UMRI-59-148L
Revision I

Proposal to

National Science Foundation

A COOPERATIVE EDUCATIONAL PROGRAM IN SCIENCE AND TECHNOLOGY BETWEEN THE COLLEGE OF ENGINEERING AT THE UNIVERSITY OF MICHIGAN AND THE ASSOCIATED UNIVERSITIES AND COLLEGES IN THE STATE OF MICHIGAN

Submitted by

The College of Engineering
The University of Michigan
February, 1960

Ann Arbor, Michigan

Name and Address of Institution

The Regents of The University of Michigan
The University of Michigan
Administration Building
Ann Arbor, Michigan

Title of Proposed Program

A Cooperative Educational Program in Science and Technology Between The College of Engineering at The University of Michigan and the Associated Universities and Colleges in the State of Michigan

Planning Period - April 1, 1960

University-College Associated Program, September 1, 1960

Time Period for Which Support Is Requested

Three Years

This application has been approved by:

G. V. Edmonson, Professor of Mechanical Engineering; Associate Dean, College of Engineering

S. S. Attwood, Dean
College of Engineering

Official Authorized to Sign for University: _____

INTRODUCTION

Science and technology dominate our civilization. Outstanding as their contributions to the social and economic life of man have been, however, western civilization has a vital need to increase greatly the pace of engineering and scientific progress for survival. The number of trained minds needed in these areas of knowledge requires an inspired teaching effort, well integrated from introductory through advanced courses of study. The challenging task of educating qualified students can be accomplished successfully provided there is active and continuing co-operation between all groups. Teaching and research cannot be considered separately.

An increasing number of students preparing for careers in technological areas are receiving their science, mathematics, applied mechanics, and other basic instruction during two- to four-year enrollments in community colleges or smaller liberal arts colleges and universities. These periods are followed by enrollment in the larger universities for the completion of undergraduate work or work on the graduate level. Decentralization of higher educational opportunity in the State of Michigan is definitely a matter of fact.

The liberal arts and community or junior college have a long historical background in the State of Michigan. The major position, however, that these institutions see destined to take in the total program in engineering and science education has only been emerging in the last four to five years. Several studies have tended to focus attention on these institutions.

The Russell study, sponsored in 1955 by the Legislature of the State, and a citizens Junior and Community College Study Commission, appointed by the Governor of the State, both reported in August 1958 that junior or community college development must be encouraged so that all qualified students in the State can have the opportunity for two years of additional academic training beyond the secondary school level. A general recommendation was made that new institutions should be established and located geographically so that students could live at home. It was recognized that the capital outlay and operating cost would be comparable with those of existing institutions but that the family economics was materially enhanced when a student attended a school within daily commuting range of home.

Published plans and space recommendations and facility studies developed by the faculty of the College of Engineering at The University of Michigan indicate that it has considered only junior, senior and graduate study requirements for new space and programs. By inference, the faculty has accepted the fact that increasing numbers of students with pre-engineering preparation in the decentralized institutions will be admitted with advanced standing into the college.

The College of Engineering has had a long experience in working with a limited number of students who transferred from the presently existing colleges in the State. The student success experience has varied over the complete spectrum; some institutions are preparing students who are consistently very successful in upperclass and graduate work while students from other institutions have found the transition quite difficult and discouraging.

Considerable study of the transfer problem has resulted from these experiences. It has been possible to draw some conclusions which have been valuable as a background for the preparation of this proposal. Although continuing study by a teacher of his subject is a first requirement in a dynamic educational program, the pursuit of advanced education or the outstanding teaching ability of the teachers who are preparing students for transfer from the local institutions do not appear to be the only factors in student successes. In certain institutions which seem consistently to turn out students most likely to succeed in engineering, one finds a faculty man directing the student programs and counseling students who understands intimately the relationships between subjects taught in his institution and the subsequent studies his student will pursue in the College of Engineering at The University of Michigan. He is alert to changes of engineering programs; he understands the reasons for the changes and he understands the need for orientations in preliminary fundamental courses that are necessary in a total educational program. The above information is documented in student success records.

