

P.O. Box 2008, New Britain, Connecticut 06050 (203) 827-7700

RESOLUTION

concerning

LICENSURE AND ACCREDITATION

for a

MASTER OF SCIENCE

in

COMPUTER SCIENCE

at

CENTRAL CONNECTICUT STATE UNIVERSITY

June 16, 1989

RESOLVED, That under the authority granted to the Board of Trustees of Connecticut State University in Chapter 185b, Sections 10a-87 and 10a-149 of the Connecticut General Statutes, the President of Connecticut State University is authorized to seek licensure and accreditation from the Connecticut Board of Governors for Higher Education for a Master of Science in Computer Science (MS) to be presented by Central Connecticut State University.

A Certified True Copy:

President





February 2, 1990

Dr. Norma Foreman Glasgow Commissioner of Higher Education 61 Woodland Street Hartford, CT 06105

Dear Norma,

With the authorization of the Board of Trustees of the Connecticut State University and on behalf of Central Connecticut State University, I request licensure and accreditation for a program leading to the M.S. in Computer Science to be offered at Central.

The following items are attached to this letter:

- (1) The program proposal
- (2) The program summary
- (3) The Trustees' authorizing resolution

We are sensitive to the potential concerns of neighboring institutions, and therefore President Shumaker has discussed this program with President Worth Loomis of the Hartford Graduate Center. Additional discussions have been held between faculty of the two institutions. Central's program is comparable to only one of the several tracks offered in the Graduate Center's M.S. in Computer Science. We do not believe that it will provide inappropriate competition.

Central has had an undergraduate program in Computer Science for over a decade, and we believe that Central's own graduates will provide a significant clientelle for this Master's program. We also believe that this is an appropriate area for development at Central in support of the state's needs for high tech personnel for the next century.

Thank you for considering this request. Please do not hesitate to contact me if there are any questions.

Dallas K. Beal

cc: President Shumaker



### BOARD OF GOVERNORS FOR HIGHER EDUCATION

PROGRAM SUMMARY

41 MODELAND STREET MARTTONS, COMMETTICAT OS 100

rogram name						DATE OF SUBILI		
Master of Science in Computer Scienc	e					10/25	/89	
OF DEGREE (and abbreviens)								
MS in Computer Science				· .		<u> </u>		
PROBLEM CODE NO. TITLE					•			
1 1 0 1 0 1 CS General							: 	
DARTHEIST AND SOUGH, OR COLLEGE		***						
Computer Science								
PLICANT INSTITUTION						PROPOSED INITIATION DATE		
Central Connecticut State University				Fall 1990				
OGRAPHIC LOCATION OF PROGRAM								
New Britain, CT								
STITUTIONAL UAISON PERSON	MILE						TELEPHONE	E
Richard L. Pattenaude, Ph.D.	Vice	Preside	nt for	Academ	ic Affa	irs	827-7	288
AND OF TRUSTEES STAFF LIAISON (IF applicable)								

The Master of Science in Computer Science is intended to prepare students for career employment or for doctoral study in Computer Science. Admission to this program requires a Bachelor's degree with at least a minor (preferably a major) in Computer Science and also substantial work in athematics including courses in calculus, statistics, and numerical methods. The program will be offered to both full-time and part-time rudents.

Specific Computer Science courses required for entry into the program are CS 271, Introduction to Computer Sciences; CS 285, Advanced Programming Concept; CS 295, Data and File Structures; CS 372, Introduction to Computer. Organization and Assembly Programming; CS 376, Digital Systems Design; and CS 455, Systems Programming.

The proposed Master's program will require 30 credit hours of course work, plus a culminating experience which will consist of either a thesis or a programming project and a cumulative examination. The required courses in the program will be:

CS 464, Programming Languages

CS 495, Legal, Social, Ethical, and Economic Issues in Computing

CS 510, Mathematical Methods in Computer Science I

CS 514. Software Engineering II

CS 516, Computer System Software and Architecture I

CS 517, Computer System Software and Architecture II

DO NOT FILL IN	LICENSURE ACTION	ACCREDITATION ACTION			
These items will be completed	SCA	SCA			
by the BHE staff.	PAAC	PAIC			
	BHE	BHE			

Additional electives will complete the 30 hours. It is anticipated that many students will elect CS 410, Software Engineering I. Other available elective will include courses in Artificial Intelligence, Algorithms, Pattern Recognition, Data Base Systems, and Compiler Techniques. Additional graduate courses in Mathematics, Business, Law, Communications, and Technology may be taken as electives with departmental approval.

According to recent Bureau of Labor Statistics projections, the nation, particularly the Northeast, will experience a need for trained computer scientists in excess of the available supply for at least the next decade. The department has had numerous inquiries from current students and others. The program has been designed to appeal to both the practicing software engineer and to graduates of strong undergraduate programs in Computer Science.

or 1.65

CONNECTICUT BOARD OF HIGHER EDUCATION

QUESTIONNAIRE FOR LICENSURE OF A PROGRAM IN HIGHER EDUCATION

DECEMber 12, 1988

CENTRAL CONNECTICUT STATE UNIVERSITY

MASTER OF SCIENCE IN COMPUTER SCIENCE

- 1. PURPOSES AND OBJECTIVES:
- 1. a. State the purpose and objectives of this program in relation to the goals and objectives of the institution.

According to recent Bureau of Labor Statistics projections, the Nation and the Northeast will experience a need for trained computer scientists in excess of the available supply for at least the next decade. Furthermore, lack of such trained people is projected to be an important limiting factor in the economic growth of the region and nation, especially in those high technology sectors of the economy where we have the most hope of competing successfully with the Japanese. It is therefore crucial that additional computer science graduate programs be established.

"The Connecticut State University exists to serve the Life and career preparation needs of Connecticut citizens and

must change and adapt its program offerings to meet these needs." Central Connecticut State University embraces this Mission Statement of the Connecticut State University (approved by the Board of Trustees on October 3, 1986).

This proposed program is consistent with the mission of the University and will provide the quality education necessary to meet the demands of the State and region in this area.

This programs is best described under CIP code 11.0101.

 b. State why this program is considered to be an appropriate offering for this institution at this time. Include reference to supporting information such as an institutional master plan.

Central Connecticut State University, with its long tradition of public higher education and its current diversity of offerings, is uniquely well equipped to introduce such a program of study. Built upon its extremely successful undergraduate computer science major, this program of study will further the educational mission of the institution in this area as stated back in 1976: "to provide a marketable skill for those students who wish to become professionals in the computer field," and "to

prepare the student for work toward an advanced degree." To date, 328 students have graduated from CCSU with an undergraduate degree in Computer Science (1977 - May 1987). To insure the student meets these objectives, the proposed Master's curriculum is based largely on the ACM model curriculum with appropriate modifications.

The importance of such a program can be further emphasized from the letters of support received (see appendix A).

It should also be noted that no public institution of higher education in the State of Connecticut has conferred a Master's Degree in Computer Science under CIP 11.0101 (see also question 13).

1. c. Describe the clientele(s) to be served by the program (students, employers, professional groups etc.).

The program has been designed to appeal to both the practicing software engineer and to graduates of strong undergraduate programs in Computer Science. This proposed master's degree program will be a 30 credit hour degree program in which software will be emphasized over hardware, especially the mathematical methods applicable to software, in order to build on our existing strengths.

Requirements will be organized around an 18 credit hour core curriculum to insure that every student learns the essentials of graduate study in the discipline. Additional requirements will be intentionally flexible to allow the program to be tailored to the needs of the individual working in industry (see appendix A). Admission to the program requires a minimum of an undergraduate minor/concentration (preferably a major) in computer science and substantial work (preferably a minor/concentration) in mathematics. The mathematical foundations of computer science are the primary emphasis of the program.

### 2. ADMINISTRATION

2. a. How were the program plans developed and approved? Give the dates of approval by the institution and the governing board.

The germ of this program was present in 1975 when the original undergraduate major in Computer Science was developed. Although the Department was most concerned with the implementation of an undergraduate program in Computer Science then, testimony was given before the Board of Higher Education indicating that a long range goal of the Department was the creation of a graduate level program in the discipline at a time when Central and the Board thought it was proper to expand the undergraduate major. Central's Five Year Institutional Plan (dated 09/13/85, page 16) echoed that testimony stating that such a program "should be pursued within the next five years." Actual work on the details of the graduate program began in the fall of 1983. A letter of intent from George A. Clarke, Dean, Arts/Sciences, to Richard L. Pattenaude, Vice President, Academic Affairs, regarding this program was sent on January 23, 1987. A formal letter of intent was sent by the Vice President to Dr. Thomas A. Porter, CSU Vice President for Academic Affairs and Research, on February 3, 1987. Dr. Porter, in turn notified Mark D. Johnson, Assistant

Commissioner for Academic Affairs, Department of Higher Education, of the intent to submit a proposal for an Master's degree in Computer Science on February 11, 1987 (see Appendix B). Prior to its submission to the Department of Higher Education, the proposed program has undergone many internal reviews including:

Computer Science Area approval - November 15, 1984

Mathematics/Computer Science Department approval 
April 25, 1985

Council of Deans approval - October, 1985

Arts/Sciences Subcommittee approval - March 18, 1986

Curriculum Committee approval - April 1, 1986

Graduate Studies Committee approval - March 19, 1987

Faculty Senate approval - May 4, 1987

Presidential approval - May 13, 1987

2. b. Who is directly responsible for the administration of the program and supervision of its faculty?

The Dean of the Graduate School is ultimately responsible for the overall administration of all graduate programs offered at CCSU. The Graduate Dean is assisted by the Dean

of the School where the program is housed, in this case, the Dean of Arts/Sciences. The Chairman of the Department of Mathematics/Computer Science is directly responsible for the "local" administration of the program and the supervision of the faculty involved in program instruction. In addition to the Department Chairman, the department also has a Computer Science Area Coordinator to assist in the day to day administration of the program.

2. c. List (1) any accrediting agencies which already have accredited the institution and (2) any accrediting agency to which you plan to apply for program accreditation.

Central Connecticut State University offers programs

leading to three undergraduate degrees: Bachelor of

Science, Bachelor of Arts, and Bachelor of Fine Arts.

Degrees are granted by the four schools of the University:

Arts/Sciences, Business, Education/Professional Studies,

and Technology. The University also offers programs leading

to three graduate degrees; Master of Arts, Master of

Sciences, and Master of Science in Organization and

Management.

All of these programs are fully accredited by the New England Association of Schools and Colleges, which is the accrediting agency for this region. Central was most recently reaccredited in 1978.

The University does not plan to apply for program accreditation for this program through an accrediting agency other than the Connecticut Board of Governors for Higher Education. This accreditation process will follow the Licensure period and will be conducted through the regularly required BOGHE procedures.

### 3. FINANCE

3. a. Describe the amount of financial support committed to the program by the administration and trustees. Indicate the date(s) these funds will be available.

The resources of the entire institution will be available for this program. Of special significance are the computer facilities. Special purchases of equipment has been among the top priorities of the University (see also question 9).

The Elihu Burritt Library with its 400,542 volumes, which includes 253,173 volumes of books, 78,872 government documents, and 68,497 bound volumes of periodicals, is another important program resource. In addition to these items, there are also 2,027 titles of current subscriptions, 219,037 microforms, and 6,824 audiovisual materials (see also question 6).

The geographic location of Central Connecticut State
University is a definite asset. It has enabled the
University to draw upon the region's supply of outstanding
Leaders from both the education and the business/industrial
community to serve on advisory boards for various programs
within the University. As part of our undergraduate service

offerings, we have been able for the last three years to have several outstanding guest lecturers.

Budgeting for the program has already begun with new faculty and improved equipment already in place. This support is projected in the five year plan.

3. b. Complete a Fiscal Statement form provided and make it available to staff and the Board.

Please see attached Fiscal Statement form.

3. c. If resources to operate the program are to be provided totally or in part through reallocation of existing resources, identify the resources to be employed and explain how existing programs will be affected.

The resources for this program in the initial stages of its development will be provided through reallocation of existing resources.

The number of courses introduced at the graduate level with this new program will average two to three per semester. In Fall 1986, an additional faculty line was reallocated by the University to the Department of Mathematics & Computer Science, bringing the number of full-time faculty to thirty-three. This new faculty member alone compensates in load for new courses added to date. A faculty position for the program from within the Department (retirement) has been filled effective Fall 1988.

It is not necessary to reallocate major resources since the University has planned for new programs to be introduced (e.g. library grants, special allocations). Equipment purchases will in some cases be shared with the existing undergraduate Computer Science Major.

A lab consisting of VAX and SUN workstations for program use has been partially completed.

### 4. FACULTY

4. a. List the name, title and qualifications for each person involved in the program, including degrees with areas of specialization, institutions at which degrees were earned, pertinent experience, and professional publications. Include the following additional information for each faculty member listed: full-time or part-time status as a faculty member of the institution and responsibilities in the proposed program.

