

MEMORANDUM OF UNDERSTANDING BETWEEN
THE UNIVERSITY OF MARYLAND EASTERN SHORE AND
THE COLLEGE OF SOUTHERN MARYLAND

Cooperative Agreement to Award the
Associate of Science Degree in Pre-Professional Health Science (Pharmacy Track)
and
the Doctor of Pharmacy Degree

1. INTRODUCTION AND OBJECTIVES

The University of Maryland Eastern Shore (UMES) and College of Southern Maryland (CSM) agree to provide a cooperative undergraduate/professional program leading to a Associate of Science degree in Pre-Professional Health Science (Pharmacy Track) from CSM and a Doctor of Pharmacy (Pharm.D.) degree from UMES.

Such a cooperative program is being created and sustained in an effort to fulfill the following mutual objectives:

- a. To attract qualified students to UMES and CSM.
- b. To cooperatively provide a qualified student the opportunity to complete the Associate of Science degree in Pre-Professional Health Science and the Pharm.D. degree in five years.
- c. To facilitate the transition of students from CSM to UMES.
- d. To provide advisement for students at CSM who intend to pursue professional study at UMES.
- e. To encourage academic and administrative coordination between the institutions and the exchange of evaluative information on outcomes of the program with the goal of continual improvement.

2. OVERVIEW

To offer the students at CSM the opportunity to pursue an Associate of Science (A.S.) in Pre-Professional Health Science (Pharmacy Track) from their home institution and a Pharm.D. degree from UMES in five years. The dual-degree program will require the CSM students to spend their first two years at CSM and their last three years at UMES. The CSM students will earn their A.S. degree in Pre-Professional Health Science (Pharmacy Track) from CSM after they have completed the two years of required coursework. The Pharm.D. degree will be awarded after successful completion of all of the degree requirements in the professional program. The parties to this collaboration will offer

the appropriate combination of courses to ensure that a student can complete the requirements for the A.S. in Pre-Professional Health Science (Pharmacy Track) from CSM and the Pharm.D. from UMES in five years.

3. ADMISSIONS PROCEDURE

Consideration for admission will be based on the applicant's potential for academic and professional achievement as well as an assessment of written and verbal communication skills, critical thinking skills, integrity, dedication, motivation, character and maturity.

Counseling and admissions of students entering the Pharm.D. program through this Memorandum of Understanding will be through the following procedures and policies:

- a. Application for undergraduate admissions will be made to CSM, where the prospective student will be subject to the admission requirements of CSM.
- b. CSM is responsible for informing students, who are applying for admission to the Pharm.D. program at UMES through this Memorandum of Understanding, of the admission criteria as described in section 4.
- c. CSM will provide a copy of the CSM-UMES 2+3 Curriculum Overview which lists the courses required to satisfy both degree requirements (Appendix I).
 - i. Through academic advising at CSM, students will be made aware of the courses available at CSM that will be used to meet degree requirements and prerequisites for the 2+3 Program.
 - ii. A prospective, accepted, or matriculated CSM student may indicate the desire to follow the 2+3 Program:
 - a) at the time of the student's admission to CSM or
 - b) early enough in the student's undergraduate academic program at CSM to permit the student to complete all of the prerequisite courses for admission to the 2+3 Program at UMES by the end spring semester prior to intended matriculation into the Doctor of Pharmacy program at UMES.

- iii. UMES will guarantee admission for up to three CSM students annually into its Doctor of Pharmacy program via the 2+3 pathway provided they:
 - successfully complete the requirements of CSM's Associate of Science degree in Pre-Professional Health Science (Pharmacy Track) and;
 - maintain a minimum 3.5 GPA and;
 - obtain a score of at least 50 on the Pharmacy College Admission Test (PCAT) and;
 - have a successful interview.