The liberal arts and community or junior college development must be assisted and counciled. The University of Michigan has a vital interest in aiding this important and growing part of the total educational effort in every possible way. Direct and significant gains in the progress of science and technology can be effected by continuing cooperative efforts by educators in community colleges, liberal arts colleges, and the smaller universities with their counterparts in the larger universities, as well as with research scientists in the larger universities and in industrial and governmental laboratories. The College of Engineering at The University of Michigan has taken the initiative in developing this proposal since its interests are so deeply involved in the work of the peripheral institutions.

A considerable effort has been put forth by the College of Engineering at The University of Michigan to gain a better understanding of the problems and needs of the several institutions who will participate in this proposed program. Several discussions, starting with a preliminary discussion with community college teachers on March 20, 1959, have taken place. Scheduled discussions with the Michigan Association of Junior Colleges on May 9, and October 15, 1959, have been undertaken. Interim mailings that permitted faculty discussions at the several institutions were completed. Finally, a general expression of a desire to participate in the program was voiced by the Michigan College Association which includes all colleges and universities in the State at its business meeting the afternoon of November 5, 1959. Lists of the institutions who have received information concerning this proposal and who have indicated their desire to participate in the program are included in Appendix A. A letter following the October 15, 1959, meeting of the Junior (or Community) College is to be found in Appendix B. Letters, following the distribution of this proposal to all colleges in the State, from Dr. Clarence B. Hilberry, President of Wayne State University and from Dean John J. Uicker, University of Detroit, will be found in Appendix C.

Regular contacts with the Dean of the College of Literature, Science, and the Arts at The University of Michigan and appropriate chairmen of science departments have been maintained during the development of this proposal. The College of Engineering has received their approval of the effort and an expression of desire on their part to participate to the fullest extent in this engineering program. The College of Engineering has had the continuous consultation of Doctor Jesse Bogue, past president of the American Association of Junior Colleges. It has had the advice and support of the Administrative Officers of the University.

The purpose of the proposed program as set forth herein is to develop ways and means of establishing correlation of effort among institutions, an understanding of objectives, and a total educational program free from significant step-functions in the progress curve of the student.

THE SPECIFIC OBJECT OF THE ENTIRE EFFORT IS TO STIMULATE AND BETTER PREPARE QUALIFIED STUDENTS FOR A CAREER IN ENGINEERING AND THE SCIENCES.

The program is state-wide in character and has been developed through discussions with state-wide organizations to which all participating institutions belong. The distribution of funds allocated for the program will have a state-wide impact on the problem of engineering education.

DESCRIPTION OF PROGRAM

Regular contacts and a continuous flow of information between colleges, universities, and the faculty at The University of Michigan must be established if the engineering professions and the physical sciences are to accomplish the tasks before them. The teachers in all phases of the educational program in the several locations must work as a team.

Correlation of teaching effort among the institutions jointly concerned with a total educational program requires a direct interchange of information at the teacher level on the specifics of a particular program. Frank discussions of subject sequences and the requirement for the subject matter in an engineering program would lead to an understanding and an appreciation of mutual problems that is comparatively non-existent today. Satisfactory communication channels simply do not exist. It is important to understand that the satisfactory solution of the problems of correlation is time-dependent. Frequent concentrated sessions on specific topics, time for study at each institution, and preparation of subsequent communications all suggest some extended time and work to accomplish the correlation of effort that must result. From this research effort, the most productive means for continuing the correlation aims will emerge. The College of Engineering will have many reasons to continue the use of these means beyond the scope of this NSF-sponsored effort.

An understanding by teachers in the small universities and community colleges of their participation in a total engineering educational program is important for several reasons. A teacher is usually a more inspiring teacher for engineering students if he is in the position of knowing the relation between the subject matter he teaches and the needs of the engineering profession for that material. This in no way suggests that any subject be taught less rigorously. This same inspiring teacher is usually the sought-after counselor by the engineering student who is preparing for a career in the profession. Knowledgeable counseling is very important to the engineering student throughout his total educational program.

Finally, an understanding by the teacher of science and mathematics of those technological developments which have a major influence on educational programs in the upperclass and graduate level programs, will motivate him to continue studying his particular subject. The teacher-graduate program, which is part of the proposal, will provide an incentive

for study concurrent with the correlation effort. It will strengthen the science and mathematics teaching at a time when the development of understanding is a significant effort in the total program. It is believed that the continuance of the productive means of communication that will result from the successful completion of this proposal can act as a motivating force to encourage continued graduate study by the teacher beyond the duration of NSF support.