The basic curriculum of the Master of Science in Computer Science program will be taught by full-time faculty within the Department of Mathematics & Computer Science. For some specialized offerings (e.g. Legal Issues course, some topics courses), appropriately qualified adjunct faculty from business and/or industry may be used. Those members of the Department who are projected to teach regular offerings in the program are listed in the response to question 5.a.1; their vita are in Appendix C.

# Addendum to MS in Computer Science Proposal (10/5/89)

4. a

In the time since January, 1989 when this proposal was submitted for Connecticut State Board of Trustees approval, the Department of Mathematics/Computer Science has been divided into two departments, the Department of Mathematics and the Department of Computer Science. The proposed MS program will be housed in the Department of Computer Science which now includes eight faculty members, three of whom hold the Ph.D. (Professors Jones, Neville, Zhou) and three of whom are ABD.

As noted elsewhere in this proposal, it is the three doctorally-qualified faculty who will have nearly exclusive responsibility for the teaching of 500-level courses, for advising MS students, and for supervising student research and thesis-writing. Of the remaining five faculty who do not presently hold the doctorate, three (Professor Pelletier who serves as department chair and Professors Iyengar and Neilforoshan) will have some contact with MS students. Professors Pelletier and Iyengar have completed advanced coursework and examination requirements for the Ph.D. at the University of Connecticut. They are presently working on their dissertations. Professor Neilforoshan completed his doctoral coursework at the University of Southern Mississippi. As indicated in their vitae, Professors Iyengar and Neilforoshan have already produced publishable scholarship in their specialties: Professor Pelletier has taught extensively in the computer science area and is expert in using an extensive range of operating systems and languages. Thus, all three present academic qualifications substantially equivalent to the terminal degree. The remaining two faculty members in the department are not assigned to teach 500-level courses or any of the 400-level courses which are included in the MS program.

4. b. For each vacant or proposed position provide title, position qualifications and proposed data of appointment.

This program requires that we add three new faculty positions to the Computer Science area (two obtained from retirements). All should have a Ph.D in Computer Science, or in a closely related discipline with a record of publications in Computer Science.

The Department has already filled two faculty positions in Computer Science due to retirements: one (hired in Fall 1987) has a Ph.D. in Electrical and Computer Engineering. The other (hired in Fall 1988) has a Ph.D. in Computer Science. The third position will not be needed until the program grows close to its projected final size.

4. c. Describe the procedures and criteria, including minimum qualifications, for employing adjunct faculty.

The Department follows affirmative action guidelines when hiring adjunct faculty. These guidelines have been established by the Affirmative Action Office here at Central.

In particular, all adjunct faculty who teach in this program shall possess a minimum of a doctoral degree in the subject matter area and/or other appropriate qualifications in the specific subject areas they are assigned to teach. For instance, a lawyer or a judge might be an appropriate individual to teach CS 495: Legal, Social, Ethical, and Economic Issues in Computing); we expect this to be the only course in which adjunct faculty are needed.

Part-time hiring procedures include the recommendation of adjunct faculty members by the Department's Hiring Committee (Chair is a member), to the Dean of the Extension College, the Dean of Graduate Studies (if applicable), and the Dean of Arts/Sciences (if applicable).

### 5. CURRICULA AND INSTRUCTION

5. a.1. Give the number, title and a narrative description for each course in the proposed program, noting which courses are new. Include sufficient detail in course descriptions so that content and level are clear, or attach appropriate and referenced excerpts from the catalog.\*

CS 407 ADVANCED TOPICS IN COMPUTER SCIENCE 1-3 Prereq.: CS 285 and CS 372 and permission of instructor. This course will provide an opportunity to introduce into the curriculum topics of current interest, and to provide a mechanism to introduce new courses on an experimental basis. Topics include computer networks, advanced systems programming, advanced operating systems, computer performance evaluation, pattern recognition, computer information storage and retrieval, microprogramming, digital laboratory, computer statistical analysis and compiler optimization. May be repeated with different topics for up to 6 credits.

CS 410 INTRODUCTION TO SOFTWARE ENGINEERING
Prereq.: CS 285 and CS 372. An examination of the software development process form the initial requirement analysis to the operation and maintenance of the final system. The scope of the course includes not only traditional design issues, but also the organization of software development projects, the verification and validation of the system at various stages in its life cycle, the problems of security and privacy, and the legal aspects of software development, including software protection and software liability. Fall (E).

CS 423 COMPUTER GRAPHICS: PRESENTATIONS 3
Prereq.: CS 295 or MIS 310. Wire frame and solid graphics in two and three dimensions, data structures for computer graphics, geometrical transformations in computer graphics, raster and vector display device technologies. Fall.

\* Note: (0) after a course indicates it will be offered during odd numbered years, (E) indicates even years, (NEW) indicates a new course.

3

CS 462 ARTIFICIAL INTELLIGENCE: THEORY AND PRACTICE 3 Prereq.: CS 455, and Phil. 120 or Permission of Instructor. Presentation of Artificial Intelligence as a coherent body of ideas and methods to acquaint the student with the classic programs in the field and their underlying theory. Can a machine exhibit some "mental" faculty? Students will explore this through problem solving paradigms, logic and theorem proving, language and image understanding, search and control methods, and learning. Fall (E).

CS 463 ALGORITHMS
Prereq.: CS 295. Topics include algorithms in combinatorics, integer and real arithmetic, pattern matching, list processing, and artificial intelligence.
Algorithmic analysis and domain independent techniques are also considered. Spring (0).

CS 464 PROGRAMMING LANGUAGES

Prereq.: CS 295. Emphasis on programming languages as one of many tools in the software development effort.

Comparison of different language usages of data types, information hiding, control structures, block structure, sub-programs, entrancy, and recursion. Fall (E).

CS 485 MINICOMPUTERS AND MICROPROCESSORS

Prereq.: CS 285, and CS 372 or Math. 472. To acquaint students with the basic techniques in the design and use of minicomputer and microprocessor software and hardware. Topics include minicomputers and microprocessors, differences and similarities, instructions, software and hardware components, applications and future uses. Spring (E).

CS 490 COMPUTER COMMUNICATIONS NETWORKS AND DISTRIBUTED PROCESSING

Prereq.: CS 295 and CS 372. A study of networks of interacting computers. The problems, rationale, and possible solution for both distributed processing and distributed data bases will be examined. Includes local networks and multi (micro) processor systems. Fall (0).

CS 495 LEGAL, SOCIAL, ETHICAL, AND ECONOMIC ISSUES IN COMPUTING.

Prereq.: 12 St in Computer Science and Senior Standing. Topics include privacy, law of torts in computing, and legal protection of software. Spring (0) (NEW).

- CS 507 A: VANCED TOPICS IN COMPUTER SCIENCE 1-3 Prereq.: Permission of instructor. An examination of selected advanced topics in computer science which are not otherwise of tered as part of the Department's regular curriculum. May be repeated with different topics for up to 6 credits. Irregular (NEW).
- CS 510 MATHEMATICAL METHODS IN COMPUTER SCIENCE I 3 Prereq.: Stat. 315 or Math. 104 or equivalent, and CS 463 or equivalent. Topics include elementary queuing theory, an introduction to probabilistic models, and an introduction to the analysis of algorithms. Fall (0) (NEW).
- CS 511 MATHEMATICAL METHODS IN COMPUTER SCIENCE II 3 Prereq.: CS 510. Continuation of CS 510. Spring (0) (NEW).
- CS 514 SOFTWARE ENGINEERING II

  Prereq.: CS 410 or equivalent. Continuation of CS 410.
  Study of the entire software life cycle including
  redirements analysis, specification, design, coding,
  tasting, and maintenance. Spring (E) (NEW).
- Prereq: CS 455, and CS 376 or equivalent. An integrated look at system software and architecture. Topics include systems structure, memory management, process management, concurrency, resource allocation, security and protection, performance evaluation, and software/hardware tradeoffs. Fall (E) (NEW).
- CS 517 COMPUTER SYSTEM SOFTWARE AND ARCHITECTURE II 3 Prereq.: CS 516. Continuation of CS 516. Spring (E) (NEW).

CS 527 ON-LINE, REAL TIME, AND TIME SHARING SYSTEMS 3 Prereq.: CS 455 or equivalent. An introduction to the problems, concepts, and techniques involved in specialized computer systems such as time sharing systems, process control systems, computer systems embedded in aircraft and automobiles, and graphic systems. Fall (0) (NEW).

CS 534 PATTERN RECOGNITION 3
Prereq.: CS 295, and Math 315 or Math 104 or equivalent.
Theory and applications dealing with feature extraction methods, similarity measures, maximum likelihood decisions, and the structure of data to ease recognition. Spring (0) (NEW).

CS 560 DATA BASE SYSTEMS
Prereq.: CS 295. Emphasizes the concepts and structures necessary to design and implement a data base management system. The student will become acquainted with current literature and will be given the opportunity to use a data base management system. Fall (0) (NEW).

CS 565 COMPILER TECHNIQUES

Prereq.: CS 455. An in depth study of current compiler techniques through code generation and optimization. Fall (E) (NEW).

Prereq.: CS 510. Special independent work in computer science to meet individual interest in areas not covered in the regular curriculum. Work will be under the supervision of a faculty member in an area and for an amount of credit agreed to prior to registration for the course. Irregular (NEW).

CS 598 RESEARCH IN COMPUTER SCIENCE 3
Prereq.: Permission of advisor. Course designed to familiarize graduate student with techniques and resources associated with research in computer science. Opportunity for practical application will be provided. Spring. (NEW).

CS 599 THESIS

Prereq.: CS 598 and permission of advisor. Preparation of thesis under guidance of thesis advisor for students completing master's requirements under Plan A. At conclusion of study, thesis acceptable to the student's thesis advisor must be filed in triplicate. On request. (NEW).

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List of potential instructors of these courses:
    CS 407:
             S. Iyengar, C. Pelletier, H. Zhou
    CS 410:
             W. Jones, C. Pelletier
    CS 423:
             S. Iyengar, C. Neville
    CS 462:
             S. Iyengar
    CS 463:
             W. Jones, C. Neville
    CS 464:
             W. Jones, M. Neilforoshan
  . CS 485:
            M. Neilforoshan, H. Zhou
   CS 490:
            S. Iyengar, C. Pelletier
   CS 495:
            M. Neilforoshan
   CS 507:
             S. Iyengar, C. Pelletier, H. Zhou
    CS 510:
            W. Jones, C. Neville
   CS 511:
            W. Jones, C. Neville
   CS 514:
             W. Jones
   CS 516:
            M. Neilforoshan, H. Zhou
   CS 517:
            H. Zhou
   CS 527:
            M. Neilforoshan, H. Zhou
   CS 534:
            S. Iyengar
   CS 560:
            S. Iyengar, C. Neville
   CS 565:
            H. Zhou
  - CS 580:
            M. Neilforoshan, H. Zhou
   CS 598: W. Jones, C. Neville, H. Zhou
   CS 599:
            W. Jones, C. Neville, H. Zhou
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Of the six potential instructors listed above, three have the Ph. D. (W. Jones, C. Neville, and H. Zhou); two expect to have the Ph. D. by May 1990 (S. Iyengar and M. Neilforoshan); and C. Pelletier is ABD.

a.2. Describe the course numbering system.

The 500 level courses are graduate courses only. The 400 level courses are given for graduate or undergraduate credit.

5. a.3. Indicate the required or "core" courses and those courses from which electives may be selected. Stipulate the number of courses or hours and their distribution required to complete the program.

The curriculum is based on the ACM model curriculum.

The Master of Science (MS) Degree in Computer Science will consist of: 30 semester hours (Plan A or Plan B\*\*) including an 18 SH core (CS 464, 495, 510, 514, 516, 517) and 12 SH of electives (chosen from CS 407, 410, 423, 462, 463, 485, 490, 507, 511, 527, 534, 560, 565, 580, 598 and from among selected offerings in mathematics, business, law, communications, and technology).

Courses taken as an undergraduate will not count towards the hours required for a Master's degree.

<sup>\*\*</sup> A culminating experience is required in addition to the 30 semester hours: Plan A requires a thesis and Plan B requires a comprehensive examination and a major project.

5. b. How do the institution's policies regarding transfer of credit, credit by examination, or crediting experiential learning and noncollegiate sponsored instruction apply to this program?

The following statement describes the transfer credit policy for all graduate students in all graduate programs offered at Central Connecticut State University (pages 16-17 of the 1986-8 Graduate Catalog):

"Applicants who have taken graduate-level coursework prior to admission, whether at Central or elsewhere, do so with no guarantee that such coursework will be counted toward their Degree or Certification program. A student wishing to transfer to Central from another accredited institution of higher learning must fill out an application for admission and submit official transcripts as specified.

"All credit presented for transfer must show an earned grade of B or better, be related to the student's planned program of study, and be completed within a six-year period immediately preceding program completion.

Guidelines for transfer of credit upon application and within Degree programs are as follows:

- a. up to 21 credits may be transferred from another Connecticut State University only. Regardless of the number transferred from another Connecticut State University, no fewer than 15 credits to complete the student's Degree program MUST be taken at Central with 6 or more of the 15 credits taken in the student's area of specialization;
- b. transfer of credits from other accredited institutions is limited to a total of 9 credits. Any combination of Connecticut State University and other accredited institution coursework is also limited to a total of 9 credits.

