

**Memorandum of Understanding (MOU) between
University of Maryland, Baltimore, School of Pharmacy
(UMSOP) and Frostburg State University (FSU)
for a 3:4 Program
BS in Chemistry and Doctor of Pharmacy**

I. Identification of Parties

The University of Maryland, Baltimore (UMSOP), School of Pharmacy and Frostburg State University (FSU) are constituent institutions of the University System of Maryland. FSU and UMSOP hereby enter into an inter-institutional Memorandum of Understanding (MOU) establishing an admission pathway from the BS in Chemistry (BS-Chemistry) to the Doctor of Pharmacy program (PharmD).

II. Purpose

The purpose of this BS to PharmD pathway is to facilitate degree completion, allowing qualified students to save both time and money by completing the undergraduate and doctoral degrees within seven years, rather than the eight years required for consecutive degrees.

Many students at FSU aspire to become pharmacists as their career goal. Students typically apply to pharmacy school while completing their bachelor's degree, and because the PharmD does not require a bachelor's degree for admission, some of the strongest students leave FSU without a degree, even though they have often completed about 75% of the requirements for their major. The proposed program will provide a pathway for students to count the courses in the first year of pharmacy school toward completion of the BS-Chemistry-APC.

III. Admission Criteria and Procedures

A student interested in the BS to PharmD pathway should meet with the FSU chemistry advisors upon admission or as soon as possible after deciding to pursue the BS to PharmD pathway. FSU students are encouraged to visit UMSOP's Baltimore campus during open house events or by appointment. UMSOP will provide FSU undergraduate admissions staff with information supporting the pathway and, if requested, annual on-site visits.

Early declaration of intent is recommended to help students schedule their courses appropriately and meet admissions deadlines. The FSU advisor, in collaboration with the student in the admission pathway, will monitor the process for completing the BS to PharmD pathway eligibility criteria and the progression timeframe.

A qualified student will successfully complete a minimum of 98 credits of BS courses at FSU that are required to fulfill the major in Chemistry, as well as all PharmD [prerequisite courses](#) needed to apply for the PharmD. UMSOP accepts Advanced Placement credits and community college courses as prerequisites for the PharmD. A student who meets minimum requirements for the PharmD program will be guaranteed an admission interview based on UMSOP policy and procedures.

Admission to the PharmD requires the completion of all pharmacy prerequisites, a complete application package, and a successful interview. All students in the BS to PharmD admission pathway are required to adhere to the UMSOP's admission deadlines and processes. Priority admissions for PharmD admission may be made in January of the junior year, and the regular decision deadlines may extend through April of the junior year. UMSOP will reserve five seats in each cohort for FSU students who apply by the final deadline and meet the above requirements.

The PharmD application process is competitive, and admission is not guaranteed. UMSOP reserves the right to deny admission to any applicant.

IV. Progression

To be considered for admission to UMSOP from the 3:4 program, the student must be enrolled at FSU in the third year of the BS-Chemistry program. Students apply for admission to the PharmD program at UMSOP during the fall semester.

After successfully completing the first year of the PharmD program (see Appendix A), the student will earn a BS- Chemistry from FSU. The student must request that the UMSOP transcript be sent to FSU for review of course completion and application to the BS program and must comply with all FSU requirements and procedures for BS graduation. The student will continue the PharmD curriculum to complete the second, third, and fourth years of the PharmD program at UMSOP. The PharmD degree will be awarded upon the successful completion of all program requirements.

Upon matriculation in the PharmD program, and provided the student remains in good standing in the School of Pharmacy, specifically-designated courses, totaling at least 30 credits, taken within the first year of the PharmD with a grade of honors, pass, or remediated pass, will be applied toward the completion of the BS degree. The PharmD program uses an honors/pass/fail grading system, and no letter grades are assigned for coursework. The threshold for earning a grade of "pass" is 75% plus successful completion of milestone skills if required. In applicable courses, the honors designation is granted to students in the top 10% of the class based on overall course points. Should a student cease to be enrolled in the PharmD, any pharmacy courses passed with a grade of honors, pass, or remediated pass shall be evaluated by FSU for the completion of the BS degree. A student who discontinues their enrollment in the PharmD program is responsible for requesting an official transcript from UMSOP and supplying it to FSU's Office of the Registrar.