For many reasons, it seems unwise to arbitrarily eliminate from participation any of those institutions who are members of the state-wide organizations with whom the College of Engineering has worked. It is, however, quite possible that some of them due to the character of the school, location, local interests, or orientation of the student body may not wish to participate in an engineering program. The natural reluctance on the part of a teacher to up-root his family and make temporary arrangements for real estate that may be in his possession will tend to make it difficult for school administrators to take full and immediate advantage of the teacher-graduate program. The budget reflects the best judgment of the planning group in this matter.

There are other institutions in the state which are offering engineering programs leading to the Bachelor's degree and whose programs are accredited by the Engineering Council for Professional Development. Although the responsibility for the direction of this program cannot be divided if maximum benefits to the State and sponsoring agency is realized, the participation of these institutions has been invited and their favorable response has been immediate. It is fully expected that these institutions will participate in this effort in order to take advantage of the results of the program.

The total program would be coordinated by a liaison officer attached to the Office of the Dean. Each associated college and university participating in the program would handle the coordination of the activity with the University liaison officer through the means best suited to the organization at each institution. In all cases, a firm liaison contact would be established.

The activity of the University liaison officer would include handling of details pursuant to admission, appointment, and transfer of funds for teachers entering graduate school, arranging programs and seminars that would be developed to focus the attention of all participants

on the requirements and activities of the engineering professions, providing guidance and counseling to teachers and students on the subject of career planning, and acting generally as a contact officer between science, mathematics, and the introductory programs in engineering that are being carried out in the University. The liaison activity in the associated colleges and universities will include; communicating with various groups so that they are informed of the planned sessions provided for within the framework of this proposal; distribution of publications that are available; consultation with their faculty and the University to plan and schedule topics for discussion as provided for within the proposal; and generally serve administrative officers in order that they are completely informed.

Specific activities included within this proposal are as follows:

I. Plan and conduct conferences and seminars for the purpose of informing associated college teachers of the use made of the sciences and mathematics in engineering and advanced research. A natural outgrowth of this activity would be a correlation of courses that would smooth the transition problems of a student transferring from any one of the schools to the College of Engineering. It is expected that the understanding and correlation that this proposal anticipates would bring about the same close relationship that now exists between the College of Literature, Science, and the Arts, and the College of Engineering at the University. The College of Literature, Science, and the Arts teaches all the courses in nonengineering science and mathematics required in both the undergraduate and graduate programs of the College of Engineering.

II. Arrange for admission of associated college and university teachers to the Horace H. Rackham School of Graduate Studies under the regular requirements in order that they may pursue graduate studies for one academic year (2 semesters)--in the sciences, or mathematics, or engineering area of their interest. It is planned that the teacher admitted to graduate school will remain on the payroll of their respective institutions at full salary. At the University, the teacher will receive an appointment as Lecturer and attached to one of the professional divisions' teaching staff at nominal compensation. It is expected that his participation with an engineering teaching and research unit will provide him an intimate knowledge of the engineering profession.

The cost to replace the teaching capacity of the teacher in residence at The University of Michigan, the actual displacement costs of the teacher in residence at the University, and the nominal compensation involved in his appointment to the College of Engineering professional staff shall be borne by the National Science Foundation grant.

Since the budget for this program does not initially provide for selection of a teacher from each of the several schools, a type of selection procedure acceptable to the school administrators who have counciled regarding this proposal, must be developed. Further, the selection of a replacement teacher shall be a function of the administrators of the separate participating colleges and universities. The University of Michigan will be ready to assist where required. The liaison officer will be prepared to provide consultation when such help is sought. The College of Literature, Science, and the Arts at The University of Michigan is prepared to cooperate and assist the schools to obtain qualified replacement teachers.

III. Plan for seminars at The University of Michigan, concentrating on specific late developments in given technological areas. Participants will be faculty members of the associated colleges and of The University of Michigan.