4. REQUIREMENTS FOR STUDENTS WHILE AT CSM FOR THE A.S. IN PRE-PROFESSIONAL HEALTH SCIENCE (PHARMACY TRACK)

- a. Students should plan to apply to the Doctor of Pharmacy Program in the fall of their second year at CSM.
- b. Participate in the PharmCAS Early Decision program.
- c. Submit an application to PharmCAS (www.PharmCas.org).
- d. Submit a personal statement directly to PharmCAS.
- e. Submit a required minimum of three recommendations letters directly to PharmCAS.
- f. Submit all transcripts to PharmCAS. Academic performance will only be evaluated for prerequisite course work undertaken by the students, but transcripts for all college coursework must be submitted to PharmCAS.
- g. Complete the UMESSOP supplemental application.
- h. Earn a grade of C (2.0) or better in each prerequisite course. All pre-pharmacy coursework must be completed by **the end of the spring semester** annually prior to matriculation.
- i. Earn a minimum grade point average of 3.3 (both science/math and cumulative) on a 4.0 scale. The GPAs are calculated based on the pre-requisite course work listed in Appendix I.
- j. Obtain a recommended minimum of 50 on the Pharmacy College Admission Test (PCAT) exam.
- k. Provide all required documents including transcripts, medical forms, and other pre-matriculation requirements.
- l. Satisfy the Technical Standards for admission to the program as listed on the UMESSOP's website.
- m. Complete the UMESSOP's on-campus personal interview with members of the Faculty and of the Admissions Committee (by invitation only).

5. REQUIREMENTS FOR STUDENTS WHILE AT UMES FOR THE PHARM.D. DEGREE

- a. The student must successfully complete all of the courses (164.5 credits) in the professional program to be awarded the Pharm.D. degree (see Appendix I).
- b. The student must satisfy all other graduation requirements according to the academic policies set by UMES.

6. POLICIES AND REGULATIONS

Students will be required to comply with the rules and regulations governing academic performance, grade appeals, and student behavior as established and published by CSM and UMES, respectively, depending on the institution at which the student is currently enrolled or where the applicable event/conduct occurred.

7. TUITION AND FEES

Students involved in this collaboration will be responsible for tuition and fees in accordance with the policies established by the institution in which they are enrolled.

8. RESPONSIBILITIES OF BOTH PARTIES

a. CSM shall:

- i. Recruit highly qualified students who show promise in becoming excellent pharmacy professionals.
- ii. Identify a 2+3 program advisor.
- iii. Counsel and screen applicants for admission to CSM during the years of undergraduate course work.
- iv. Assure that CSM students have met the graduation requirements of CSM.
- v. Work with UMES on promotional materials about the 2+3 Program.
- vi. Provide to UMES a list of all *potential* applicants to the 2+3 Program no later than July 1st of each academic year.
- vii. Provide regular updates about curricular changes as they relate to the Pre-Professional Health Science (Pharmacy Track) program.
- viii. Ensure the Pre-Professional Health Science (Pharmacy Track) program maintains compliance with all of the accreditation standards mandated by the Middle States Commission on Higher Education.

b. UMES shall:

- i. Work closely with the CSM 2+3 program advisor to advise the cohort of CSM students each year.
- ii. Grant the Pharm.D. degree to students who have successfully completed the 2+3 Program.
- iii. Provide to CSM an annual list of students who entered the Pharm.D. program via this MOU and successfully completed the program.
- iv. Provide regular updates about curricular changes as they relate to the Pharm.D. program.

- v. Ensure the Pharm.D. program maintains compliance with all of the accreditation standards mandated by the Accreditation Council for Pharmacy Education.

