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## Report of the New Program Review Committee: Proposal for a master of Science Degree in Clinical Laboratory Sciences

University of Rhode Island Faculty Senate

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THE UNIVERSITY OF RHODE ISLAND  
Kingston, Rhode Island

FACULTY SENATE  
BILL

Adopted by the Faculty Senate

TO: President Edward D. Eddy

FROM: Chairperson of the Faculty Senate

1. The attached BILL, titled Report of the New Program Review Committee: Proposal for a Master of Science Degree in Clinical Laboratory Sciences, is forwarded for your consideration.
2. The original and two copies for your use are included.
3. This BILL was adopted by vote of the Faculty Senate on May 15, 1986 (date).
4. After considering this bill, will you please indicate your approval or disapproval. Return the original or forward it to the Board of Governors, completing the appropriate endorsement below.
5. In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective June 5, 1986, three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; (3) you forward it to the Board of Governors for their approval; or (4) the University Faculty petitions for a referendum. If the bill is forwarded to the Board of Governors, it will not become effective until approved by the Board.

May 16, 1986  
(date)

Richard Katula  
Richard Katula  
Chairperson of the Faculty Senate

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ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

Returned.

- a. Approved ~~\_\_\_\_\_~~.
- b. Approved subject to final approval by Board of Governors       ✓      .
- c. Disapproved \_\_\_\_\_.

June 3, 1986  
(date)

Edward D. Eddy  
President

THE UNIVERSITY OF RHODE ISLAND  
KINGSTON, RHODE ISLAND

REPORT OF THE NEW PROGRAM REVIEW COMMITTEE  
APRIL 15, 1986

ON APRIL 8, 1986, THE NEW PROGRAM REVIEW COMMITTEE VOTED TO RECOMMEND THAT THE FACULTY SENATE APPROVE THE PROPOSED MASTER OF SCIENCE PROGRAM IN CLINICAL LABORATORY SCIENCE AS A CLASS C\* PROGRAM.

AN ABBREVIATED VERSION OF THE PROPOSAL WHICH IS IN THE FORMAT REQUIRED BY THE BOARD OF GOVERNORS FOR HIGHER EDUCATION IS ON THE FOLLOWING PAGES. TWO APPENDICES HAVE ALSO BEEN INCLUDED:

- APPENDIX A IS A MEMORANDUM FROM DR. DESCHEPPEL TO DEAN MICHEL REGARDING THE PROPOSED ADMINISTRATION AND FUNDING OF THE PROGRAM;
- APPENDIX B IS A MEMORANDUM FROM DR. PEZZULLO TO THE FACULTY SENATE EXECUTIVE COMMITTEE ON THE NEW PROGRAM REVIEW COMMITTEE'S CONSIDERATION OF THE PROPOSAL FOR AN M.S. PROGRAM IN CLINICAL LABORATORY SCIENCE.

\* CLASS C APPROVAL, AS DEFINED IN SECTION 8.85.23 OF THE UNIVERSITY MANUAL, RECOMMENDS "FUNDING OF THE PROPOSED NEW PROGRAM SHOULD ADDITIONAL FUNDS BE MADE AVAILABLE TO THE UNIVERSITY."

PROPOSAL FOR A MASTER OF SCIENCE PROGRAM IN CLINICAL LABORATORY SCIENCE.

A. PROGRAM INFORMATION.

1. Name of institution: The University of Rhode Island
2. Department or college involved:  
Microbiology Department, Colleges of A & S and CCE
3. Title of proposed program: Clinical Laboratory Science  
Degree to be conferred: Masters of Science in Clinical Laboratory Science
4. Academic area: Allied Health  
Field of study: Clinical Laboratory Science  
Subspecialties: Clinical Chemistry; Clinical Microbiology; Hematology; Immunohematology.
5. HEGIS title: Medical Technology  
Classification code: 17.0310
6. Intended date of initiation: Fall, 1986
7. Anticipated date for granting first degrees: May, 1989
8. Intended location: College of Continuing Education;  
Providence and Kingston Campus
9. Institutional review and approval process:  
College of Arts and Sciences Curriculum Committee  
Graduate Council  
New Program Review Committee  
Faculty Senate
10. Summary description of the proposed program:

