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About the Institute
The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

File under CA
Courses

July 26, 1968

Memo to: Dr. Dan Bailey

From: David J. Rogers

Subject: Support for Computer Science 451

The life sciences (in their broadest definition) need the aid of computers more than any other group of scholars. The list of vitally important investigations which must use computers as aids in decision-making is very long. No student in biology, psychology, sociology, etc., can claim to have a satisfactory education until he has a facility with computer use. This facility is as important as any other that will aid in solving the multiple problems facing man.

Therefore, I strongly recommend Computer Science 451, open to undergraduates and graduates alike, which provides the necessary instruction in computer programming and allied subjects for a large segment of the University community. We can expect that most biologically-oriented majors will be required to take such a course, and we anticipate that at least 20 students will be required to take Computer Science 451 the first year, and that the number will grow from year to year.

UNIVERSITY OF COLORADO

Course Number C. Sc. 451

Date April 8, 1968

New Course XX

Revised Course

COURSE OUTLINE

This form is to be completed for each proposed new or revised course, whether graduate or undergraduate. The phrase "new or revised course" applies to the following — a course not listed in the current University catalog and/or an existing course for which the number of credit hours and/or the number of class or laboratory contact hours is being changed, or a major revision is being made, or a change in catalog description is being made.

1. College or School Graduate/A & S

2. Department Computing Science
   Sponsored by Mathematics

3. Title of Course Computers in Behavioral Science

4. Catalog Description of Course Computer use in behavioral science, including data processing, simudation of behavioral processes and experiment implementation by computer

Prerequisites Upper division standing in Behavioral Science

Probable Instructor(s) Bailey

5. To be offered: Sem. I X Sem. II Summer Only Alternate Years

6. Credit 3 Clock Hours 3 Expected Enrollment I 30 II S

7. Curricular Purposes of Course (Please answer all questions.)
   a. Required in curriculum (or major)
   b. Elective for departmental major or specialization: Yes No X
   c. Elective contributing to a general (liberal) education: Yes X No
   d. Designed as an elective for student in Behavioral Science Department
      curriculum, department, etc.

8. General Educational Purposes of Course (Please answer all questions.)
   a. General education Yes X No
   b. Departmental specialization Yes No X
   c. Opportunity for student research Yes X No
   d. Professional or preprofessional training Yes No X
   e. Could the educational purposes of this course be achieved by the modification of another course now being given? Yes No X. If yes, please explain

Sequence of action

a. Request prepared by (Instructor(s)) Date
b. Approved by Department Mathematics (Head of Department) Computing Date
c. Approved by appropriate College Committee (Responsible Officer) Date
d. Approved by Dean of College Date
e. Approved by Graduate School* (Dean of the Graduate School) Date

* *Required only if a graduate level course.*

9. Relation to Other Courses (Please answer all questions.)

a. Prerequisite(s), if any, ~~an introductory statistics or probability course; such as Psychol. 210; A. Math 281~~
Name course(s)

b. This course is to be a formal prerequisite for _____
Name course(s)

c. An introductory survey of the field of knowledge represented by your department ..... Yes____ No____

d. An introductory survey of a special area of knowledge within the total field represented by your department ..... Yes X No____

e. A further development of:
(i) A course described under "c" ..... Yes____ No____

(ii) A course described under "d" ..... Yes____ No____

f. An application to the departmental field of an area of knowledge represented by some other department _____

_____
Name department and course(s)

g. A summarizing and/or integrating course ..... Yes____ No X

h. In your judgment, does this course overlap to any considerable extent with any other course, either in your department or in another department? ..... Yes____ No X

If so, please name the common topics and the courses.

Topics	*Courses*
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

Please indicate the reasons why overlapping is justified _____

_____

_____

_____

i. If there is substantial overlapping with another course, has this been discussed with the key representative of that department? ---------- Yes_____No_____

j. If the course is a revision of an existing course

(i) Have the changes which are based on a prerequisite course been discussed with the appropriate individuals? ---------- Yes_____No_____

With whom? _____

(ii) Have the changes been discussed with appropriate individuals involved with courses that use this course as a prerequisite? ---------- Yes_____No_____

With whom? _____

10. What are the reasons why this course should be offered at the present time and how does it fit in the development of the educational program of your department?

Computing Science has restricted its offerings to graduate level up to now. Increase of faculty permits extending offerings to undergraduate levels.