9. MUTUAL TERMS AND CONDITIONS

- a. **Term of Agreement.** This agreement shall be reviewed in the spring after the first cohort has been accepted in the Pharm.D. program and every two years thereafter. The agreement will be in effect for a period of five years from the date it is signed by all necessary parties, and may be renewed upon mutual agreement through a renewed agreement.
- b. **Termination of Agreement.** UMES and CSM may terminate this Agreement for any reason with ninety (90) days advanced written notice. Should UMES and CSM terminate this Agreement prior to the completion of an academic semester, all students enrolled at that time may continue their educational experience until it would have been concluded absent the termination.
- c. **Modifications and Amendments of Agreement.** This Agreement shall only be modified in writing with the same formality as the original Agreement. If appendices require updates, this Agreement may be amended by written agreement of the parties made subsequent to this agreement. To be effective, such amendments must make explicit reference to this agreement and must be signed by authorities with signature authority for the respective institutions.
- d. **Nondiscrimination.** The parties agree to continue their respective policies of nondiscrimination based on Title VI of the Civil Rights Act of 1964 in regard to sex, age, race, color, creed, veteran status, gender identify, and national origin, Title IX of the Education Amendments of 1972 and other applicable laws, as well as the provisions of the Americans with Disabilities Act.
- e. **Assignment.** Neither party shall assign, sell, or otherwise transfer this Agreement without prior written consent of the other. Any such purported assignment, sale or transfer shall be void.

10. DESIGNATED REPRESENTATIVES

The following are the designated representatives for each institution for purposes of implementing this agreement and for any notices required to be given under this agreement.

For the University of Maryland Eastern Shore:

Rondall E. Allen, B.S., Pharm.D.

Dean, School of Pharmacy and Health Professions

University of Maryland Eastern Shore

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For College of Southern Maryland:

Jean Russ

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College of Southern Maryland

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MEMORANDUM OF UNDERSTANDING


We, the undersigned, agree to the requirements for the A.S. degree in Pre-Professional Health Science (Pharmacy Track) at the College of Southern Maryland and Doctor of Pharmacy degree offered by the University of Maryland Eastern Shore, as indicated on the attached.




Dr. Juliette B. Bell Date
President
University of Maryland Eastern Shore
Princess Anne, MD 21853



Dr. Maureen Murphy Date
President
College of Southern Maryland
LaPlata, MD 20646



Dr. Kimberly Whitehead Date
Interim Provost and Vice President
for Academic Affairs
University of Maryland Eastern Shore
Princess Anne, MD 21853



Dr. Eileen Abel Date
Vice President for Academic Affairs
College of Southern Maryland
LaPlata, MD 20646

APPENDIX I: CSM and UMES 2+3 Curriculum Overview

	Fall Credits	Spring Credits
CSM Year 1		
ENG 1010 Composition and Rhetoric*	3	
BIO 1020/L Zoology with Lab* or BIO 1060/L Principles of Biology with Lab*	4	
CHE 1200/L General Chemistry I with Lab*	4	
MTH 1200 Calculus I and Analytic Geometry*	4	
BIO 2070/L Integrated Human Anatomy and Physiology with Lab*		4
CHE 1210/L General Chemistry II with Lab*		4
SOC 1010 Introduction to Sociology		3
MTH 2300 Introduction to Statistics		3
Humanities (preferred ENG 1020)		3
Total Semester Credit Hours CSM Year 1-32		
CSM Year 2		
CHE 2200/L Organic Chemistry I with Lab	4	
BIO 2080/L Integrated Human Anatomy and Physiology with Lab	4	
PSY 1010 General Psychology	3	
COM 1010 Basic Principles of Speech Communications (preferred)	3	
BIO 2010/L Microbiology with Lab		4
ECN 2020 Principles of Microeconomics		3
CHE 2210/L Organic Chemistry II with Lab		4
Humanities (Se Gen Ed Listing)		3
Total Semester Credit Hours CSM Year 2- 28		
Total Semester Credit Hours CSM- 60		

Note: In addition to the courses above, students MUST complete PHY 1010 lecture and lab (face to face version) and a 3 credit humanities or social and behavioral science course in order to meet pre-req requirements for program.