"After admission to a graduate program, a student must obtain prior written approval from the academic adviser for courses to be transferred from other accredited institutions. Forms for requesting the transfer of credit are available in the Graduate Office. Upon completion of coursework intended for transfer, the student is responsible for providing the Dean of Graduate Studies with an official transcript from the other institution."

At the present time, there is no means by which a student can obtain credit for courses in this program on the basis of credit by examination or by crediting experiential learning and noncollegiate sponsored instruction.

- 5. c. Indicate any requirements and arrangements for clinical affiliation, internships, and practice or work experience. Describe how these will be administered and furnish the following assurances:
  - (1) The courses of the program, and the related clinical or work experience, have been articulated with appropriate credit assigned.
  - (2) The institution has or will have a qualified staff coordinator for the program before its inception.
  - (3) The institution will provide appropriate arrangements for student work experience.
  - (4) The work activities of the students will be structured by the college as an educational experience with supervision, teaching and evaluation under the control of the college.
  - (5) Agreements or contracts exist between the college and the agency in which the students will receive their practical experience.
  - (6) Appropriate procedures have been established which the college will use for the evaluation of students.

Internships and practice or work experience are not a required part of this program. However, since many of the students will be practicing professionals, efforts will be made to demonstrate direct relationships between course material and the student's own experiences in the "real world." The student's faculty advisor will review experience when creating the student's Planned Program of Study.

## 6. RESOURCE CENTERS AND LIBRARIES

6. a. What library and other learning resources are available at the institution or elsewhere which support the program? Describe the accommodations in terms of study space, professional assistance and time schedule of availability.

The Elihu Burritt Library is open a total of 85 hours per week (during the academic semesters) and there is a minimum of one Professional Librarian coverage each hour the library is open. There are currently a Director and Associate Director of Library Services and 19 Professional Librarians. The Library has a seating capacity of 1,700 students.

The Elihu Burritt Library is a member of OCLC. As such, it has access to the holdings of thousands of libraries and millions of titles in the United States, Canada, and Europe.

It is also a member of the Capital Region Library Council and participates in an on line and systematic exchange of materials of libraries throughout the Capital Region.

Beyond that, it has entered into reciprocal agreements with institutes of higher education in the New England states allowing for the free exchange of materials.

The library has added its serial holdings to the Connecticut Union List of Serials and as such, it not only provides access to its own holdings, but has access to the Serial holdings of virtually every library in Connecticut.

Also in place in Connecticut, is a document delivery system which provides for the transfer of books and materials between libraries within the State.

 b. Report as accurately as practicable the number of volumes, periodicals and other materials, by subject area, which directly support the program.

The approximate number of acquisitions in the past two years (1985-6, 1986-7) and the present total number of books:

Books:	Added	Total
Entire Institutional Library	26,275	400,542*
Support Fields:		
Math & Computer Science	423	4,908
Physics	150	1,565
Engineering	1,014	6,352
Chemistry	113	2.016

Appropriation to the library for the 1986-87 and amounts allotted for books and periodicals in computer science and computer-related fields.

Total library appropriation

\$331,009.63

For computer science and technical books \$29,396.19\*\*

\* Total includes books and bound periodicals (entire bookstock) as of June 30, 1987.

<sup>\*\*</sup> Includes mathematics and computer science books, engineering technology and industrial technology (Department allocations plus library allocations)

6. c. Provide a representative listing of periodical literature in the library which will support the program.

The approximate number of acquisitions in the past five years and the present total number of bound periodicals:

Periodicals:	Added	Total
Entire Institutional Library	492	2,063
Support Fields:		
Math & Computer Science	2	41
Physics	1	47
Mathematics	1	24
Engineering	4	95
Chemistry	0	40

Total library appropriation

\$331,009.63

For computer science and technical periodicals \$8,434.82\*

<sup>\*</sup> Includes Computer Science (not Mathematics), engineering technology, and industrial technology.

The following is a lists of computer journals holdings in the Elihu Burritt Library:

### COMPUTER SCIENCE JOURNALS

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ACM COMPUTING SURVEYS V.6- 1974-
ACM TRANSACTIONS ON DATABASE SYSTEMS V.9- 1984-
ACM TRANSACTIONS ON MATHEMATICAL SOFTWARE V.10- 1984-
ACM TRANSACTIONS ON PROGRAMMING LANGUAGES AND SYSTEMS V.6- 1984-
ADMINISTRATIVE MANAGEMENT V.46- 1985-
AMERICAN DOCUMENTATION v.7, 11-15, 17-20// 1956-1969//
   *L.T. - American Society for Information Science Journal
AMERICAN SOCIETY FOR INFORMATION SCIENCE JOURNAL v.21- 1970
   *E.T. American Documentation
ANNALS OF ECONOMIC AND SOCIAL MEASUREMENT v.1-6// 1972-78//
ASSOCIATION FOR COMPUTING MACHINERY. COMMUNICATIONS. V.1- 1958-
ASSOCIATION FOR COMPUTING MACHINERY. JOURNAL. v.2- 1955-
AUTOMATION v.1-14 1954-1967
    L.T. Production Engineering
BUSINESS AUTOMATION v.6-19// 1961-1972//
    E.T. Management & Business Automation
    L.T. Infosystems
BYTE v.6- 1981-
CAD/CAM ALERT V.4// 1984//
    L.T. CAD/CIM Alert
CAD/CAM DIGEST V.6- 1984-
CAD/CAM TECHNOLOGY v.2-3// 1983-84//
    L.T. CIM Technology
CAD/CIM ALERT V.4- 1985-
CIM REVIEW v.1- 1985-
CIM TECHNOLOGY V.3- 1984-
    E.T. CAD/CAM Technology
COMMLINE v.15- 1986-
COMPUTE v.7- 1985-
COMPUTER v.11-13,15,17+ 1978-80,1982,1984-
COMPUTER AIDED DESIGN REPORT V.5- 1985-
COMPUTER & COMMUNICATIONS DECISIONS v.19 1987-
    E.T. Computer Decisions
COMPUTER BULLETIN v.1-8 1958-1965
COMPUTER DECISIONS v.4-19// 1972-1987//
    L.T. Computer & Communications Decisions
COMPUTER DESIGN v.21- 1982-
COMPUTER GRAPHICS WORLD v.8- 1985-
COMPUTER JOURNAL v.1-7, 17-19 1958-1965, 1974-76
COMPUTERS AND AUTOMATION V.4-22// 1955-1973//
   L.T. Computers and People
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COMPUTERS & ELECTRONICS v.20-23// 1982-85//
     E.T. Popular Electronics
 COMPUTERS AND PEOPLE V.23-
     E.T. Computers and Automation
 COMPUTERS & SOCIETY v.13- 1984-
 COMPUTERS IN INDUSTRY V.5- 1984-
 COMPUTERS IN NURSING V.2-
 COMPUTERWORLD v.13- 1979-
 COMPUTING FOR BUSINESS v.10- 1985-
    E.T. Interface Age, Computing for Business
COMPUTING REPORT IN SCIENCE AND ENGINEERING V.7-10// 1971-74//
COMPUTING REVIEWS v.1-7, 15- 1960-66, 1974-
COMPUTING TEACHER v.13- 1985/86-
CONTROL ENGINEERING v.1-12, 32+ 1954-65, 1985-
CREATIVE COMPUTING v.8-11// 1982-85//
DATA BASE v.16- 1985-
DATA COMMUNICATIONS v.11- 1982-
DATA EDUCATION v.12-13:2// 1971-72//
    L.T. Journal of Data Education
DATA MANAGEMENT V.8- 1970-
    E.T. Journal of Data Management
DATA PROCESSING v.26-28// 1984-86//
    L.T. Information and Software Technology
DATA PROCESSING FOR SCIENCE/ENGINEERING v.1-2// 1963-64//
DATA PROCESSING MAGAZINE V.7-14// 1965-1972//
DATABASE UPDATE v.2 1984
DATAMATION v.4- 1985-
    E.T. Research and Engineering
DIGEST OF SOFTWARE REVIEWS: EDUCATION v.3-4 1984-86
DIGITAL REVIEW v.1- 1984-
DR. DOBB'S JOURNAL V.7-
EDP ANALYZER v.18- 1980-
HEPHAISTOS v.1// 1970//
IBM JOURNAL OF RESEARCH AND DEVELOPMENT v.1- 1957-
IBM SYSTEMS JOURNAL v.24- 1985-
IEEE COMPUTER GRAPHICS AND APPLICATIONS v.5- 1985-
IEEE TRANSACTIONS ON COMPUTERS v.17-24
                                       1968-1975
    E.T. IEEE Transactions on Electronic Computers
IEEE TRANSACTIONS ON ELECTRONIC COMPUTERS V.12-16//
                                                     1963-67//
    E.T. IRE Transactions on Electronic Computers
    L.T. IEEE Transactions on Computers
IEEE TRANSACTIONS ON SOFTWARE ENGINEERING V.11- 1985-
IRE TRANSACTIONS ON ELECTRONIC COMPUTERS v.6-11// 1957-1962//
    L.T. IEEE Transactions on Electronic Computers
INFORMATION AND MANAGEMENT V.8- 1985-
INFORMATION AND SOFTWARE TECHNOLOGY v.29- 1987-
    E.T. Data Processing
INFORMATION MANAGEMENT: SYSTEMS/TECHNOLOGY/SOFTWARE/MEDIA
   v.17-19// 1983-85//
```

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INFOSYSTEMS v.19- 1972-
 INFOWORLD v.3- 1981-
 INTERFACE AGE, COMPUTING FOR BUSINESS V.10// 1985//
 INTERNATIONAL ABSTRACTS IN OPERATIONS RESEARCH v.1-4 1961-64
 INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING. PROCEEDINGS.
     v.3-5 1978-1981
 JOURNAL OF COMPUTING IN CIVIL ENGINEERING V.1- 1987-
JOURNAL OF DATA EDUCATION v.11-14 1970-74
JOURNAL OF DATA MANAGEMENT V.4-8// 1966-1970//
    L.T. Data Management
JOURNAL OF SYSTEMS MANAGEMENT v.20- 1969-
    E.T. Systems and Procedures Journal
MANAGEMENT AND BUSINESS AUTOMATION v.1-4 1959-1960
    L.T. Business Automation
MANAGEMENT INFORMATION SYSTEMS QUARTERLY v.1-5, 8+ 1977-1981,
    1984-
MICROCOMPUTER v.7-8// 1983-84//
MINI-MICRO SYSTEMS v.12- 1979-
NETWORK (ASSOCIATION FOR LIBRARY AUTOMATION RESEARCH COMMUNICATION)
    v.1-[3] 1974-76
OFFICE v.9-28, 33-36, 49-56, 75-88, 91- 1932-
OFFICE ADMINISTRATION AND AUTOMATION v.44-46// 1983-85//
ONLINE v.8- 1984-
ONLINE REVIEW V.8- 1984-
OPERATIONS RESEARCH v.4-11, 13-14, 33- 1956-1963, 1965-66, 1985-
OPERATIONS RESEARCH SOCIETY OF AMERICA BULLETIN. V.7-14 1959-
PERSONAL COMPUTING V.2- 1978-
POPULAR COMPUTING v.1-5// 1981-85//
RESEARCH AND ENGINEERING v.1-3// 1955-57//
    L.T. Datamation
SIGART NEWSLETTER no.95+ 1986-
SIGPLAN NOTICES v.19- 1984-
SOFTWARE PRACTICE AND EXPERIENCE v.13- 1983-
SYSTEMS AND PROCEDURES JOURNAL v.18-19// 1967-68//
   L.T. Journal of Systems Management
WORDS v.11- 1982-
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6. d. List any new learning materials which will be added for the program. Indicate when they will be available for student and faculty use.

The department has been appropriated in excess of \$6,000 for each of the last several years for the acquisition of library materials. We expect this to continue. We also received \$2,000 in 1984 and \$3,000 in 1986 from the Special Programs Fund for the Computer Science program.

- 7. ADMISSION, STUDENT PERSONNEL, AND GRADUATION POLICIES:
- 7. a. Describe the admission requirements for the program, the policies and requirements for academic achievement to remain enrolled in good standing, and the requirements for graduation. Note any differences from general institutional policies.

candidates are expected to have a background at least equivalent to that provided at CCSU by the combination of an undergraduate concentration in Computer Science and an undergraduate concentration in Mathematics. Provision will be made to remedy deficiencies and determine equivalencies, possibly by requiring the GRE Advanced test in both areas. Moreover, as with all other graduate programs at Central, the candidates will be subject to the regulations and procedures found on pages 15–16, 23–24, and 27–31 from the 1986–1988 CCSU Graduate catalog. Moreover, a 3.0 undergraduate grade average is required for regular admission.

7. b. What academic and career counseling or other services will be provided for students who may enroll in this program?

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Upon admission to this program, a student will be assigned a faculty advisor (full-time faculty member of the department)

who will be directly responsible for advising the student on academic matters. The student will have to have his/her advisor's approval in order to register for courses. In addition, the Dean of the Graduate School and his/her staff can assist the student with matters related to the administration of a graduate program.

The Director of Central's Center for Career Development and Placement and that Center's staff will be available for career counseling, and Central's Counseling Center and its highly trained staff will be available for other forms of counseling as appropriate.

Through the introduction of scholars, persons from business and industry, and research opportunities, the students will learn about additional alternatives available to them.

Several teaching assistantships will also be needed/available for full-time students.

7. c. How many students are expected to enroll in the program? List the numbers by part-time and full-time.

Student demand is likely to be so heavy that the University can be highly selective in the admissions process. There will

be a Department faculty committee to review all applications for admission to the program that meet minimum University standards. Recommendations for admission to the program will be made to the Dean of the Graduate School. It is projected that there will be a total of 40 full-time equivalent graduate students in all phases of the program. In the first year, this would require 3 or 4 graduate sections per semester. In the second year, it would require about 5 graduate sections. In subsequent years, it would require 6 or 7 graduate sections per semester. Each graduate section is projected to have an average of 15-20 students each.

First year: 2 full-time, 54 part-time, total of 20 FTEs.

Second year: 5 full-time, 75 part-time, total of 30 FTEs.

Later years: 10 full-time, 90 part-time, total of 40 FTEs.

#### 8. STUDENT AND ALUMNI RECORDS:

How is the program to be evaluated internally? What criteria have been established? Where will the program records be kept?

The Department intends through established committees to evaluate its program effectiveness as part of the Master of Science in Computer Science from both the statistical and qualitative viewpoints: the increase or decline in the number of students choosing this option from semester to semester; physical needs in terms of space and equipment; the number, variety, and effectiveness of courses as well as the quality of instruction for courses; student evaluations; and a careful monitoring of the economic viability of the degree in its service to the University and the State.

In 1987-88, the Graduate School began a regular cycle of graduate program reviews with the proposed Master of Science in Computer Science to be included in this cycle. Briefly, each graduate program will be reviewed by the Graduate School at least once each seven years, more often if requested by the department, academic dean, or an accrediting agency. A review consists of an intensive self-study of curriculum, program procedures, and outcomes by department faculty. The Graduate School uses the Graduate Program Self-Assessment Service

sponsored by the Educational Testing Service and the Council of Graduate Schools, and also contracts with an external consultant to assist in the program review process. The final report of the program review consists of a summary and recommendations based on the findings. All records will be kept in the graduate records office of the University.

The Department will have an MSCS faculty committee that will make recommendations to the Graduate Dean on admissions to the program; design, administer, and evaluate the comprehensive examination; and perform other related functions.

#### FISCAL STATEMENT

Proposed New Academic Program: Master of Science in Computer Science

Institution: Central Connecticut State University

	Year 1 19_90	Year 2 1991	First Year of Full Operation 1992
Estimated New Expenditure (private institutions list expenditures on General Fund Lines)			
Personnel (Faculty and Support) $^{\it I}$			
Full-Time positions Number Salaries - General Fund Salaries - Extension Fund	0	0	0
	0	0	0
	0	0	0
Part-time positons Number Salaries - General Fund Salaries - Extension Fund	0 0 0	.25 0 1,665	.25 . 0 1,665
Other Expenses <sup>2</sup> (supplies) General Fund Extension Fund	500	500	500
	0	0	0
	0	0	0
Equipment (incl. Library Books) <sup>3</sup> General Fund Extension Fund	5,000	5,000	5,000
	0	0	0
TOTAL NEW GENERAL FUND EXPENDITURES EXTENSION FUND	5,500	7,165	7,165
	0	0	0

IFaculty, professional, managerial, clerical, and other persons employed by the institution in support of the proposed new academic program.

Board of Higher Education 61 Woodland Street Hartford, Connecticut 06105

<sup>&</sup>lt;sup>2</sup>Compensation for services secured by contract with firms or individuals not employed by the institution and purchases of supplies, materials, and equipment not normally regarded as capital items.

<sup>3</sup>Items of equipment with a normal useful life of three years or more and a value of \$100 or more or, if the useful life is less than three years, a value of \$250 or more.

FISCAL STATEMENT

Proposed New Academic Program: Master of Science in Computer Science Institution: Central Connecticut State University

	Year 1 19 90	Year 2 19_91	First Year of Full Operation 19 <sup>92</sup>
Estimated Revenue and Enrollment			
Projected Enrollment (Headcount)* Full-time Students Part-time Students	2 54	5 75	10 90
Income from Students Tuition Extension Fund Fees	3,678 47,628	9,195 65,856	18,390 79,380
Funds Available from Other Sources (Federal, Private, Corporate, Foundation, etc.)	0	0	<b>0</b>

<sup>\*</sup>Indicate what portion of projected enrollment, if any, represents students transferring from other programs. Tuition and fee revenue should be based upon new enrollments only.

Use of Current Resources: Identify, describe, and estimate cost (prorated) of existing personnel and other resources which will be used in connection with this program. If existing personnel and resources are to be reallocated from other programs, indicate from where the resources will be diverted and what impact this action will have on any other activity within the institution.

	1990	1991	1992
Salaries	35,000	69,550	108,766
Supplies	800	1,200	1,600
Equipment *	20,000	30,000	35,000
Edathmen.	55.800	100,750	145,366

<sup>\*</sup> shared with undergraduate Computer Science major

	<b>Year 1</b> 1990	Year 2 19 <u>9</u> 1	First Year of Full Operation 19 92
Cost Summary  New Expenditures Cost of Existing Resources Total Program Cost	5,500	7,165	7,165
	55,800	100,750	145,366
	61,300	107,915	152,531

Signature of Institutional Fiscal Officer

Signature of Chief Fiscal Officer (for System, if different than above)

Vice President, Administrative Affairs May 31,

Title

Date

Date

Title

Title

-2-

#### Explanation of Fiscal Statement

#### Estimated New Expenditures:

0.25 part-time position teaching one computer science course in years two and three. Salary based on current contract (lecturer C).

#### Estimated Revenue and Enrollment:

Three categories of students are included in the projected enrollments:
students enrolled at CCSU (program) for first time - N
students enrolled at CCSU (program) during previous semester - C
students enrolled at CCSU (non-program) during previous semester - T

#### Projected Enrollments:

		1990			1991			1992	
	N	С	T	N	C	T	N	C	$\mathbf{T}$
Full-time students	2	0	0	-3	2	0	6	4	0
Part-time students	49	0	5	26	44	5	25	60	5

Totals: 1990 - 2 full-time, 54 part-time

1991 - 5 full-time, 75 part-time 1992 - 10 full-time, 90 part-time

#### Use of Current Resources:

A percentage of the total Mathematics/Computer Science Department resources, based on the number of majors in the program, will be reallocated specifically to the program. Faculty allocation will be the equivalent of one full-time faculty member in each of the first three years. It is projected that at no time during the period will more than 20% of the Department be actually involved with the program.

#### 1. Tuition Income (Full-time Students)

1990	2 Students	x 2 semesters	X 919.50 =	3,678
1991	5 Students	x 2 semesters	X 919.50 =	9,195
1992	10 Students	x 2 semesters	X 919.50 =	18,390

Tuition of 919.50 is based on current In-State tuition and fees. We do not anticipate significant enrollment (more than one or two students) by out-of-state students and so have used the more conservative in-state rate to compute revenue.

#### 2. Extension Fund Income (Part-time students)

We estimated Extension Fund income based on the assumption that 50% of part-time students will enroll in one three-hour course each semester, and 50% of part-time students will enroll in two three-three hours courses each semester.