IV. Correlate interests between the associated college teachers of science, mathematics, and applied mechanics, and University faculty having a primary interest in these subjects. Although the Liberal Arts College at The University of Michigan has not been given specific responsibilities in this program, it is ready to cooperate in the separate seminars where subject matter in its area is the topic of discussion.

V. Plan programs between selected groups of college students, their teachers, College of Engineering representatives, and representatives of Michigan industry. These will take place either on the premises of the college or those of the industry. The College of Engineering is fortunate to have the help of a very active Industry Committee, organized in 1952 as a working group, independent of the College except through good will, who are in a position to assist greatly in this phase of the program. This plan is intended to clarify the student's thinking about engineering and the related subjects in his educational program.

VI. Schedule University faculty and industry-affiliated lecturers to visit associated colleges at times when the topic of the lecture would fit in with the teaching program. For example, one lecture might deal with recent developments in the programming of computers for solving engineering problems. Another lecture might deal with the very important roles which physics, chemistry, and mathematics are playing in the development of the so-called "solid-state materials" used in the production of transistors, thermoelectric generators, voltage-tunable magnetrons, and similar electronic devices. Outstanding faculty men would have to be selected for these lectures, since the potential for guidance and inspiration cannot be overlooked in such situations.

VII. Distribute research reports, reprints of technical papers, and other written material appropriate for use by associated college science and mathematics teachers in their teaching and counseling activities.

VIII. Make available on a loan basis for specific use by associated colleges certain items of equipment and instrumentation to provide more effective laboratory demonstrations.

IX. Encourage the development and construction of laboratory and teaching aids by teachers and students at a minimum cost. In some cases, a written description with drawings would be sufficient. In other cases, prototype models would be constructed for delivery to the associated college classes, along with instructions for the construction of additional units by students.

X. Stimulate students in their career planning by making available to them pamphlets, films, etc., from industrial libraries, as well as industrial displays and other similar material. Through liaison representation and communication, the best available materials could be selected; other materials would be produced. One pamphlet, for example, would include statistical analyses and actual case histories of associated college graduates who have completed university degree work, and are now successful in professional careers in engineering and science.

The above items are suggested means for accomplishing the specific objective of the proposal. The relative amount of activity in any one category must be regulated by intelligent planning as the program progresses when the real needs are better understood. The program must have built-in flexibility in order to take maximum advantage of the knowledge that is gained.

Specific lectures, seminars, study groups, and short courses are all planned. However, the basic philosophy of this proposed program is to provide a continuing framework within which communications can be established and developed between the associated colleges, small universities, and The University of Michigan, with one central purpose--that each year more well-prepared graduates of junior colleges and transfer students from the liberal arts colleges will enter concentrated programs in engineering and science.

A necessary and valuable part of an operation such as this consists of evaluation and progress reports. It is proposed that semi-annual progress reports be prepared and distributed to the principal parties concerned. It is further suggested that copies of all technical writings developed for this program such as lecture notes, and designs of demonstration equipment should be transmitted to the sponsoring agency for broader application. It is also expected that this program will give rise to reports and papers suitable for publication in the various journals dealing with science and engineering education.

PERSONNEL

It is proposed that Glenn V. Edmonson, Professor of Mechanical Engineering and Associate Dean of the College of Engineering be project director of this cooperative program. His extensive experience in industry as a fluids engineer, his experience as a teacher of both undergraduate and graduate engineering students, and the performance of his duties as Associate Dean make him eminently qualified to provide overall direction of the program.

The prime responsibility of the College of Engineering for liaison with the associated colleges and for cooperative programs between the College and other non-University entities, such as industry, resides in the Office of the Dean. The Dean must always be acutely aware of the needs and desires of these entities and their relationship to the educational programs of the College. It is believed that the proposed centralization of this program in the Dean's Office takes full advantage of the awareness of, and response of that office to, the growing problems arising concurrently with the expanding college population.

Working with and through the Dean's Office will be a senior member of the engineering faculty. He will devote full time to the program and will be responsible for implementing the plans and policies of the project director and the Dean's Office as they are formulated in conjunction with responsible members of the associated college faculties. He must work from a background of knowledge of, and personal interest in, the integration of freshmen and sophomore curricula with upperclass and graduate curricula in engineering. He must also be able to communicate his knowledge and interest to participants in the program and, above all, he must be a good coordinator. All these duties will be performed by a person of proven teaching and administrative capabilities. Although this senior faculty member has not yet been selected, the selection processes have been initiated and will be completed within the next few months.

