biology, 594-8614, Lipp
IS, RP - Nucleic acid biosynthesis, amino acid homologies, protein mapping.

334. M. R. IYENGAR
Veterinary Medicine, Animal Biology, 594-8614, Lipp
IS, RP - No description.

335. Harry KISHLEFF
SAM, Physical Therapy, 594-8515, 3001 Pine Street
IS, RP - I am studying the neurological controls of feeding and drinking in mammals. The problem is an interdisciplinary one involving studies of behavior of the experimental animals after manipulations of the brain (lesions or stimulation), body fluids, and nutritional state. As such it combines the academic areas of biology, psychology, physiology, and anatomy.

336. Florence LIEF
Veterinary Medicine, Animal Biology, 594-8614, Lipp
IS, RP - Broodly, the subject would be virology and immunology of viruses. My special interests concern certain respiratory viruses of man and lower animals and human wart virus and the reactions of the host to them, including the antibodies they stimulate. I have a number of well-defined experiments in which a student can participate under supervision and even complete, within a short time. With background reading and lab discussions, it could be a learning experience.

337. E. J. Lawson SOULSBY
Veterinary Medicine, Pathobiology, 594-8687, 217 Vet. Med.
RP - Supervised research on host factors in parasitism along with a selected reading course.

WOMEN'S STUDIES

Nina AUERBACH (description under ENGLISH)
Ann BEUF (description under SOCIOLOGY)
Cynthia COOKE (description under HEALTHCARE AND COMMUNITY MEDICINE)
Faris R. KIRKLAND (description under PEACE RESEARCH AND CONFLICT RESOLUTION)

339. Janice MADDEN
Wharton, Regional Science, 594-6739, 353 McNeil Building
IS - Economic theory of discrimination as applied to race or sex; human capital decision-making by women.

Barbara RUCH (description under ORIENTAL AND ASIAN STUDIES)
Carroll SMITH-ROSENBERG (description under HISTORY)
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