Extension Fund Income is based on Fall, 1989 Fees of \$98.00 per graduate credit hour. Registration fees of 26.00 per student per semester are a University General Fee (Auxiliary Services Account).

#### 9. PHYSICAL PLANT AND FACILITIES:

Describe the physical facilities (classrooms, laboratories, offices) and specialized equipment now available, or which will be provided (including schedule for acquisition) to initiate and maintain the program.

I. Adequacy for Instruction, Condition of Equipment:

Central Connecticut State leads the CSU system in state-of-theart computer equipment and facilities. Constantly growing and
expanding, the hardware and software resources here at Central
provide the student the opportunity to keep pace with current
developments in programming languages and machine architecture.
With plans underway for increased lab facilities,
workstation availability will increase beyond the currently
adequate situation. Diversity of microcomputer types along with
experience interacting with the VAX super-mini serves to
solidify the students' background. CCSU has also recently become
linked to the international network BITNET and the students
regard the ability to use BITNET as a significant benefit.
Remote access to our mainframe has been increased to 12 dial-up
lines.

The Microcomputer Lab stands out in its design, adequacy of

working space, and quiet atmosphere. Facilities afford a comfortable setting, conducive to productive and quality time spent working on the micros or remotely connected to the VAX.

The most recent addition to the lab (summer '87) were ten Zenith graphics workstations.

Other terminal rooms located at various sites around campus for the most part are converted classrooms. There, the atmosphere is also conducive to work, although restricted to remote timesharing on the VAX.

II. Description of hardware available to support the MSCS program:

The main computers available to support the computer science program are two DEC VAX 8650s on which all students' accounts are stored. Also available are a MicroVAX, used by students working with its UNIX operating system, and the VAX 11/750 and PDP-11/23.

Timesharing terminals include the DEC VT 100, 102, and 52 models. Microcomputer labs house DEC Rainbow micros, IBM PCs and compatibles, and a word-processing facility housing DecMate workstations.

In addition to the Digital Letterprinter 100 (LA 100) dot-matrix printers, one per five micros networked in the microcomputer Lab, a QMS Lasergrafix 2400 laser printer is also available.

Graphics work is supported by GIGI color terminals, Rainbow terminals running Regis graphics interpreter (screen output is spooled to the LA 100 printers), Zenith PC's and a Hewlett-Packard digital plotter (see also question 3.c).

#### III. Description of software available (representative items):

VAX Software	Rainbow Software	Zenith & IBM Software
BASIC	CP/M-86/80	Lotus 1-2-3
FORTRAN	MS/DOS	Volkswriter
Pascal	Microsoft MBASIC	DBase Manager II
COBOL	Turbo Pascal	BASIC
ADA	Microsoft muMath	Easywriter
LISP	MicroGANTT	VisiCalc
Modula-2	Lotus 1-2-3	muLisp
C	Samna Word II	Perfect Writer
MACRO	Wordstar	Smartkey
SAS (Stat. Anal.)		The Final Word
Word-11	FMS-80	Crosstalk XVI
Digicalc	DBase III	dBase III plus
Minitab	Regis	Open Access
TeX	Golden Common Lisp	and the state of t
	PROLOG	Supercalc 3
		Norton Utilities
		Overhead Express
		SDS-XP Modular-2
		BPS Business Graphics
		Microsoft Windows
		Wordstar
		WordPerfect
		Turbo Pascal
		Turbo Tutor

Sidekick

All manuals documenting software used by the students are available in the Microcomputer Lab and are accessible upon request. They are subject to restrictions on location and duration of use. DEC's manuals are complete: the student's search for an answer is assured of being finite. Specific manuals may be referenced indirectly by the software list above.

As of November, 1988, five VAXstation 2000s have been acquired and are networked with a MicroVAX II. Additional purchases of workstations of equivalent or greater power are projected for 1989 and 1990.

The following charts provide additional information on available facilities:

CENTRAL CONNECTICI STATE UNIVERSITY

MSCS Proposal

Question #9 Response

Physical Room	Facilities		Jsage .
Facility   Area Cond (Bldg/Rm) 39Ft' tion	Type of Station No. Type of Station No. Type of Station N (List Hardware) (List Hardware)	o. Purposes	No. of Open/Close   Students
Maria 468' Good Sanford	and Software) and Software) and Software)	d. Student work	≤ 6 Open 24 hours
ROOM 109	VT 100 6	b.	
	Remarks: Terminals connected to VAX Printer LA 120 (1)	c.	
	(Contact Security for after-hours access)	d.	

Physical Room	•		Facilities				Usage	
Facility   Area Condi- (Bldg/Rm) sqFt' tion	(List Hardware		(List Hardware	No.	Type of Station No. (List Hardware)	Purposes	No. of Students	: <u> </u>
DiLoretto 468 Very	and Software)		and Software)	ł	and Software)	a. Student work	≤ 3	Open 24 hours
	VT 100	3		İ		ь.		
	Remarks: Printe	r LA	120 (1)	c.	•	ر		
	. Termin	als	connected to VAX ecurity for acces	8 A	fter-hours)	d.		

Physical Room			Facilities					sage		-
Facility   Area Condi-   (Bldg/Rm)   Ft'   tion	Type of Station (List Hardware	NO.	(List Hardware	ŀ	Type of Station (List Hardware		Purposes	No. of Students		
Marcus Excel- White 4800 lent	and Software) Rainbow Micros		and Software) Rainbow Micros	i	and Software) IBM PC's	3	a. student work		8:30 12:00	
	(Stand-Alone)	28	(Remote Termina Connect to VAX	B)	ZENITH PC'S	10	ь.			
	Remarks:					-	C.			
	Printers: LA 100	) t s	(14), Okidata (2	).			•			
			grafix Laser pri				d.			
	Manuals: All ker	t h	ere in office wi	th B	oftware as listed	in	•			-
					B.)to follow					

# CENTRAL CONNECTICUT STATE UNIVERSITY MSCS Proposal Question #9 Response

Physical Facility (Building and Room No	Purpose of Laboratory	Condition	Adequacy For Instruction	Area(ft
Marcus White Annex	Class Lab Microcomputer Lab>Student Work	2 years old, Excellent	Quiet, Private Cubicles Large worktables	80'x43'
Maria Sanford Rm.109	11 11 11	Good	Work tables available for Tutorial Aid	26' x 18
DiLoreto Room 200	11 11 11	Very Good	Not applicable	26' x 18
Elihu Burritt Library	Microcomputer use	Very Good	Not applicable	26' x 18
Copernicus Physics Lab	Digital Circuit Design	Good	All necessary equipment provided	  26' x 18
Student Center	Word-Processing	Very Good	Not applicable	20' x 10
Maria Sanford Rm. 203	Faculty Microcomputers	Very Good	Individualized use with students needing assistance	20' x 10
Maria Sanford Rm. 205	Zenith Laboratory	less than 1 yr. Excellent	Adequate for class instruction	26' x 18
			TOTAL AREA	8520

#### 10. CATALOG AND PUBLICATION

List and submit copies of any catalog(s), brochure(s) or other publications in which the program is listed or described or will be listed or described.

Current plans call for the program to be listed and described three places. First, it will be described in the Central Connecticut State University Graduate Catalog. This catalog is revised, updated, and printed every two years. Second, the program will also be described in the Central Connecticut State University Extension College Bulletin, which is revised, updated, and printed before each academic semester and summer session. Third, the Department also plans to prepare a brochure on this program for general distribution to other educational institutions and other appropriate agencies. This brochure will be similar in nature to our undergraduate brochure in Computer Science (see appendix D).

#### 11. CERTIFICATION

Provide certification that program and institution hiring and admission practices are in compliance with all applicable state and federal laws, regulations, and orders; and that the institution will operate under the provisions of approved nondiscrimination plans including consideration for women and minorities and accessibility for the handicapped.

Page 17 of the Graduate Catalog contains the applicable statement about Central's policy of nondiscrimination in institutional hiring, admission practices, and in all its daily operations. The attached assurances (Appendix E) provide further certification that Central Connecticut State University is in compliance with all laws and regulations governing nondiscrimination.

#### 12. TIME SCHEDULE AND AUTHORIZATIONS

12.a. Indicate any specialized approval, licensure or accreditation, by any agency other than the Board of Higher Education, to the extent it is related to this program.

None	required	for this	program.	

12.b. Indicate the earliest date on which students may be expected to complete the program.

It is expected that some students will finish the program within two years of the start-up date, others three, others will take longer, but no student should be in the program more than five years. The anticipated date for the first graduating student in the program is 1991.

- 13. EDUCATIONAL PLANNING STATEMENT

  Provide the following information:
- 13.a. The relationship of the proposed program to other programs and resources in the institution, and any institutional plan.

The Master of Science Degree Program in Computer Science grows out of the undergraduate program in computer science which currently offers a full BS Degree program to more than 250 "majors" each semester and a large number of significant courses related appropriately to many other academic majors. This degree program also grows out of Central's desire to utilize its increasingly effective computer resources as fully as possible for its students.

Page 16 of Central's Five year institutional plan approved by the CSU Board of Trustees on September 13, 1985, includes references to the plans to add this new Master's degree to Central's curriculum within five years of that data. 13.b. Data and commentary to indicate what consideration has been given to similar programs in the geographic area to be served by the proposed program. Identify any similar existing or proposed academic programs or degrees in Connecticut in public, independent or proprietary institutions.

		85-84 DEGREES AND OTHER AYARDS CONFERRED						
11 COMPUTER AND INFORMATION SCIENCES								
CPI # 11.0101		CERTIFICATE	S ASSOCIATE	S MCHELOR	s Kasters	DOCTORAL	PROFESSIONAL	
COMPUTER AND INFORMATION SCIENCES, GENERAL CENTRAL CONHECTICUT STATE UNIV. EASTERN CONNECTICUT STATE UNIV. SOUTHERN CONNECTICUT STATE UNIV. YALE UNIVERSITY Master's HARTFORD GRADUATE CENTER Master's SACRED HEART UNIVERSITY UNIVERSITY OF BRIDGEPORT UNIVERSITY OF HARTFORD UNIVERSITY OF HEY HAVEN Master's COMPUTER AND INFORMATION SCIENCES, GENERAL		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	83 26 49 24 0 41 22 24 30	0 0 0 27 105 0 0	0 0 0 5 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
11.0301 DATA PROCESSING THACKS COMMUNITY COLLEGE UNIVERSITY OF NEW HAVEN DATA PROCESSING		S 0 5	0	0 13 13	205 0 0	0	0	
11.0401 INFORMATION SCIENCES AND SYSTEMS OUINMIPIAC COLLEGE Master's INFORMATION SCIENCES AND SYSTEMS 11.9999		0	0	57 57	3	0	0	
COMPUTER AND INFORMATION SCIENCES, OTHER YALE UNIVERSITY OUTHAIPIAC COLLEGE COMPUTER AND INFORMATION SCIENCES, OTHER		0	0	1 3 4	0	0	0	
TOTAL DEGREES AVARDED IN THIS DISCIPLINE		. 2	0	373	208	5	. Q	

Source: BOGHE (DHE) Research Report R-1-87

Note: No public institution conferred a Master's Degree in Computer Science under the CIP 11.0101.

13.c. Data and commentary regarding the relationship of the proposed program to further educational opportunities and current employment trends.

Computer science is now firmly established as an academic discipline on campuses across the nation. Ph.D's are in great demand to teach in many universities. There is a great need to provide Masters degrees to computer scientists as a step toward entering Ph.D programs.

Connecticut campuses have turned out many well-trained professionals who have stayed to work in the state and have need for an opportunity to continue their professional education in order to facilitate career advancement.

Central Connecticut State University is located near Hartford which has many major businesses which include computer oriented users and software and hardware developers (see appendix A).

13.d. A description of any efforts made to identify student demand for the program and an estimate of enrollments for the first five years.

Requests from students currently in the undergraduate program and recent graduates, inquiries by telephone and mail, surveys of students, and opinions expressed by executives of national corporations, show great interest in the proposed program. Projections are 20 FTE (full-time equivalent) students in the first year, 30 FTE in the second year, and 40 FTE in subsequent years. Growth beyond this level is not expected within the first five years of the program (see also question 7).

13.e. A description of program and career articulation noting career opportunities as applicable (local, regional, state and/or national estimates), according to the nature and goals of the program.

The Bureau of Labor Statistics has projected that the State, region and nation as a whole will experience a need for trained computer scientists and software engineers in excess of the available supply for at least a decade. In order to fuel the high technology economy necessary for continued growth and prosperity in the much more competitive global economy, it is crucial that high quality graduate programs in computer science and other technological areas be established and fostered.

#### CONCLUDING STATEMENT

All of us at Central associated with the planning, development, and future implementation of the Master of Science Program in Computer Science feel that this completed questionnaire is sufficient to warrant licensure approval by the Connecticut Board of Governers for Higher Education immediately.

We wish to thank all those individuals who aided our efforts to gain licensure for this important program, especially those administrators, faculty, students, alumni, colleagues from other Universities throughout the country, and private citizens who contributed time and effort to the formulation of answers to this questionnaire: the professional staff of the Board of Trustees for the Connecticut State University, and the professional staff of the Connecticut Department of Higher Education. We know that they join with us in looking forward to the many benefits that will accrue to the State of Connecticut and its economy once this program is licensed and implemented.



CONSTRUCTION EQUIPMENT BUSINESS

GENERAL ELECTRIC COMPANY • 41 WOODFORD AVENUE • PLAINVILLE, CONNECTICUT • 06062 (203) 747-7111

November 2, 1987

Professor George Miller Department of Mathematics and Computer Science Central Connecticut State University 1615 Stanley Street New Britain, CT 06050

Dear Professor Miller:

I was pleased to hear from you and to learn that CCSU is embarking on the process of developing a Masters Degree Program in Computer Science.

I am Manager of Information Systems at the Construction Equipment Division of General Electric, headquartered in Plainville. This billion dollar division of GE has had a long association with CCSU and we have hired several students from the Computer Science program to serve as Co-op students. Many of these students were subsequently hired for full time positions and we see CCSU and the Co-op program as a major source of new talent.

The Masters program will be useful in providing existing employees a growth and educational opportunity and could serve to both attract and retain existing talent to the area and to General Electric.

I hope you succeed in your efforts.

Sincerely,

Harry David, Manager Information Systems

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270 HARTFORD, CONNECTICUT 06141-0270 (203) 665-5000