The third member of the College of Engineering who will be responsible for a significant aspect of the proposed program is Raymond E. Carroll, Assistant to the Dean, Director of the Engineering Summer Conference Office, and Director of the Industry Program of the College of Engineering. Mr. Carroll will devote one-quarter time to matters pertaining to the conferences, lectures, symposia, seminars, publications, and coordination with industry. His educational background and College of Engineering experience make him uniquely qualified to perform these functions. The planning and implementation of the program of intensive summer

courses in many phases of engineering are his direct responsibility. The long-established liaison and cooperative programs of the Industry Program provide Mr. Carroll with significant experience pertinent to the proposed program.

Biographical data for Professor Edmonson and Mr. Carroll are a part of this application.

EDMONSON, GLENN V. Professor of Mechanical Engineering
Associate Dean, College of Engineering

Education: University of Michigan: B.S.E. (M.E.), 1932; M.E. (Mechanical Engineer) 1949; Registered Professional Engineer - State of Michigan

Employment: Academic
University of Michigan: Associate Professor, 1947-54: Professor, 1954-; Chairman, Fluids Engineering Laboratory Planning Group, 1954-; Executive Committee, College of Engineering, 1955-; Member, Engineering Research Council, 1955-; Associate Dean, College of Engineering, 1958-.

Other Professional

Kelvinator Corp., 1932-37; Staff Engineer, Hydraulic Coupling Division of American Blower Corp., 1937-47.

Experience: Inspection and quality control; production-process development; in charge of field development of kinetic-power transmission apparatus; hydraulic machinery; turbo-machinery, advanced mechanical-engineering problems; supervisor of research, high-pressure pumping units for servopower; refrigeration compressors; hydrokinetic-power transmission; universal-joint project; consultant on power transmission and centrifugal pump; design of high-speed pumping unit; consultant on turbo-compound engine development.

Publications: Books, Bulletins, etc.--Hydraulic Machinery Notes (litho), 1950. Articles--5 on hydrokinetic-power transmission and applied hydraulics.

Professional and Honorary Societies: Am. Soc. for Engineering Education; Am. Soc. of Mechanical Engineers; Engineering Soc. of Detroit; Mich. Soc. of Professional Engineers; University of Michigan Science-Research Club; Pi Tau Sigma; Tau Beta Pi.

CARROLL, RAYMOND E. Director, Industry Program of the College of Engineering
Coordinator, Engineering Summer Conferences

Education: University of Michigan: B.A., 1937.

Positions Held: Professional
Amasa High School: Teacher of Speech and English 1937-38.
Dollar Bay High School: Teacher of Physics and Chemistry, 1938-41.
Physicists Research Co. (later called Micrometrical Manufacturing Co.): Superintendent of Engineering and Production, 1941-54.
University of Michigan: Administrative Assistant, 1954-56;
Assistant Director, Industry Program, 1956-58;
Director, Industry Program, 1958-
Coordinator, Engineering Summer Conferences, 1958-.

Experience:
Design, production, and inspection of precision electronic instrumentation; statistical quality control; development of engineering standards for drawings and process sheets; development of production control systems; character and rate of wear in friction research projects; editing of instruction manuals and technical sales literature; aptitude testing, interviewing, and other personnel work; member of ASME sub-committee on surface roughness standards; member of the board of directors of one profit, and one non-profit corporation, for two years each.

Publications:
Articles - 2, on the measurement of superimposed surface irregularities, and creative engineering.

Professional and Honorary Societies:
American Society for Engineering Education; American Society of Mechanical Engineers; Society for General Systems Research; The University of Michigan Science Research Club.

BUDGET STATEMENT

Following is a budget for the first year of a contemplated three-year program. It is expected that a review of the project will be completed far enough ahead of the end of each year's operation so that continuity of effort will not be broken. It is particularly important to realize that a lead-time for a teacher to complete plans prior to entering graduate school and lead-time for the selection of replacements is vital to the success of the teacher-graduate training portion of the proposal. It is the desire of the College of Engineering to begin the necessary organization work in preparation for a full-scale program to commence in September, 1960. The preparatory work must start on or before April 1, 1960. Therefore, it is requested that the National Science Foundation give careful consideration to the dates in arriving at its decision regarding this effort. The budget for the first year full-scale program is preceded by a planning period budget.