11. If this course is intended to replace an existing course or courses, please specify.

12. Topical Outline of Course (Give under major and minor headings the principal topics covered in this course together with the approximate number of class hours to be devoted to each topic. *Please be specific and inclusive* and avoid technical terms where possible.) Note: If this proposed course is a reorganization of, or an important change in, an existing course, prepare the outline so as to show the exact nature of the change or reorganization. (Insert extra page if needed)

Computer Programming (17 hours)
- Fortran IV language
- Major Applications survey
- Monitor system operations

Computer simulation of behavioral processes (17 hours)
- Random number generators
- Statistical processes
- Organization of behavioral systems

Computers as laboratory instruments (17 hours)
- Computer assisted instruction
- Computer control of experimental apparatus
- Computer collection of data

13. Basic Text for Proposed Course Uttal, W. Real-time computers in psychological science
(Give author and title)

14. Special Syllabi _____
(Give author and title)

15. Required Readings (Indicate appropriate journals or texts)

16. Classroom, laboratory or other needed space (specify full needs)

lecture room

17. Impact of this course on departmental staffing needs (Additional faculty, graduate assistants, secretarial and clerical help. Please specify.)

none

18. Impact of this course on library facilities (Are current holdings adequate for this course? New books or periodicals needed? Please specify.)

holdings are adequate

Remarks: Add any explanations or additional information that you believe would be helpful in the appraisal of this course.

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
GRADUATE SCHOOL

INSTITUTE FOR COMPUTING SCIENCE

AUG 1 1968

July 30, 1968

Vice President Thurston Manning
Regent Hall
Campus

Dear Dean Manning:

In accordance with my promise to Rex Krueger about information justifying the initiation of the undergraduate course in Computing Science, 451, I have made special inquiries of representatives of social, behavioral and biological science departments. I am pleased to report that there is strong support from these people for offering the proposed course.

The Psychology Department will recommend the course to all of its undergraduate majors as an elective to supplement the methodology and statistics courses required at present. In addition, the language substitute now permitted Psychology graduate students includes Computing Science 501. In the future the Computing Science course 451 will be accepted in place of C.Sc. 501. As the course develops it is possible that it will be used to take the place of the laboratory in Psychology 586, permitting that lab to be re-defined in a way more appropriate to the rest of the course.

The Sociology Department indicates a most urgent need for the course. In the newly instituted mathematical sociology graduate program all of the students will be required to take the course if it is available. The general graduate student in Sociology will be urged to take the course during their first or second year in preparation for their doctoral research. It is anticipated that a minimum of eight graduate students will take the course each year. The course will be recommended to undergraduates aa an elective to supplement the methodology and statistics requirements in the Department. It was indicated that the Department would almost certainly be forced to propose their own course if this course is not offered.

The Economics Department indicates that they would welcome the availability of such a course. They anticipate that some of their undergraduate students are likely to enroll in the course if it is offered and that we can probably count on having approximately 6 graduate students take the course each year from the Economics graduate programs.

The Educational Research graduate program indicates that about 7 or 8 graduate students (on the average) from their program would enroll each year. In addition, they indicated that such a course, coupled with other applications courses already taught in Computing Science, would induce a majority of their graduate students to take Computing Science as a minor in their Master's Degree work.

A representative of the Biology Department provided the attached statement in support of offering the course.

All of the departmental representatives I talked with have indicated a willingness to write a formal memorandum in support of initiating the course, should that be desirable. I am listing their names and affiliations below. They will receive copies of this memorandum.

I should add that I will be teaching this course on an "overload" basis for the next couple of years. If I do not teach this course I probably will teach an advanced seminar in statistical procedures for a handful of graduate students in the behavioral sciences. I would much rather teach a course for which I think that there is a very urgent need.

If you should need further information or documentation before you approve the new course please call on me. In the absence of instructions to the contrary, we will leave the course in the schedule of courses and assume that we will be offering the course this Fall.

Sincerely,

Daniel E. Bailey (ax)

Daniel E. Bailey
Associate Professor

cc: Stuart Cook, Psychology
Robert Hanson, Sociology
Kenneth Hopkins, Education
David Rogers, Biology
Wesley Yorden, Economics

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

TAXIMETRICS LABORATORY
DEPARTMENT OF BIOLOGY
ARMORY 101

PHONE: 303-443-2211
Ext. 6712

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