A master's program (non-thesis option) in clinical laboratory science is proposed, to be offered on a part-time late afternoon and evening basis. The student may specialize in one of four areas: clinical chemistry, clinical microbiology, hematology, or immunohematology. Courses will be arranged in a three-year cycle, offering three courses in each of the fall and spring semesters. Clinical courses will be taught primarily by adjunct faculty from area hospitals and medical laboratories. Other courses will be taught by URI faculty. There will be a strong emphasis on the development of managerial/supervisory and educational skills. The program will be funded through a self-supporting account at the College of Continuing Education.

B. RATIONALE.

1. Nature of Proposed Program:

The recently expanded role of the clinical laboratory

scientist has brought about the need for graduate study in the areas of supervision-management, education, research, and clinical practice. Factors contributing to this need include an expanding technology, the increasing importance of rapid and accurate diagnostic procedures and greater use of health care delivery systems particularly by the expanding elderly population. The demand for graduate level programs in the clinical laboratory sciences has now reached a critical stage for laboratory professionals in Rhode Island. These people have requested of URI that a program be developed within the State. This proposal is in response to their request.

The objectives of the program are:

- 1) To provide advanced technical and scientific training in the clinical laboratory sciences.
- 2) To develop in students the research skills to be used in both basic science and applied technology.
- 3) To provide supervisory, managerial and administrative training that is important in the changing economic environment of the health care industry.
- 4) To provide training in educational methodology so that these professionals can effectively teach in hospital and continuing educational programs at several levels.

## 2. Needs the Program Addresses:

A survey was conducted in the summer of 1984 to assess the need for this program. Approximately 500 survey forms were mailed out to baccalaureate level clinical laboratory scientists (medical technologists, cytotechnologists, nuclear medical technologists, microbiology technologists, chemistry technologists, etc.) in hospitals, public health laboratories, independent clinical laboratories, and academic institutions. The geographic area that was covered included Rhode Island, southeastern Massachusetts, and eastern Connecticut.

Of the 115 surveys returned, 98% indicated they would like to see a program established and 94% indicated they would take courses in the program. The majority preferred a part-time, evening program with courses taught primarily in the Providence area. Most respondents preferred a program with a non-thesis option. The major reasons given for wanting this program were to maintain competence and to further career advancement. The respondents were asked to list, in order of interest, the subject areas that they would like to study in this program. Their ranking, in order of interest, was: 1. management 2. immunology/immunohematology, 3. education, 4. microbiology, 5. chemistry and 6. hematology.

## 3. Manpower Needs:

Surveys at the State and national level show that the need for medical technologists will continue at a rapid rate during the next five years. The Rhode Island Occupational Information Coordinating Committee reported that nationally this occupation is expected to grow faster than the average of all occupations. In 1981, the Rhode Island Department of Employment Security reported that forty-five net openings are expected annually, 15 are due to growth and 30 are due to worker separation. Writers of the Occupational Outlook Handbook of the Department of Labor (1983) state: "Employment of medical laboratory workers is expected to expand faster than the average for all occupations through the 1980's. Technologists may advance to supervisory positions in certain areas of laboratory work, or after several years experience, to administrative medical technologist. Graduate education usually speeds advancement."

Potential employers include hospitals, analytical laboratories; medical, dental, and veterinary schools; pharmaceutical, reagent, and instrument manufacturers; public and private research institutions; city, state, and federal agencies; and the military services.

## 4. Clientele:

The clientele for whom the program is intended include mainly clinical laboratory scientists who are working in the southeastern New England region. The program is designed to allow the student to continue working while pursuing graduate study. It is currently estimated that 1,075 clinical laboratory technologists are employed in Rhode Island and that there is probably an equivalent number in the southeastern Massachusetts area.