October 27, 1987

Professor George Miller Central Connecticut State College New Britain, CT 06050

Dear Professor Miller:

I have, through the CO-OP program at Central Connecticut State College, been employing students majoring in Computer Science for the past ten years. I have found these students to be not only well versed in the subject matter, but also possessing a sense of responsibility and maturity seldom found in young adults. I have never hesitated to hire one of these students, if the opportunity presented itself.

It is because of this experience that I recommend wholeheartedly granting CCSC the authority to offer its students the opportunity to build and further their education in the Computer Science area via a Masters Degree program. With the established base that the school now offers, a Masters Program would be just a continuation of a "good thing".

Sincerely yours,

Frank D. Pierce, Manager Applications Development

October 26, 1987

Professor George B. Miller, Chairman Department of Mathematics and Computing Science Central Connecticut State University New Britain, CT 06050

Dear Mr. Miller:

I am pleased to be able to commend you and your staff for the quality of the program and students graduating from it. In the past two years my department has had two students in the co-op program, one of whom we hired as a full-time employee. We have also hired one of your other graduates as a full time employee.

We like the practical emphasis of your program, which allows us to use your students effectively for our programming needs in a relatively short time.

I support your efforts to build upon your solid undergraduate program to offer an M.S. degree.

Sincerely yours,

Jugny 2 Seamon. Gregory G. Seaman, PhD.

Manager, Systems Engineering

GGS/vm

cc: Jan Witek,

Co-op Student Program Director

November 6, 1987

Professor George Miller Chairman of Math & Computer Science Dept. Central Connecticut State College New Britain, CT 06050

Dear Professor Miller:

We have participated in your University's work study program for a period of over five years. My particular experience has been with people who have come from the Computer Science program. The students that we have had in here for the six months work portion of their program have been almost without exception extremely successful. We have, in fact, hired virtually every one of those students as a full time permanent employee. Those students, without exception, still remain with us as valued long term employees.

We have found that the students are well prepared, mature and productive employees. I would like to take this opportunity to congratulate you and the college on a very fine program and I expect that we will continue employing as both interns and full time employees members from your program.

eucin is file

David B. Zelie

Assistant Vice President

DBZ/scs

P.O. Box 3332 Danbury, Ct. 06813

December 4, 1987

Professor George Miller Chairman, Math and Computer Science Central Connecticut State University 1615 Stanley Street New Britain, CT 06050

Dear Sir:

We have had the pleasure of having several of your students work as co-ops in our organization. We have always been very pleased with their competence and training.

It has been a successful cooperation and we hope to continue such activities in the future.

Sincerely,

David R. Dalring

Manager of Development Support

emw



December 1, 1987

To whom it may concern:

Over the past two years, Central Connecticut State University has been instrumental in the success of our Cooperative Education Program through the referral of qualified Co-op candidates, including Computer Science majors. The CCSU Computer Science majors have successfully completed Co-op assignments in areas such as Quality Assurance and Personnel. Feedback from supervision who have worked directly with the CCSU Co-op students has been very positive.

Sincerely,

Cynthia E Dodge

Cynthia E. Dodge Coordinator, Cooperative Education Programs



## CENTRAL CONNECTICUT STATE UNIVERSITY

1615 Stanley Street • New Britain, Connecticut 06050

827-7215

January 23, 1987

TO: Dr. Richard L. Pattenaude, Vice President, Academic

Affairs

FR: Dr. George A. Clarke, Dean, School of Arts and

Sciences

RE: M.S. Degrees in Computer Science

The Department of Mathematics/Computer Science has voted to request a Masters level program in Computer Science; several years of planning has culminated in a proposal which will now be sent to appropriate campus committees and administrative offices for review and approval. Since we have advanced this far I request a formal letter of our intention be sent by you to CSU Administration in which you could inform them of our progress and our wish to have them plan/begin to initiate their approval/review processes as we work the proposal through the University. I will be most pleased to discuss this matter with you.

GAC/1

cc: Prof. G. Miller

## CENTRAL CONNECTICUT STATE UNIVERSITY

## NEW BRITAIN, CONNECTICUT 06050

(203) 827-7288

February 3, 1987

Office of the Vice President
Academic Affairs

Thomas Porter, Vice President Academic Affairs and Research Connecticut State University P.O. Box 2008 New Britain, CT 06050

Dear Tom,

Please accept this letter as notification of our intention to submit a proposal for a Master of Science Degree Program in Computer Science under CIP code 11.0101. Discussions about this proposed new degree program have been held with Dr. Karen C. Beyard, Dean of the School of Graduate Studies; Dr. George A. Clarke, Dean of the School of Arts and Sciences; George Miller, Chairperson of the Department of Mathematics and Computer Science; and Dr. Joseph R. Dunn, Jr., Director of Research. We are all agreed that this new graduate degree program will be appropriately strengthened by the ten years of successful experiences associated with Central's B.S. Degree Program in Computer Science which was licensed by the Connecticut Commission for Higher Education on December 15, 1976. We feel that approval of this proposal would enable Central to fulfill even more effectively the career needs of our students and to contribute further to the enhancement of Connecticut's economy.

Several years of careful planning have culminated in the program description which is being reviewed and approved by campus committees and administrative offices. We have come a long way since 1976 and Mr.Miller and his departmental colleagues are now in the process of organizing all the data required for the completion of a licensure application. We look forward to hearing from you about this matter. If you have questions about any aspect of it, please contact me.

Sincerely,

0

Richard L. Pattenaude Vice President for Academic Affairs

RLP/s

Attachment

cc: President James

Dr. Beyard

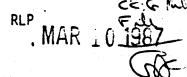
Dr. Clarke

Dr. Dunn

Mr. Miller

From: Dr. G. Clarke
Arts & Sciences

FYI: Council of Deans /





## STATE OF CONNECTICE

Department of Higher Education

RECEIVED

MAT 0 : 1987

THE CONNECTICUT

March 3, 1987

Dr. Thomas Porter
Vice President for Academic
Affairs and Research
Connecticut State University
P.O. Box 2008
New Britain, CT 06050

Dear Tam:

Thank you for your letter of February 11, regarding your plans to submit a proposal for an M.S. in computer science.

We will look forward to receiving your licensure application. If you are thinking about linking this proposal to the contracting RFP process, please give me a call. As you know, the Board has declined to entertain proposals for new programs in connection with the contracting process.

Thanks again for informing us of your plans.

Sincerely,

Mark D. Johnson Assistant Commissioner for Academic Affairs

MDJ:df

MAR 5 1987

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#### SHRIDAR IYENGAR

Mathematics and Computer Science Department Central Connecticut State University New Britain, Connecticut 06050 Office (203) 827-7566 Home (203) 429-1648

#### PROFESSIONAL OBJECTIVE

To be in a Research and Development environment in the area of Distributed Computing Systems and Databases.

#### **EDUCATION**

Pursuing Ph.D. (Computer Science) at the University Of Connecticut, Storrs, Ct.

Master of Science Degree (Computer Science), University Of Connecticut, Storrs, Ct 1986.

Course Specialization Includes:

Computer Architecture, Operating Systems, Distributed Databases, Computer Graphics, Image Processing and Pattern Recognition, Logic Programming and Software Engineering.

Bachelor Of Engineering Degree (Mechanical Engineering), College Of Engineering, Maharashtra, India 1982.

#### RESEARCH SKILLS

Developed a Database Generator and Manager for FASTRACK, a Fare and Schedule Tracking System, for Next Generation Information Inc.

Involved in the development of a Query Optimization Testbed for Distributed Database Management Systems at the University Of Connecticut, Storrs.

Developed a Query Optimization Technique for DRIFTWOOD, a Dynamically Reconfigurable Distributed Database Management System.

Developed software for 3-dimensional modelling and navigational purposes to interface with an existing 3-dimensional viewing system.

Designed and developed software for dynamically tracking the motion of objects with respect to time based on specific split second images.

#### SYSTEMS EXPERTISE

Languages: C, PL/1, Fortran, Prolog, IBM/370 Assembler, Pascal.

Operating Systems: Unix, MS-DOS, PC-DOS, MVS, CMS, VMS.

Hardware: IBM 30XX Series, PC Series, VAX Series.

#### WORK EXPERIENCE

#### August 1986 - Present

Instructor, Department Of Mathematics and Computer Science, Central Connecticut State University, New Britain CT.

Duties Include: Teaching Computer Science courses such as Operating Systems, Database Management Systems, Introduction To Computer Science, Advanced Data Structures etc. Also involved in guiding Senior Projects, Textbook Selection Committees, Course Evaluations, Syllabus Changes, arranging and Participating in Colloquia, Maintaining Computer Facilities etc.

#### August 1986 - Present

Contract Consultant, for Next Generation Information Inc. Involved in the development of commercial software products.

### August 1983 - July 1986

Graduate Teaching Assistant at the University Of Connecticut, Storrs, CT.

Duties Included: Teaching junior and senior level students in Computer Science and other Engineering students courses like Pascal, IBM Assembler, PL/1 etc.

#### **PUBLICATIONS**

Query Optimization in DRIFTWOOD, CARC/CSE-TR-21-1987, University Of Connecticut, Storrs, CT.

Query Optimization in Dynamically Reconfigurable Distributed Database Systems, with Dr. Fred Maryanski, submitted for acceptance and presentation at the COMPCON 1988 Proceedings.

#### ACTIVITIES AND INTERESTS

Volunteer Staff at the Connecticut Special Olympics 1985-1987.

Treasurer, Indian Students' Association, University Of Connecticut.

Selected to represent the University Of Connecticut at the New England Regional Tournaments in Table-Tennis.

Dr. William C. Jones, Jr. 275 Carlton Street New Britain, CT. Telephone: (203) 229-7824 October 1987

#### EDUCATION:

M.S. (in progress) in Computer Science, Hartford Graduate Center. I began the program in September 1985. Courses completed to date (with an A in each): Data Structures, Computer Architecture, Systems Programming, Analysis of Algorithms, Artificial Intelligence.

PH. D. in Mathematics, Purdue University, 1969.

in Mathematics, Indiana State University, 1966.

B.A. in Mathematics and Spanish, Southwest Missouri State, 1965.

#### COMPUTER LANGUAGES:

Modula-2, Pascal, Basic: Excellent knowledge.

Formerly excellent knowledge, now rusty.

Fortran, PL/I, ALGOL: Formerly excellent 1 Cobol, IBM-370 Assembler: Adequate knowledge. PDP-11/20 & 6502 Assembler: Some knowledge.

#### WORK EXPERIENCE:

17 years (Sept 1969 to present; on leave one year) teaching at Central Connecticut State University in New Britain. Present rank: Full Professor. Taught computer courses in Basic, Fortran, PL/I, and Pascal beginning in Sept 1979.

1 year (Sept 1981 to August 1982) as an instructor at Hamburg Military University in West Germany -- computer course in Algol.

7 years (April 1980 to present) consulting in business programming.

3 months (Summer 1967) as a mathematician-programmer with Dupont in South Carolina (a summer job for Ph. D. Candidates).

#### OTHER RELEVANT BACKGROUND:

Author of textbooks:

(1) "Pascal: Problem-solving and Programming with Style", published January 1986 by Harper & Row, for ACM CS 1;

(2) "Modula-2: Problem-solving and Programming with Style", published February 1987 by Harper & Row, for ACM CS 1;

(3) "Data Structures With Modula-2", to be

published Spring 1988 by Wiley & Sons, for ACM CS 2.

Author of the PASCAL language manual and users' quide for Central's Computer Science Students (February 1983; revised June 1983).

One of two co-authors of a manual for Central's Computer Science students (Summer 1980).

Passed the first 4 of the 5 nation-wide examinations for an Associate Life Actuary, on: Calculus, Numerical Analysis and Math of Finance, Statistical Analysis, and Life Contingencies.

Some background in General Accounting, Linear Programming, PERT Analysis, and Graph Theory.

#### PERSONAL DETAILS:

Born February 2, 1944 in Chicago, Illinois.

Married September 3, 1967 to Virgina. She has a Master's degree in Mathematics from Purdue University. Child Catherine Anne born March 12, 1973.

#### CURRICULUM VITAE George B. Miller

Address: Home -

93 Rosewood Drive Newington, CT 06111

(203) 666-1851

Office -

Mathematics/Computer Science Central CT State University New Britain, CT 06050

(203) 827-7374

#### GENERAL UNIVERSITY ACTIVITIES:

- 1. Chairman, Mathematics/Computer Science since department's creation in 1970.
- 2. Member of Faculty Standing Committees;
  - a. Faculty Senate (1970-82), President (1976-82),
  - b. Computer Facilities Committee (1977-current),
  - c. University-wide Committee on Promotions and Tenure (1978-86),
  - d. University Calendar Committee (1974-current),
  - e. University Traffic/Parking Regulations Committee (1982-current),
  - f. University Curriculum Committee (1982-4, 1988-current),
  - g. Termination Appeals Committee (1982-current).
- 3. Member Governor's Commission on High Technology in the State of Connecticut (1981).
- 4. Member Governor's Commission on Computer Science in the State of Connecticut (1982-current).
- 5. Member Board of Trustees Committee on Entering Competencies for the State University System (1981-current).
- 6. President and Chairman of the Board of the Class of 1971 Charitable Trust (1972-current).
- 7. Faculty Advisor, CCSU Boxing Club (1985-current).

#### TEACHING EXPERIENCE/DEPARTMENTAL ACTIVITIES:

- 1. Member CCSU Faculty (1965), currently Professor of Mathematics/ Computer Science. Teaching responsibilities include mathematics, computer science, and statistics.
- 2. Chaired committees which implemented minor and major in computer science.
- 3. Chairman Mathematics Placement Exam Committee (1966-current), member CSU Mathematics Placement Exam Committee (1986-current).
- 4. Director, Caribbean Mathematics/Science Institute (1985-current). Developed international programs mathematics/computer science for Jamaica, Iran, and Brazil.

#### 'BLICATIONS/PRESENTATIONS:

- 1. Authored several articles in mathematics, mathematics education, and computer science including;
  - a. On the Independence of Random Variables (ATOMIC),
  - b. Graphing With the Computer (IBM),
  - c. Ill-Conditioning of Simultaneous Equations (IBM),
  - d. Trisecting an Angle (Mathematics Magazine).