APPENDIX I (CONT'D): UMES and CSM 2+3 Curriculum Overview

UMES Year 1	Fall Credits	Spg/Sum Credits
PHAR 530 Pharmaceutics and Biopharmaceutics	4.5	
PHAR 501 Basics of Drug Information and Introduction to Pharmacy Profession	1.5	
PHAR 510 Fundamentals of Drug Action and Metabolism	3	
PHAR 511 Genetic Controls of Cell Function, Cell Reproduction and Protein Synthesis	2.5	
PHAR 512 Metabolism of Carbohydrates, Lipids, and Amino Acids	4	
PHAR 523 Endocrine System: Pharmacology and Medicinal Chemistry	1.5	
PHAR 540 Pharmacy Administration I - Health Care Delivery	2	
PHAR 550 Pharmaceutical Calculations	2	
PHAR 542 Concepts in Diversity and Communication For The Pharmacist	3	
PHAR 561 Professional Development I	1	
PHAR 571 IPPE I	5	
PHAR 520 Principles of Neurobiology and Neuropharmacology		1
PHAR 525 Neuropharmacology and Medicinal Chemistry		3.5
PHAR 521 Cardiovascular & Renal: Pharmacology and Medicinal Chemistry		2
PHAR 522 Gastrointestinal & Genitourinary: Pharmacology and Medicinal Chemistry		1
PHAR 513 Hematology and Immunology		4
PHAR 531 Pharmacokinetics		3.5
PHAR 524 Toxicology		1
PHAR 541 Pharmacy Law		1.5
PHAR 514 Biostatistics and Clinical Trial Design		1.5
PHAR 543 Public Health for Pharmacists		2
PHAR 544 Direct Patient Care in Pharmacy Practice		3
PHAR 562 Professional Development II		1
PHAR 572 IPPE II		5
Total Semester Credit Hours UMES Year 1 - 60	30	30
UMES Year 2	Fall Credits	Spring Credits
PHAR 640 Pharmacy Administration II: Management	3	
PHAR 610 PTMM: Principles of Pharmacotherapy	2	
PHAR 614 PTMM: Pulmonology and Ophthalmology	2	
PHAR 611 PTMM: Fluids, Electrolytes and Nephrology	2	
PHAR 612 PTMM: Cardiology	5.5	
PHAR 630 Sterile Products	1.5	
PHAR 641 Practice of Drug Information and Literature Evaluation	2	
PHAR 622 PTMM: Endocrinology and Urology	3	
PHAR 661 Professional Development III	1	
PHAR 671 IPPE III	2	
PHAR 624 Integration of Pharmacy Practice I	2.5	
PHAR 650 Top 200 Drugs	1	
PHAR 609 Therapeutics of Self-Care and Over the Counter Products	2	

PHAR 619 PTMM: Neurology		3
PHAR 618 PTMM: Psychiatry		2.5
PHAR 615 PTMM: Gastroenterology		3
PHAR 613 PTMM: Immunology and Rheumatology		3
PHAR 616 PTMM: Infectious Disease I		3
PHAR 617 PTMM: Infectious Disease II		3
PHAR 620 PTMM: Hematology/Oncology		3
PHAR 660 Scientific Writing		1
PHAR 625 Integration of Pharmacy Practice II		2.5
PHAR 662 Professional Development IV		1
PHAR 672 IPPE IV		2
Elective courses*		6
Total Semester Credit Hours UMES Year 2 - 62.5	29.5	33
UMES Year 3	Summer/Fall/Spring Credits	
Required Advanced Practice Pharmacy Experiences (APPEs)		
PHAR 700 APPE-Advanced Community Practice		5
PHAR 701 APPE-Advanced Institutional Practice		5
PHAR 702 APPE- Acute Care		5
PHAR 703 APPE- Ambulatory Care		5
Elective APPEs (Select 4)*		20
APPE Patient Care Elective		
PHAR 711 APPE - Home Infusion		
PHAR 713 APPE - Emergency medicine		
PHAR 714 APPE - Hematology/Oncology		
PHAR 715 APPE - Patient Care		
APPE Systems Elective		
PHAR 704 APPE - Public Health		
PHAR 710 APPE - Drug Information		
PHAR 712 APPE - Management and Leadership		
PHAR 720 APPE - General Elective		
PHAR 799 Professional Seminar		2
Total Semester Credit Hours UMES Year 3 - 42.0		42
Program Total Credit Required Hours - 164.5		164.5

Abbreviations: IPPE – Introductory Pharmacy Practice Experience, PTMM-Pharmacotherapy and Medication Management, APPE – Advanced Pharmacy Practice Experience, SCH – Semester Credit Hours

*At least one elective must come from each category, patient care and systems