## 5. Estimated Program Size:

The estimated program size is 30 to 40 part-time students, with 10 to 15 graduating at the end of the three-year cycle.

## 6. Admission Requirements:

The requirements for students to be admitted into the program, besides those required of all applicants include:

- Graduate Record Examination.
- A bachelor's degree in Medical Technology, Microbiology, Biological Science, Chemistry, or related area.
- Certification as a generalist or specialist by a nationally recognized clinical certifying agency.

## 7. Advisory Committee:

An advisory committee was formed with representatives in the sub-specialty areas from the University and from the clinical laboratory community. The committee's role is to help develop the program and to oversee its operation.

**C. INSTITUTIONAL ROLE.**

**1. Relation to Institutions Long-Range Plans:**

The University of Rhode Island has numerous health programs offering both undergraduate and graduate degrees. The undergraduate Medical Technology Program has been a popular and successful program since the 1960's. The Board of Governor's of Higher Education has designated the University of Rhode Island as the primary site for new health program development. This program would enhance the University's overall health offerings and is consistent with it's long-range goal of expansion of and closer coordination of existing health programs.

**2. Relationship to Other Programs:**

This is a new graduate degree program for Rhode Island, but the M.S. Medical Technology Program is not new nationally. It would provide graduate training for medical technology graduates and does not overlap into other programs.

**D. CONTENT.**

The program is structured to allow the student the flexibility in program design to meet his or her professional needs. The program will consist of core courses (12 credits); courses within a primary specialty area--clinical chemistry, clinical microbiology, hematology, or immunohematology (12 credits); and electives--additional courses in specialty area, courses in a secondary scientific area, or courses in a professional area, such as management or education (12 credits).

**1. Curriculum:**

**a. Typical curriculum for one program cycle:**

The courses would be arranged in a three-year cycle, offering two courses in each of the fall and spring semesters and one in each summer session. This will provide a total of 18 courses, or 6 per year, with each course offered once every three years except for MTC 512, Special Problems, which would be offered every year. One core course would be offered per year. This program cycle would allow the student to complete the program in three years if four courses were taken per year in any combination (e.g., 2 in the fall, 2 in the spring; or one each in fall, spring, and each summer session).

The total list of courses includes:

Distribution	Course	Number of Courses
Core (12 credits)	*MTC 510 Clin.Lab.Mgt. **EDC 582 Inst. systems	4

\*MTC 512 Special Problems  
EST 407 Biostatistics  
or 408.

**Specialties (12 credits)**

1. Clinical Chemistry	*MTC 502 Adv. Clin. Chem/M.T. BCP 581 Biochemistry BCP 582 Biochemistry *MTC 532 Clin. endocrinology	4
2. Clinical Microbiology	*MTC 501 Adv.Clin.Microbiology *MTC 516 Adv. Clinical Parasitology *MTC 515 Infect. Diseases ASP 534 Virology	4
3. Hematology	*MTC 503 Adv. Hemostasis *MTC 513 Clin. Immunology *MTC 520 Adv. Hematology I *MTC 521 Adv. Hematology II	4
4. Immuno-hematology	*MTC 530 Adv. Immunoematol. I *MTC 531 Adv. Immunoematol. II *MTC 513 Clin. Immunology *MTC 520 Adv. Hematology II	2

**\* Courses taught by Adjunct Faculty**

In addition, the student could take as electives any related course currently offered through CCE, such as education, management and pharmacy administration courses.