V. Student Responsibilities

The student is responsible for:

- Submission of all required PharmD application forms and materials according to published deadlines
- Payment of all deposits, tuition, and fees of the institution in which the student is enrolled – when the student is enrolled at FSU, they will pay the FSU tuition rate, and when the student is enrolled at UMSOP, they will pay the UMSOP tuition rate
- Execution of a written authorization (a "FERPA release") to permit FSU and UMSOP to monitor any matter of legitimate educational interest
- Awareness of and compliance with all academic and non-academic standards, policies, and procedures of FSU and UMSOP during enrollment at each institution (note that program requirements may differ)
- Successful completion of all requirements for the BS to PharmD pathway, including the FSU BS-Chemistry core curriculum and all prerequisites for admission to UMSOP, as well as progression requirements throughout matriculation in the PharmD

VI. FSU/UMSOP Responsibilities

Upon completion of the FERPA release form, designated program representatives at FSU and UMSOP will maintain regular communication regarding the student's progression. While a student is enrolled at FSU, a designated program advisor will provide counseling, advising, and an appropriate evaluation of academic performance every semester, in accordance with the requirements stated herein. While a student is enrolled at UMSOP, the student will be advised by the UMSOP Office of Students.

At this time, no additional courses need to be created. The 3:4 program curriculum requirements are made up of existing courses and approved programs. Each institution's academic and non-academic policies and procedures shall apply to the student during the time of matriculation. Each institution will offer the appropriate combination of courses to ensure that a student can complete the requirements for both the BS-Chemistry from FSU and the PharmD from UMSOP within seven years. Each institution will bear its own legal expenses related to resolving any academic or disciplinary matters.

While the student is enrolled at FSU, they will apply for and receive financial aid only at FSU. FSU will determine eligibility and the satisfaction of all federal and institutional requirements before aid is disbursed. Upon admission to UMSOP, the student may apply for financial aid through the University of Maryland Baltimore (UMB), and UMB will determine eligibility and the satisfaction of all federal and institutional requirements before aid is disbursed.

VII. FSU/UMSOP Points of Contact

Institutional contacts for issues or questions related to this MOU:

FSU: Matthew Crawford, Ph.D.
 Chemistry Professor and Chair, Department of Physical and
 Environmental Sciences
 Frostburg University

mjcrawford@frostburg.edu

UMSOP: Leah Sera, PharmD, MA, BCPS
Associate Dean of Recruitment, Admissions, and Integration
University of Maryland School of Pharmacy
LSera@rx.umaryland.edu

VIII. Implementation

Implementation of this MOU is the responsibility of the Dean of the University of Maryland, Baltimore, School of Pharmacy, and the Dean of the College of Humanities, Arts, and Sciences of Frostburg State University. Each institution shall designate a representative responsible for expediting and directing applications and admissions to the PharmD program. In the event one institution changes representatives, it shall notify the other of the change.

FSU and UMSOP will feature the BS to PharmD pathway in their respective catalogs, publications, and admissions recruitment activities. Both institutions will approve all publication materials related to the pathway. FSU will refer students interested in the chemistry field to the BS to PharmD pathway and actively recruit applicants for this pathway.

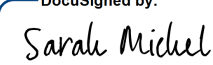
Both parties may agree to amend the requirements for the pathway as needed. Amendments to PharmD admission requirements resulting from curricular changes will become effective in accordance with the dates specified by UMSOP, while allowing current pathway students sufficient time to meet the new requirements. Amendments or curricular changes approved by the BS- Chemistry program must ensure compliance with UMSOP's minimum requirements as set forth in this agreement.