- Authored and co-authored several grant proposals, the most recent ones include;
  - a. World Bank III grant,
  - b. UNESCO grant,
  - c. Board of Trustees for Higher Education in the State of Connecticut research grant ("Computers in Education").
- 3. Speaker at several mathematics organization meetings in Connecticut and Jamaica, the most recent ones include;
  - a. "Computer Literacy in Jamaica," Jamaican Association of Teacher Educators (J.A.T.E.) meeting, December 1987,
  - b. "Some Methods of Proof," Associated Teachers of Mathematics in Connecticut (ATOMIC),
  - c. "Towards a National Policy on Education," J.A.T.E. meeting, December 1988.
- 4. Textbook reviewer for several major publishing companies including Prentice-Hall, Holden-Day, and Addison-Wesley. Authored many "Chapter Exercises" in mathematics textbooks.

#### EDUCATION/PROFESSIONAL AFFILIATIONS:

- 1. BS Degree in Mathematics, West VA Wesleyan College (1961).
- 2. MS Degree in Mathematics, West VA University (1964).
- 3. PhD work in statistics and computer science, University of CT and Rensselaer Polytechnic Institute.
- 4. Institutes at IBM and Aetna.
- 5. Member of several professioanl organizations including;
  - a. National Council of Teachers of Mathematics (NCTM),
  - b. Mathematics Association of America (MAA),
  - c. Associated Teachers of Mathematics in Connecticut (ATOMIC),
  - d. Associated Teachers of Mathematics in New England (ATMNE).

#### RESUME

'AME: Mohamad Reza Neilforoshan-Dardashti

ADDRESS: CCSU Box B079

New Britain, CT 06050

TELEPHONE:

(203) 224-3695

#### PERSONAL:

Born 9-22-1954, Isfahan, Iran. Married and have two children. Permanent Resident of the U.S.

#### EDUCATION

Doctoral studies in computer science, University of Southwestern Louisiana. I have completed all the course works(major and minor), for a Ph.D. in computer science, 1981-83.

M.S. in computer science, University of Southern Mississippi, Hattiesburg, Mississippi, December 1980.

B.S. in computer science, School of Planning and Computer Applications Tehran, Iran, May 1978.

#### TEACHING EXPERIENCES:

August 1985 to present: Assistant Professor,
Department of Mathematics and Computer Science,
Central Connecticut State University,
New Britain, CT 06050

1983-85 Department of Computer Science, University of North Carolina at Charlotte.

1981-83 Department of Computer Science, The University of Southwestern Louisiana.

Department of Computer Science, School of Planning and Computer Applications

1973-75 Teaching Mathematics, Kharazmi High School, Tehran, Iran.

1972-73 Teaching Mathematics, Taraghi High School, Isfahan, Iran.

#### OTHER PROFESSIONAL EXPERIENCES:

1977-78 System Analyst
Azadegan Company, Tehran, Iran.

1975-77 Associate Director of Researches,
Department of Research and Developments,
School of Planning and Computer ApplicationsTehran, Iran.

June 75 to August 75 Programmer, Ministry of Economics, Tehran, Iran.

#### AWARDS AND HONORS:

Listed in the Brochure of Outstanding Students in 1977, School of Planning and Computer Applications, Tehran, Iran.

Gold Badge, Ministry of Education, for one of the ten best math. teachers in 1974-75 academic year, in Tehran.

Silver Badge, Ministry of Education, for one of the fifty best math. teachers in 1973-74 academic year, in Tehran.

#### JRGANIZATIONAL ACTIVITIES:

Member of Association of Computing Machinery.
Member of American Association of University Professors.
Involved in several research committies while at USL and USM.

#### COURSES TAUGHT:

Operating Systems
Computer Architecture
Digital Systems Design
Structured Computer Organization
Data Structures
Programming Languages
File Processing
Assembly Language
Introduction to Computing using PASCAL
Introduction to Computing using FORTRAN
Discrete Structures
Different math. courses, such as: Euclid Geometry, Calculus and Algebra.

#### COLLOQIUM TALKS:

- " Machine Translation", State University of New York at Geneseo, Geneseo, NY, May 6, 1985.
- " Semantic-Based Machine Translation", Fordham University, New York, NY, April 18, 1985.
- " Machine Translation", University of Wisconsin at Eau Claire, Eau Claire, Wisconsin, March 19, 1985.

#### PAPERS and PROJECTS:

- 1. Topological Sorting of Large Networks by using PERT/CPM.
- 2. Machine Translation, a research paper about necessary steps toward Machine Translation.
- 3. Machine Translation and Different Approaches Toward Machine Translation.
- 4. Semantic-Based Machine Translation.
- 5. Interactive Machine Translation Systems.
- 6. Software Support Tools for ACM curriculum.
- 7. Planning by using PERT and CPM.
  - 8. Analysis of Management Information System for South Mississippi Electric Power Association.
  - 9. Simulation of a bank using GASP.
- 10. Simulation of PDP/11.

#### LANGUAGES KNOWN:

FORTRAN, PASCAL, ALGOL, SNOBOL, LISP, APL, COBOL, PL/I.

#### SYSTEMS USED:

IBM 1130, IBM 370, CDC 6400, SIGMA-9, MULTICS(HONEYWELL 68/80), BURROUGHS 6900, and VAX 8600/VMS.

#### AREAS OF INTEREST:

Artificial Intelligence, Computer Architecture, Operating Systems, and Programming Languages.

#### Curriculum Vitae

Name Charles W. Neville

Date of Birth April 2, 1941

Rank Professor of Mathematics and Computer Science

Status Full Time

#### Education

Ph.D. in Mathematics, University of Illinois, 1972 M.S. in Mathematics, University of Illinois, 1964

B.S. in Mathematics and Physics, Yale University, 1962

#### Employment History at C.C.S.U

Years at Central 14

Professor 1985-present

Associate Professor 1977-1985

Assistant Professor 1973-1977

#### Previous Employment History

Visiting Assistant Professor of Mathematics, University of New Hampshire, 1972-1973

Assistant Professor of Mathematics, University of Texas at El Paso, 1969 - 1972

Instructor in Mathematics, Washington University, 1967-1969

Research Assistant in Mathematics, University of Illinois, 1965-1967

Teaching Assistant in Mathematics, University of Illinois, 1962-1965

Junior Physicist, American Machine and Foundry Co., Summers 1961 and 1962

#### Consulting None

#### Referee for

Canadian Mathematical Bulletin

Illinois Journal of Mathematics

Rocky Mountain Journal of Mathematics

Transactions of the American Mathematical Society

#### Research Evaluations for

Howard University

National Science Foundation

#### Current Service to C.C.S.U.

Departmental Library Liason Person

Departmental M.A. Committee

Departmental Math 111-125 Committee

Departmental Special Funds Equipment Acquisition Committee Chairman

#### Previous Service to C.C.S.U.

Previous service has included two terms on the Faculty Senate, three terms of membership in the Graduate Studies Committee, chairmanship of the Academic Policies Subcommittee of the Graduate Studies Committee, several terms as Departmental Library Liason Person, membership on the committee to establish an M.S. in C.S. at Central – and authorship of major portions of the original report – and, most onorously and least honorously, three years as the person in charge of the Commodore lab.

#### Unofficial Service to C.C.S.U.

I run our two unofficial homebrew faculty seminars, the Homebrew C.S. et. al. Seminar and the Underground Mathematics Seminar. We meet about four to six times a semester.

#### Publications in the Last Five Years

- 1. A Loomis-Sikorsky Theorem for Locales, recently submitted.
- 2. Projectives, Coherence and Flats in C(X), recently submitted.

#### Papers in Preparation

- 1. A Strong Phragmen-Lindelöf Theorem for the Ball in C".
- 2. Quasi Fn Spaces as Projectives.

#### Earlier Publications

#### Monographs

Invariant Subspaces of Hardy Classes on Infinitely Connected Open Surfaces, Memoirs of the Americal Mathematical Society, 160, May 1975.

#### Papers

- 1. Invariant Subspaces of Hardy Classes on Infinitely Connected Plane Domains, Bulletin of the American Mathematical Society, 78, (1972), 857-860.
- 2. Banach Spaces with a Restricted Hahn-Banach Extension Property, Pacific Journal of Mathematics, 63, (1976), 201-212.
- 3. A Short Proof of an Inequality of Carleson's, Proceedings of the American Mathematical Society, 65 (1977), 131-132.
- 4. (with Eric Kronstadt) Interpolating Sequences for Hardy Classes in Polydisks, Michigan Math. J. 24, (1977), 327-345.
- 5. (With Stuart P. Lloyd) N-Projective Spaces, Illinois Journal of Mathematics, 25, (1979), 159-168.

#### Colloquia, Seminar, and Conference Addresses

#### Mathematics Colloquia

- 1. University of New Hampshire, 1976
- 2. Wesleyan University, 1986

#### Invited Extra-Mural Seminar Addresses

- 1. University of Connecticut, 1974
- 2. University of Connecticut, 1976
- 3. Yale University, 1976
- 4. Brown University, 1979
  - 5 -14. Wesleyan University, 1978-present
- 15. University of Connecticut, 1986

#### Conference Addresses

1. North-East Topology Conference, New York City, 1987

#### Professional Society Membership Mathematical Association of America

#### Honors

- 1. Lilly Foundation Fellow, Yale University, Summer 1977
- 2. C.S.U. Research Grant, Summer, 1987

#### Course Schedule

Fall 1987 - all lecture-recitation - all sections meet for 3 hours per week.

- 1. Computer Science 285, An introduction to algorithms and data structures.
- 2. Computer Science 285.
- 3. Computer Science 213, A combined Pascal and Fortran course for Science and Technology majors.
- 4. Mathematics 222, Our third semester calculus course, consisting of trig substitution and other hard integrals, infinite sequences and series, etc.

Spring, 1988 - all lecture-recitation - all sections meet for 3 hours per week.

- 1. Computer Science 372, VAX assembly language and the beginnings of computer architecture.
- 2. Mathematics 125, A calculus course for business majors and computer science majors.

- 3. Mathematics 125.
- 4. Mathematics 520, A second graduate course in real analysis and the topology of metric spaces.

Other Computer Science Courses Taught in the Recent Past C.S. 271, C.S. 295, C.S. 423, C.S. 460.

#### Other Duties

- 1. Graduate Advisor for 10 Mathematics M.A. Graduate Students.
- 2. Undergraduate Advisor for 16 Computer Science Students.
- 3. Faculty Advisor to CCSUniverse, the student science fiction club.

  Total hours per week from these responsibilities 2

Clifford L. Pelletier 235 Babcock Road

Tolland, Connecticut 06084-2704

Home: (203) 872-3543 Business: (203) 827-7630

#### EDUCATION.

A.B. (cum laude), Mathematics, Providence College (Providence, Rhode Island), 1968. Liberal Arts Honors Program. Delta Epsilon Sigma Honor Society.

M.A., Mathematics, Clark University (Worcester, Massachusetts), 1971. Master's thesis: "The Generalization of Tauberian Theorems to Slowly Varying Functions."

ABD, Mathematics, Clark University (Worcester, Massachusetts).

M.S., Computer Science, University of Rhode Island (Kingston, Rhode Island), 1975. Master's thesis: "The Implementation of an Iterative Algorithm for Non-Orthogonal Analysis of Covariance." University of Rhode Island Graduate Fellowship (1974-75). Phi Kappa Phi Honor Society.

Additional work in Computer Science and Statistics (beyond M.S. degree) taken at the University of Rhode Island (1975-76).

ABD, Computer Science, University of Connecticut (Storrs, Connecticut). Have completed all course work and have passed the qualifying exams.

#### PROFESSIONAL INTERESTS.

Programming languages, operating systems, software tools, software metrics, computer law, personal computing, and the psychology of computer programming.

#### EXPERIENCE.

Assistant Professor of Computer Science (1980-), Instructor in Computer Science (1976-80), Central Connecticut State University (New Britain, Connecticut), 1976-. Tenured, 1983.

Responsible for teaching courses in elementary and advanced programming (at various times employing Pascal, Modula-2, C, Ada, FORTRAN, PL/I, Icon, SNOBOL, assembler and BASIC), computers and society, data and file structures, operations research, simulation, numerical methods, digital logic design and switching theory, digital system design, computer architecture, systems programming, operating systems design, Unix, mini- and micro- computer systems (using at various times the 8080/8085/Z80, 8086, PDP 11, and VAX architectures), compiler design, programming languages, software engineering, computer networks, computer statistical analysis, and data base management systems.

Have also served as coordinator of seminar and project courses in computer science and have served as advisor to independent study projects.

Member (1980-), CCSU Computer Facilities Committee and its Microcomputer, and Faculty Utilization subcommittees.

Connecticut State University representative (1980-85) (representing Central, Eastern, Southern and Western Connecticut State Universities), University of Connecticut Computer Systems Advisory Committee.

Member (1979-83) of the Faculty Senate, and of its Budget Committee and Committee on Committees.

Member (1982-85), Connecticut State University High Technology Task Force.

Member (1982-85), Central Connecticut State University High Technology Committee.

Chairman (1978-82), Departmental Computer Science Curriculum Subcommittee.

Member (1983- ), Planning Committee for M.S. in Computer Science program.

Member (1984-), Departmental Evaluation Committee, Department of Mathematics and Computer Science.

Chairman (1981-83), University-Wide Grade Appeals Committee.

Advisor to the CCSU Computer Club (1976-), Central Connecticut State University Chapter of the Association for Computing Machinery (1979-) and the CCSU Gamma Connecticut Chapter of the Upsilon Pi Epsilon Computer Science Honor Society (1987-)

Sabbatic leave studying distributed processing systems (1987-1988)

Area Coordinator for Computer Science (1987-)

Research Associate, University of Rhode Island (Kingston, Rhode Island), 1975-76. (NSF Grant: "New Algorithms for Statistical Computations")

Responsible for the development and implementation of statistical software, the preparation of project technical reports and supervision of the student members of the project.

Taught courses in statistics and advanced programming.

Reason for leaving: End of temporary employment.

Instructor of Mathematics, Bristol Community College (Fall River, Massachusetts), 1972-73.

Responsible for the teaching of courses in calculus, statistics, algebra, geometry, mathematics for the liberal arts and for elementary school teachers, and remedial mathe-

matics. Also taught the mathematical portion of the adult general education (high school equivalency) program.

Developed minicomputer software for use in land surveying and in the teaching of statistics.

Initiated a revised statistics curriculum, still taught in this form today.

Reason for leaving: Left temporary position to return to graduate school.

#### PROGRAMMING EXPERIENCE.

Have knowledge of and have programmed in:
Pascal, Ada, C, Modula-2, PL/I, FORTRAN, BASIC, Icon, SNOBOL,
ALGOL-60, LISP, COBOL, and numerous assembly languages.

Have knowledge of and have used the following systems, applications languages, packages or routines:

VAX/VMS, Unix, MS/PCDOS, OS/MVS, CMS, SAS, SPSS, BMD, SIM-SCRIPT, GPSS, dBase II and III, RBase, Framework, numerous word processors and spreadsheets.

#### AFFILIATIONS.

Association of Computing Machinery (1974- ) (including SIGCSE, SIGPLAN, ADATECH, SIGARCH, SIGOPS, SIGSOFT, and SIGDOC)

Greater Hartford Chapter of the ACM (1981-1987)

IEEE Computer Society (1977- ).

Delta Epsilon Sigma Honor Society (1968- ).

Phi Kappa Phi Honor Society (1975-).

Upsilon Pi Epsilon Computer Science Honor Society (1988- ).

American Mensa Society (1980-)

#### Ms. HONG ZHOU

F-19, North Village Amherst, MA 01002 (413) 549-1378 (Home) (203) 827-7566 (Work)