**Electives (12 credits)**

- 1) Education:
    - EDC 407 - Philosophy of Education
    - EDC 503 - Education in Contemporary Science
    - \*\*EDC 505 - Leadership Development in Adult Programs
    - \*\*EDC 522 - Microcomputer Application in the Classroom
    - \*\*EDC 529 - Foundations in Educational Research
    - EDC 581 - Administering Adult Programs
    - EDC 582 - Instructional Systems Development for Adult Program
    - \*\*EDC 583 - Planning Design and Development of Adult Learning Systems
  - 2) Management:
    - PAD 405 - Personnel Administration
    - \*\*PAD 651-652 - Health Care Systems I and II
    - PAD 680 - Legal Environment in Health Administration
    - MGS 664 - Health Information Systems
- \*\* Courses presently taught at CCE.

**b. Required courses in area of specialization:  
see 1.a.**

c. Options available within the area of specialization:  
 The student may take elective courses within the primary specialty selected (clinical chemistry, clinical microbiology, hematology, immunohematology) or may select a secondary specialty such as the technical areas of education or management. For example, a student's primary specialty could be clinical microbiology, and the secondary specialty could be management.

d./e./f. Course Distribution Requirements/Free Electives/Total Number Credits

- |                   |            |
|-------------------|------------|
| 1. Core Courses   | 12 credits |
| 2. Specialty      | 12 credits |
| 3. Free Electives | 12 credits |

Total 36 credits

The scheduling of courses would follow this outline:

	I	II
<u>Year 1</u>		
Fall	MTC 510	MTC 532
Spring	BCP 581	MTC 501
Summer	MTC 530	MTC 503
<u>Year 2</u>		
Fall	BCP 582	MTC 512
Spring	EDC 582	ASP 534
Summer	MTC 513	MTC 521
<u>Year 3</u>		
Fall	EST 407 or 408	MTC 514
Spring	MTC 502	MTC 515
Summer	MTC 531	MTC 520

3. Certification/Licensing Requirements:

Except for a few states, there are currently no licensing requirements for graduate-educated clinical laboratory scientists. The personnel requirements of the Health Care Financing Administration for technical supervisors and directors of clinical laboratories performing work for Medicare patients, include a masters degree and varying years of experience (depending on the specialty).

There are several agencies that certify clinical laboratory scientists with post baccalaureate education:

<u>Agency</u>	<u>Certification</u>	<u>Education Requirement</u>
American Board of Bioanalysis	laboratory director	doctorate
American Board of Clinical Chemistry	clinical chemist	doctorate
Board of Registry; American Society of Clinical Pathologists	specialist certification in: chemistry hematology microbiology blood bank	masters and doctoral level
American Board of Microbiology (American Society for Microbiology)	director of microbiology	doctorate
National Registry in Clinical Chemistry	clinical chemist	masters and doctoral level
National Registry of Microbiologists	supervisor in microbiology	masters

E. INTERINSTITUTIONAL CONSIDERATIONS

1. Similar programs offered in the State and region:

Institutions offering programs in New England include Northeastern University, Anna Maria College (Paxton, MA), University of Hartford, and University of Vermont. None of these programs are close enough to Rhode Island to allow for easy access to study, particularly on a part-time basis.

2. Objectives of Similar Programs:

Most of these regional programs share the same objectives as the proposed program. They all, with the exception of Vermont, are designed for the working professional.

3. Cooperative Arrangements:

There will be no cooperative arrangements with institutions offering similar programs.

4. Transfer Provisions:

Students from other Rhode Island public institutions of higher education may transfer in and out of the proposed program, as long as transfer credits satisfy the requirements of the respective institutions. Because this will be the only program in Rhode Island, it is not expected to have many transfer students.

5. Projected Impact:

Since this will be the only program of its kind in Rhode Island, there will be no impact on other post-secondary institutions.

6. External Affiliations:

There will be no external affiliations except for employment of adjunct faculty.

7. NEBHE:

Because this will be predominantly a part-time, evening program, regional students will not be expected to enroll through the New England Board of Higher Education.