Planning Period Budget

Salaries and Wages (Including Fringe Benefits)		
Senior Engineering Faculty	7840	
Secretarial Assistance	2613	
Total Salaries and Wages		10,453
Purchases		
Materials and Printing Costs	1500	
Travel	400	
Total Purchases		1,900
Total Direct Costs		12,353
Indirect Costs (15% Total Direct Costs)		1,853
Total Estimated Costs		14,206

Annual Program Budget

(A) Graduate School - Teacher Program

Salaries for Replacement Personnel 18 @ $6500	117,000
Displacement Costs and Travel for Graduate School Enrollees 18@ $500	9,000
Tuition to Horace H. Rackham Graduate School for Enrollees 18 @ $250	4,500
Appointment to Lecturer - College of Engineering for Graduate Enrollees 18 @ $100	1,800
Total	132,300

(B) Program Direction Cost

Salaries and Wages (including fringe benefits)		
Project Director	--	
Senior Engineering Faculty Person (full time)	$13,440	
Assistant to Dean of Engineering (1/4 time)	3,360	
Non-University of Michigan Faculty (45 faculty members, approx. 1/10 time each)	22,500	
Secretarial Assistance (full time)	4,480	
Total Salaries and Wages		$43,780
Purchases		
Travel and Subsistence		
University of Michigan Personnel		
(8740 miles, 45 days, car at $7/day, $.07/mile)	$ 927	
(subsistence, 45 days at $17/day)	765	
Community College Personnel		
(90 trips, 172 miles each, $.07/mile)	1,084	
Expendable Materials and Supplies	994	
Communications	450	
Services, (printing, drafting, reproducing, photography, etc.)	5,000	
Part IX - Materials and construction of teaching aids (45 x $200)	9,000	
Part X - Procurement, preparation, printing, distribution	5,000	
Total Purchases		23,220
Total Estimated Direct Cost		67,000
Indirect Cost (15% of Total Estimated Direct Cost)		10,050
Total Estimated Cost B (one year)		$77,050

(C) Other Program Costs - Seminars

I and III		
8 Seminar (45 persons attending)		
Subsistence - 2 days each at $17/day/person	$12,240	
Travel - 172 miles/person/meeting at $.07/mile	4,334	
Preparation and delivery of 75 lectures at $50/lecture	3,750	
Administrative expense	2,037	
		$22,361

IV		
Travel - 40 trips, 172 miles/trip at $.07/mile	480	
Subsistence - $5/trip for 40 trips	200	
Administrative expense	68	
		748
V		
Travel - 20 trips, 10 persons/trip, 172 miles/ trip (2 cars/trip) at $.07/mile	480	
Subsistence - $5/trip/person	1,000	
Administrative expense	148	
		1,628
VI		
Lectures - 40 lectures at $125/lecture (including preparation, travel, and subsistence)	5,550	
Administrative expense	555	
		6,105
VII Covered in B		
VIII No cost		
IX Covered in B		
X Covered in B		
Total Estimated Cost C (one year)		$ 30,842
TOTAL ESTIMATED COST (one year)		$240,192

REPRESENTATIONS

The foregoing proposal has not been submitted to other possible sponsors in whole or in part, including other Federal agencies. There are no present sponsors of any portion of the program outlined in the proposal.

The U.S. Air Force resident auditor is assigned to audit The University of Michigan contracts with the Department of Defense and other Government agencies when requested by the agency or by any contractor who has subcontracted work to Michigan under a Department of Defense prime contract.

Salaries and wages will be charged at regularly established rates and will include allowances for vacation, holidays, or sick leave in accordance with the University's regular policy. Salaries of employees chargeable to the contract at less than full time will be charged on an allocation basis in accordance with our regular accounting procedures.

The University warrants that no person or selling agency has been employed or retained to solicit or secure this grant upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, and agrees to furnish information thereto as requested by the contracting officer.