#### Research

Interests:

- VLSI (Design/Simulation/Layout), Silicon Compilation
- Expert Systems, Artificial Intelligence
- Parallel Processing

#### Education:

8/84-8/87 Illinois Institute of Technology, Chicago, IL

Ph.D. in Electrical and Computer Engineering, GPA 3.68/4.0

Thesis: Design and implementation of Dynamic Signal

Type Binding Language for VLSI

1/83-5/84 Illinois Institute of Technology, Chicago, IL

MS in Electrical and Computer Engineering. GPA 3.61/4.0

Project: Distributed processing system development

(hardware/software)

1/78-1/82 Zhongshan University, Canton, China

BSEE, highest honors, GPA 3.81/4.0

**Project:** Highly stablized power supply development

#### Course Work:

- Digital Hardware: Integrated Circuits, VLSI Design
  - Switching Theory I and II, Fault Detection in Digital Circuits
  - Logic Design and Implementation, Microprocessors
  - Computer Architecture, Computer Design, Assembly Languages
  - Computer Networks, Distributed/Parallel Processing Systems

- Software: Artificial Intelligence, Knowledge Systems and Robotics
  - Formal Languages and Automata, Programming Languages and Translators
  - Syntactic Analysis of Programming Languages and Compilers
  - Operating Systems I and II
  - Database Organization
  - Analysis of Algorithms, Data Structures and Algorithms

- Electrical Engr.: Electric and Electronic Circuits, Network Theory
  - Analysis of Random Signals, Signals and Systems
  - Electrodynamics, Electromagnetic Field Theory

- Microwaves
- Mathematics: Calculus (including Honors, Multivariate and Vector)
  - Mathematical Methods, Numerical Methods
  - Complex Analysis, Fourier Analysis, Theory of Probability
  - Algebra, Matrices
  - Ordinary and Partial Differential Equations
  - Physics: General Physics, Classical Mechanics, Statistical Physics
    - Optics
    - Quantum Theory, Atomic Physics
    - Relativity

## Teaching Experience:

- 9/87-present Central Connecticut State University
  Mathematics and Computer Science Department
  Assistant Professor in Computer Science
  - 6/85-8/87 Illinois Institute of Technology, Chicago, IL Electrical and Computer Engineering Department Instructor for Digital Computers and Computing
  - 1/86-5/86 Chicago State University, Chicago, IL

    Mathematics and Computer Science Department
    Instructor for Pascal
- 1/84-12/86 Illinois Institute of Technology, Chicago, IL
  Electrical and Computer Engineering Department
  Lab Instructor and Teaching Assistant for Logic Design
  and Implementation, Electronics, VLSI Design, Network Theory
- 1/82-12/82 Zhongshan University, Canton, China Electrical Engineering Department Teaching Assistant for Automatic Control

#### Research Experience:

- 8/86-12/86 Microprocessor Design and Implementation: Simulation, microprogramming, breadboarding, and testing
- 6/86-12/86 CAD tool development: Element database development and simulator upgrading
- 1/86-5/86 Custom VLSI Design (systolic architecture, p-well CMOS technology): Algorithm development, IC design, layout, and simulation at all levels
- 8/84-1/85 Logic design testability: Algorithm development for easy testable logic design

5/83-7/83 Knowledge-based system: Knowledge-based office automation programming

Computers, Languages and Systems:

- PDP-11, VAX, Prime, Ridge, Intel8086, M6800
- C, Lisp, Prolog, Pascal, Icon, PL/M, Fortran, Basic, Assembly Languages
- Unix, VMS, Primos

Professional Institutions:

Member, IEEE

# CENTRAL CONNECTICUT STATE UNIVERSITY NEW BRITAIN, CONNECTICUT 06050

Office of the President

POLICY STATEMENT

It is the intellectual and moral responsibility, but more importantly, the POLICY of the leadership of Central Connecticut State University to advance social justice and equity by exercising affirmative action to remove all discriminatory barriers to equal employment opportunity and upward mobility. Accordingly, the university, through this plan of affirmative action, will, with university, through this plan of affirmative action, will, with conviction and effort, undertake positively to overcome the present effects of past practices, policies or barriers to equal employment opportunity, and to achieve the full and fair participation of opportunity, and to achieve the full and fair participation of Blacks, Hispanics, women and any other protected group found to be underutilized in the work force or adversely impacted by system policies or practices.

Equal opportunity, a distinctly different matter, is employment of individuals without consideration of race, color, religion, age, sex, marital status, national origin, ancestry, mental retardation, physical disability or prior conviction of crime, unless the physical disability or prior conviction of crime, unless the provisions of Sections 46a-60 (b), 46a-80 (b) or 86a-81 (b) of the provisions of Sections 46a-60 (b), 46a-80 (b) or matter is a bona Connecticut General Statutes are controlling or there is a bona Connecticut General Statutes are controlling persons in one of the fide occupational qualification excluding persons in one of the above protected groups. Equal employment opportunity is the above protected groups. Equal employment opportunity is the through 46a-68-74.

Attached hereto and incorporated herein, are listed federal and state constitutional provisions, laws, regulations, guidelines and executive orders prohibiting or outlawing discrimination, identifying classes of persons protected based on race, color, religion, age, sex, marital status, national origin, ancestry, religion, age, sex, marital status, national origin, ancestry, resent or past history of mental disorder, mental retardation and physical disability limited to blindness, except for bona fide occupational qualification.

Affirmative Action recruitment involves contacting agencies that work with Blacks, Hispanics, women and other protected groups. The University advertises in publications that attract protected group members such as the Affirmative Action Register and The Hartford Inquirer. Refer to External Communication Section 46a-68-35.

Affirmative action interviewing involves using uniform questions for all candidates. In the affirmative action promotion process, incumbents are not promoted by race or sex, but are promoted on the basis of their performance, and/or seniority or reclassification. Clearly, Affirmative Action and Equal Employment Opportunity are immediate and necessary agency objectives for Central Connecticut State University. We shall affirmatively provide services and programs in a fair and impartial manner. also recognize the hiring difficulties experienced by the physically disabled and many older persons, and will undertake measures to overcome the present effects of past discrimination, if any, to achieve the full and fair utilization of such persons in the work force.

This policy of non-discrimination will not be limited to employment practices but will extend, as well, as to services and programs provided by the University.

All executive, administrative, and supervisory personnel are expected to discharge their affirmative action responsibilities, in word and deed, consistent with this agency's objective of establishing and implementing Affirmative Action and Equal Employment Opportunity.

As President of Central Connecticut State University, I pledge to make every good faith effort to realize our goals within the timetables set forth in this plan and as required by pertinent state and federal legislation, detailed in the pages which follow.

The Affirmative Action Officer responsible for overseeing Affirmative Action and Equal Employment Opportunity is Mrs. Natalie Stimpson-Byers, Administration Building, Room No. 214, Central Connecticut State University, New Britain, Connecticut 06050, Telephone No. 827-7495.

To Consider to F. Don James, President

## CENTRAL CONNECTICUT STATE COLLEGE New Britain, Connecticut 06050

#### Notice of Compliance

#### Regarding

Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 706

Central Connecticut State College does not discriminate in admission or access to, or treatment or employment in, its programs and activities of qualified handicapped persons defined under the provisions of the Rehabilitation Act above referred.

In accordance with Section 84.7, sub part (a), Central Connecticut State College has designated Dr. Richard L. Judd as the Compliance Officer for coordination of institutional efforts in meeting the requirements set forth in the rules and regulations.

## ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF HEALTH. EDUCATION. AND WELFARE REGULATION UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

Central Connecticut State College	(hereinafter	called the.	'Applicant'')
(Name of Applicant)	(		11. L.

HEREBY AGREES' THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Regulation of the Department of Health, Education, and Welfare (45 CFR Part 80) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Regulation, no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives Federal financial assistance from the Department; and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant by the Department, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant for the period during which the Federal financial assistance is extended to it by the Department.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant by the Department, including installment payments after such date on account of applications for Federal financial assistance which were approved before such date. The Applicant recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant.

Dated	Central Connecticut State College
	(Applicant)  (President, Chairman of Board, or comparable suthorized official)
1615 Stanley Street	Vice President for Administrative Affairs
New Britain, Connecticut 06050 (Applicant's mailing address)	

HET-441 (13-44)

## ASSURANCE OF COMPLIANCE WITH SECTION 504 OF THE

REHABILITATION ACT OF 1973, AS AMENDED

The undersigned (hereinafter called the "recipient") HEREBY AGREES THAT it will comply with section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), all requirements imposed by the applicable HEW regulation (45 C.F.R. Part 84), and all guidelines and interpretations issued pursuant thereto.

Pursuant to § 84.5(a) of the regulation [45 C.F.R. 84.5(a)], the recipient gives this Assurance in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts (except procurement contracts and contracts of insurance or guaranty), property, discounts, or other federal financial assistance extended by the Department of Health, Education, and Welfare after the date of this Assurance, including payments or other assistance made after such date on applications for federal financial assistance that were approved before such date. The recipient recognizes and agrees that such federal financial assistance will be extended in reliance on the representations and agreements made in this Assurance and that the United States will have the right to enforce this Assurance through lawful means. This Assurance is binding on the recipient, its successors, transferces, and assignces, and the person or persons whose signatures appear below are authorized to sign this Assurance on behalf of the recipient.

This Assurance obligates the recipient for the period during which federal financial assistance is extended to it by the Department of Health, Education, and Welfare or, where the assistance is in the form of real or personal property, for the period provided for in § 84.5(b) of the regulation [45 C.F.R. 84.5(b)].

The recipient: [Check (a) or (b)]

a. ( ) employs fewer than fifteen persons;

A73

b. () employs fifteen or more persons and, pursuant to § 84.7(a) of the regulation [45 C.F.R. 84.7(a)], has designated the following person(s) to coordinate its efforts to comply with the HEW regulation:

Dr. K	ichard L. Judo	
Name of Designec(s)	- Type or l'rint	
C12	C42	
Central Connecticut State College	1615 Stanley Street	
Name of Recipient - Type or Print	Street Address or P. O. Box	

Name of Recipient - Type or Print		Street Address of P. O. Box		
A12	A41	Λ42		A71
0200758		New Britain.		
(IRS) Employer Identification Number		City		D 4 1
A1	A11	B12		D41
<b>B1</b>	B11	Connecticut	06050	
CI	Cll	State		Zip
		B42		B71

I certify that the above information is complete and correct to the best of my knowledge.

01 July 1977
Date
B72
B77

F. Don James, President

By: Dr. Richard L. Judd, Dean

Signature and Title of Authorized Official

If there has been a change in name or ownership within the last year, please PRINT the former name below:

NOTE: The 'A', 'B', and 'C' followed by numbers are for computer use. Please disregard.
PLEASE RETURN ORIGINAL TO: Office for Civil Rights, HEW, P. O. Box 8222, Washington, D.C. 20024.

NOTE: This supercedes any documents, if previously received.

#### CIVIL RIGHTS CERTIFICATE

ASSURANCE OF COMPLIANCE WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, SECTION 504 OF THE REHABILITATION ACT OF 1973, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, AND THE AGE DISCRIMINATION ACT OF 1975

The applicant provides this assurance in consideration of and for the purpose of obtaining Federal grants, loans, contracts (except contracts of insurance or guaranty), property, discounts, or other Federal financial assistance to education programs or activities from the Department of Education.

The applicant assures that it will comply with:

- 1. Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. 2000d et seq., which prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving Federal financial assistance.
- 2. Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794, which prohibits discrimination on the basis of handicap in programs and activities receiving Federal financial assistance.
- 3. Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. 1681 et seq., which prohibits discrimination on the basis of sex in education programs and activities receiving Federal financial assistance.
- 4. The Age Discrimination Act of 1975, as amended, 42 U.S.C. 6101 et seq., which prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance.
- 5. All regulations, guidelines, and standards lawfully adopted under the above statutes by the United States Department of Education.

The applicant agrees that compliance with this Assurance constitutes a condition of continued receipt of Federal financial assistance, and that it is binding upon the applicant, its successors, transferees, and assignees for the period during which such assistance is provided. The applicant further assures that all contractors, subcontractors, subgrantees or others with whom it arranges to provide services or benefits to its students or employees in connection with its education programs or activities are not discriminating in violation of the above statutes, regulations, guidelines, and standards against those students or employees. In the event of failure to comply the applicant understands that assistance can be terminated and the applicant denied the right to receive further assistance. The applicant also understands that the Department of Education may at its discretion seek a court order requiring compliance with the terms of the Assurance or seek other appropriate judicial relief.

The person or persons whose signs applicant to the above provisions.	sture(s) appear(s) below		ign this application, and to commit the	
		Mr., Jos	seph F. Pikiell, Vice Preside	IJ.
March 9, 1983		for	Administrative Affairs	
Date			Authorized Official(s)	

Central Connecticut State University
 Name of Applicant or Recipient

1615 Stanley Street
Street

New Britain, Connecticut 06050

City, State, Zip Code