F. RESOURCES

1. Administration:

a. How Program Will Be Administered. The program will be administered through the College of Continuing Education, the Graduate School and the Department of Microbiology. A Medical Technology advisory committee will serve as a committee for making recommendations concerning the program and shall report to the Medical Technology Coordinator and the Chairman of the Department of Microbiology.

b. Administrative responsibility for the program: Alloys Michel, Dean of the Graduate School, 1% of time; Norris P. Wood, Chairman, Department of Microbiology, 5% of time; Gregory Paquette, Coordinator, Medical Technology Program, 33% of time.

c. Administration salaries and related costs: The Coordinator of the Medical Technology Program will require additional support from the College of Continuing Education for evening office hours in Providence.

2. Faculty:

a./b. Present and anticipated faculty: The clinical courses will be taught primarily by adjunct faculty from area hospitals and medical laboratories. Other courses will be taught by URI faculty or adjunct faculty. All adjunct faculty have made a commitment to teach the courses listed.

c. Support Personnel: No additional support personnel are anticipated.

d. Annual Costs: Because these courses will be taught through CCE, any additional faculty expenses will be covered by tuition charges, including the adjunct faculty expenses and the additional administrative functions of the Medical Technology Program Coordinator.

3. Learning Resources:

a. Current Resources: Faculty members will utilize existing learning resources made available to them from their primary institutions of employment. Students also will have access to learning resources at their places of employment (hospital medical library, medical school library, etc.).

b. Library Materials: The URI Library (Kingston Campus) has a satisfactory number of print materials available in the subject matter field, in the form of references, texts and periodicals.

c. Accrediting Agency Recommendations: There are currently no national accrediting agencies for this type of graduate program. However, the learning resources available for the undergraduate Medical Technology Program meet the standards of the National Accrediting Agency for Clinical Laboratory Sciences.

d. Upgrading of resources: No substantial upgrading of resources is needed. Most periodicals and reference library books are being purchased for other programs. Periodicals, reference books and audiovisuals could be upgraded over a period of years. The Medical Technology Program has recently received a grant from the URI Foundation for audiovisual materials for upgrading the undergraduate classes. These will also be available for graduate level teaching.

e. Annual costs for learning resources: (CCE)

periodicals (subscription)	\$300
reference books	200
audiovisuals	200
	\$700

4. Facilities and Equipment:

a. Existing facilities:

- 1) classrooms - those at CCE in Providence will be utilized
- 2) laboratories - none of the new courses have a laboratory component
- 3) office space - space available in Morrill Hall for Microbiology Chairperson and secretary and in Potter Building for Medical Technology Coordinator

No new or renovated facilities will be required.

b. Instructional/support equipment: Existing equipment at Kingston and in Providence is sufficient.

5. Operating Expenses:



The University of Rhode Island  
 College of Continuing Education  
 199 Promenade Street Providence, RI 02908-5090  
 (401) 277-3800

<b>Personnel Services</b>	
Adjunct faculty (4 MTC courses/year) Coordinator	\$ 8,540 <u>4,270</u> \$12,810
<b>Operating Expenses</b>	
Office expense	300
Learning Resources	700
Printing	600
Travel-coordinator	100
Travel-adjunct faculty	<u>400</u> 2,100
<b>Subtotal</b>	<b>\$14,910</b>
<b>Overhead (15%-CCE)</b>	<b>2,311</b>
<b>TOTAL</b>	<b>\$17,221</b>

Funding for the program will be through a self-supporting account.

6. Scholarships: No funds are available for scholarships or fellowships.

**G. EVALUATION**

1. Quality Assurance:

The advisory committee, with representatives from both The University and the clinical laboratory community, will assure the quality of the proposed program.

2. Accreditation:

There is currently no specialized accreditation for the entire program. The immunohematology specialty tract may be eligible for accreditation as a Blood Bank Technology Program by the Committee on Allied Health and Education of The American Medical Association. This accreditation may be pursued once the program has started if desired.

3. Evaluation:

The program will be evaluated by the Advisory Committee and the Graduate School during the first three to five years.