APPENDIX A

MICHIGAN JUNIOR COLLEGES

Alpena Community College
Alpena, Michigan
Stanley E. Van Lare, Director

Battle Creek Community College
Battle Creek, Michigan
Robert O. Hatton, Director

Bay City Junior College
Bay City, Michigan
Eric J. Bradner, Dean

Community College & Technical Institute
Benton Harbor, Michigan
C. G. Beckwith, President

Emmet Community College
Petoskey, Michigan
A. Shankland, Dean

Flint Junior College
Flint, Michigan
Clyde E. Blocker, Dean

Gogebic Community College
Ironwood, Michigan
Jacob A. Solin, Director

Grand Rapids Junior College
Grand Rapids, Michigan
John Visser, Dean

Henry Ford Community College
Dearborn, Michigan
Fred K. Eshelman, Dean

Highland Park Junior College
Highland Park, Michigan
Grant O. Withey, Dean

Jackson Junior College
Jackson, Michigan
William M. Atkinson, President

Lansing Community College
Lansing, Michigan
Philip J. Gannon, Dean

Muskegon Community College
Muskegon, Michigan
William G. Dwyer, Director

Northwestern Michigan College
Traverse City, Michigan
Preston N. Tanis, Director

Port Huron Junior College
Port Huron, Michigan
James C. Browning, President

South Macomb Community College
Van Dyke, Michigan
Walter E. Bradley, Dean

Spring Arbor Junior College
Spring Arbor, Michigan
Roderick C. Smith, President

Suomi Junior College
Hancock, Michigan
David J. Hulkola, President

Tri-County College
Saginaw, Michigan
Samuel Marble, President

October 27, 1959

LIST OF COLLEGES AND UNIVERSITIES RECEIVING TEACHER-PROGRAM LETTER AND NSF PROPOSAL--A COOPERATIVE EDUCATIONAL PROGRAM IN SCIENCE AND TECHNOLOGY BETWEEN THE UNIVERSITY OF MICHIGAN AND THE STATE'S COMMUNITY COLLEGES

President Roy L. Aldrich
Detroit Bible Institute
17370 Meyers Road
Detroit 35, Michigan

Sister Mary Assumpta
President
Madonna College
36800 Schoolcraft
Livonia, Michigan

President Dewey F. Barich
Detroit Institute of Technology
131 E. Adams
Detroit 26, Michigan

Dr. Lynn Bartlett
Superintendent of Public Instruction
Lansing, Michigan

Right Reverend Arthur F. Bukowski
President
Aquinas College
Grand Rapids, Michigan

President Owen J. Cleary
Cleary College
Michigan Avenue
Ypsilanti, Michigan

Mr. Harry L. Crawford,
Resident Director
Sault Ste. Marie Branch
Michigan College of Mining & Technology
Sault Ste. Marie, Michigan

President John J. Danhof
Detroit College of Law
130 East Elizabeth Street
Detroit 1, Michigan

President John H. Dawson
Adrian College
Adrian, Michigan

President Eugene B. Elliott
Eastern Michigan University
Ypsilanti, Michigan

President Judson Foust
Central Michigan University
Mount Pleasant, Michigan

President John Hannah
Michigan State University
East Lansing, Michigan

President Edgar L. Harden
Northern Michigan College
Marquette, Michigan

President Weimer K. Hicks
Kalamazoo College
Kalamazoo, Michigan

President Clarence B. Hilberry
Wayne State University
Detroit, Michigan

President David T. Holkola
Suomi College
Hancock, Michigan

Sister Mary Honora, President
Marygrove College
Detroit 21, Michigan

President Otho Jennings
Owosso College
Owosso, Michigan

Sister Marie Kathleen, President
Nazareth College
Nazareth, Michigan

Mrs. Pauline Wilson Knapp, Director
The Merrill-Palmer School
71 East Ferry Avenue
Detroit 2, Michigan

President E. George Lawrence
Lawrence Institute of Technology
21000 W. Ten Mile Road
Detroit 41, Michigan

President Irwin J. Lubbers
Hope College
Holland, Michigan

Sister M. Lucille, President
Mercy College
8200 W. Outer Drive
Detroit 19, Michigan

Sister Benedicta Marie, President
Siena Heights College
Adrian, Michigan

Monsignor Albert A. Matyn, President
Sacred Heart College
2701 Chicago Boulevard
Detroit 6, Michigan

President Florence Merrill
Detroit Conservatory of Music
5035 Woodward
Detroit 2, Michigan

President J. Donald Phillips
Hillsdale College
Hillsdale, Michigan

President Philibert Ramstetter
Duns Scotus College
Nine Mile at Evergreen
Detroit 19, Michigan

President Gorton Riethmiller
Olivet College
Olivet, Michigan

President Floyd O. Rittenhouse
Emmanuel Missionary College
Berrien Springs, Michigan

Mr. Zoltan Sepeshy, Director
Cranbrook Academy of Art
440 Lone Pine Road
Bloomfield Hills, Michigan

President Paul V. Sangren
Western Michigan University
Kalamazoo, Michigan

President Roderick J. Smith
Spring Arbor Junior College
Spring Arbor, Michigan

President Victor F. Spathelf
Ferris Institute
Big Rapids, Michigan

President William Spoelhof
Calvin College
Grand Rapids, Michigan

President Celestin J. Steiner, S.J.
University of Detroit
McNichols Road at Livernois
Detroit 21, Michigan

President Robert D. Swanson
Alma College
Alma, Michigan

Mr. Preston N. Tanis, Director
Northwestern Michigan College
Traverse City, Michigan

President J. R. Van Pelt
Michigan College of Mining & Tech.
Houghton, Michigan

President William W. Whitehouse
Albion College
Albion, Michigan

October 27, 1959

MICHIGAN ASSOCIATION OF JUNIOR COLLEGES

Highland Park Junior College
27 Oct. 1959

Dr. Glenn V. Edmonson, Associate Dean
College of Engineering
University of Michigan
Ann Arbor, Michigan

Dear Dr. Edmonson:

The Legislative Assembly of the Michigan Association of Junior Colleges studied the project, "A Cooperative Educational Program in Science and Technology Between the University of Michigan and the State's Community Colleges," at its Fall meeting at Michigan State University on 15 October 1959. That body which is composed of faculty representatives and deans of all the community colleges in Michigan unanimously endorse the project and indicated that the community colleges would participate in it. Additionally, the action necessary to initiate and carry the project forward was supported unanimously.

It was anticipated that there would be some problems of adjustment and arrangement which would have to be worked out cooperatively. The general attitude towards the project, however, was one of full approval.

Sincerely,

David A. Hilton

David A. Hilton, President
Michigan Association of
Junior Colleges

DAH:pk

cc: Mr. Ed. Bush, Secy, MAJC
Port Huron Junior College

UNIVERSITY OF DETROIT
McNICHOLS ROAD AT LIVERNOIS
DETROIT 21 MICHIGAN

COLLEGE OF ENGINEERING
OFFICE OF THE DEAN

December 2, 1959

Associate Dean Glenn V. Edmonson
College of Engineering
University of Michigan
Ann Arbor, Michigan

Dear Glenn:

Thank you very much for your note of November 16 concerning the latest events in your proposal which is being studied by the special group known as "Special Projects in Science Education". I think this has great possibilities.

As the matter develops, we shall be glad if we may be of assistance in this project. Meanwhile, we shall wait with interest to hear of developments.

Best regards.

Sincerely yours,

John

John J. Uicker
Acting Dean

JJU:cf

WAYNE STATE UNIVERSITY

DETROIT 2, MICHIGAN

OFFICE OF THE PRESIDENT

November 13, 1959

Dean Glenn V. Edmonson
College of Engineering
University of Michigan
Ann Arbor, Michigan

Dear Dean Edmonson:

I regret that my out-of-town commitments have made it impossible to give attention to your letter of October 23 before this date. We are, of course, deeply interested in the proposal which the University of Michigan College of Engineering has before the National Science Foundation and look forward to hearing from you further. In the meantime, I have referred the materials which you sent us to Dr. Winfred Harbison, our Vice President for Academic Administration and Dean J. Stuart Johnson of our College of Engineering asking them to provide our formal analysis.

My thanks to you for keeping us informed.

Sincerely yours,

Clarence B. Hilberry
President