TO: Al Michel, Dean, Graduate School  
 FROM: Jerry DeSchepper, Director, Academic Planning  
 DATE: December 24, 1985  
 RE: Clinical Laboratory Sciences Program Proposal

Drs. Norris Wood, Greg Paquette and I met on December 9, 1985 to address the issues raised in my memo to you of November 27. These are the results of that meeting:

1. There was general agreement that the program coordinator's work load should be 1/3 time rather than the 15% originally proposed. It was also taken into account that the increased time could mean an additional expense to the program.
2. We agreed in principle that funding for the program, at least through the 1986-87 academic year, would be through a self-supporting account. During that time it is not expected to bear upon the CCE instructional/operating budget; however, at some future date it could with proper planning be incorporated into our standard budget.
3. The question of adequate library resources has not been fully resolved. Capital requirements could be met through the above mentioned funding and so should not pose a problem. On the availability of library materials through CCE, I did not feel qualified to speak so I referred Dr. Wood and Dr. Paquette to Jean Sheridan, Head, CCE Library.
4. Neither Dr. Wood nor Dr. Paquette believe the laboratory requirements for certain pre-requisites is a serious problem due to the kind of preparation applicants are expected to have. In any case, everyone agrees that the labs at CCE are not suitable.



Office of the Vice President for Academic Affairs

MEMORANDUM

April 8, 1986

TO: Faculty Senate Executive Committee  
FROM: Thomas R. Pezzullo *TRP*  
Chair, New Program Review Committee  
RE: New Program Review - 1986

*Rec'd  
4-14-86  
Tom/1/4  
Snake*

5. Greg Paquette, as Program Coordinator, agreed that office hours should be maintained in Providence (especially during the evening hours) for the purpose of recruitment and advising. No space has yet been located, however.

At this point I am satisfied that we at CCE could administer the Clinical Laboratory Sciences Program, once it is approved, and I have recommended to Dean Walter Crocker that we proceed with its development. Again, if you or any members of the Council need further information, please feel free to call me.

JDS/rml

cc: Walter Crocker, Dean, CCE  
Ann Byrne, Director, Academic Programs  
Norris Wood, Chairperson, Microbiology Dept.  
Greg Paquette, Coordinator, Medical Technology  
✓ Richard Gelles, Dean, Arts & Sciences

In my memorandum of March 28, 1986, I mentioned that the review of the M.S. in Clinical Laboratory Sciences was incomplete, pending a further discussion with Norris Wood, Chair of the Department of Microbiology. The recessed meeting of the New Program Review Committee was held today. At that meeting the Committee met with Prof. Wood, discussed the program, and voted to take the following action:

The Committee recommends to the Faculty Senate that the M. S. program in Clinical Laboratory Sciences be approved as a "Category C" program because of the opportunity referred to in the proposal for Ledger 3 funding.

The action of recommending Category C -- that is, in effect to recommend that the program not be implemented until such time as new funding be identified for the program -- is based not on the quality of the program nor of the routine criteria used by the Committee according to the Manual. Rather it is a reflection of the opportunity for the Program to be funded, at least initially, through the College of Continuing Education and through ledger 3. This funding mechanism appears to avoid, at least initially, the need for the program to compete for allocated funds along with other programs (as Category B or Category A would imply).

I should add that there were unresolved questions about the extensive use of adjunct faculty in this and other programs, their selection, status, evaluation, the proportion of a program's offerings

appropriately taught by adjuncts and quality control. The Committee seemed to think it advisable that the Senate review the various sections of the Manual on this subject to correct the omissions and silences on these questions.

The Committee took no action on these questions, principally because they appear to be larger issues than the content of New Program Review, but clearly within the Senate's responsibility.

cc.       A. Michel  
          B. Brittingham  
          R. Gelles  
          E. Kohlsoot  
          J. Marasco  
          L. Shamoan  
          R. Panzica  
          U. Wyman