Modifications or amendments to the terms of this MOU must be agreed to in writing by both parties. All notices and correspondence between the parties shall be in writing and sent to the designated program representatives.

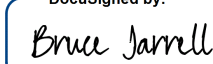
This MOU shall become effective when signed by both parties and shall continue from academic year to academic year unless terminated. Either party may terminate this MOU for any reason upon sixty (60) days prior written notice to the other Party, which shall be given by registered or certified mail directed to the attention of the designated institutional contact of the other party. In the event of termination, the parties to this MOU shall honor commitments to any student currently enrolled in the BS to PharmD pathway.

APPROVED:

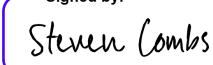
FOR THE UNIVERSITY OF MARYLAND, BALTIMORE

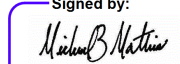
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Sarah L. J. Michel, Ph.D.
Dean & Professor of Pharmaceutical Sciences
University of Maryland School of Pharmacy


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Roger Ward, EdD, JD, MSL, MPA
Provost and Executive Vice President

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Bruce Jarrell, MD, FACS
President

FOR FROSTBURG UNIVERSITY

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Steven Combs, Ph.D.
Dean, College of Humanities, Arts & Sciences

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Michael Mathias, Ph.D.
Provost and Senior Vice President for Academic and Student Affairs

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Darlene Brannigan Smith, Ph.D.
President

Appendix A. FSU and UMSOP Curricula

Proposed Curriculum at Frostburg State University (98 credits)

* Prerequisite course for UMSOP PharmD program

Year 1

Semester 1:

- *CHEM 201 – General Chemistry I (4)
- *BIOL 149/159 – General Biology (4)
- *ENGL 101/111 – First Year Composition (3)
- *MATH 236 – Calculus I (4)
- ORIE 101 – Intro. To Higher Education (1)

Semester 2:

- *CHEM 202 – General Chemistry II (4)
- * BIOL 304 – Microbiology (4)
- MATH 237 – Calculus II (4)
- ECON 200 or 201/211 – Economics (3)

Year 2

Semester 1:

- *CHEM 311 – Organic Chemistry I (3)
- *CHEM 312 – Organic Chemistry Lab I (1)
- *BIOL 321 – Anatomy & Physiology I (4)
- BIOL 310 – Cell Biology (4)
- IDIS 150 – FSU Colloquium (3)
- CHEM 304 – Computational Techniques (2)

Semester 2:

- *CHEM 321 – Organic Chemistry II (3)
- *CHEM 322 – Organic Chemistry Lab II (1)
- CHEM 222 – Organic Chemistry II (4)
- *BIOL 322 – Anatomy & Physiology II (4)
- #GEP Fine & Performing Arts (3)
- #GEP Humanities (3)
- #GEP Social Science (3)

Year 3

Semester 1:

- CHEM 320 – Quantitative and Analytical Chemistry (4)
- CHEM 455 – Biochemistry (3)
- *MATH 109/110 or 280 – Statistics (3)
- *PHYS 215 or 261 – Physics I (4)
- GEP Identity and Difference (3)

Semester 2:

- CHEM 305 – Research Methods (1)/PSES 305 – Research Methods in Physical and Environmental Sciences (1) + CHEM 493 – Advanced Chemical Research (2)

*CMST 102/112 or 122- Communication (3)
ENGL 338/339- Advanced Writing (3)
PHYS 216/262 – Physics II (4)
#GEP Humanities (3)

Proposed Curriculum at UMSOP

(21 to 23 credits transferred to Frostburg to complete BS-Chemistry degree requirements.)
(§ Indicates courses that would be transferred.)

First Semester (Year 1 – Fall)

§ PHRM 5102- Applied Biochemistry (1.5)
§ PHRM 5103- Applied Cell and Molecular Biology (1.5)
§ PHRM 5104- Applied Medicinal Chemistry (1.5)
§ PHRM 5101- Applied Physical Chemistry (1)
§ PHRM 5100- Principles of Pharmacy Science (2)
§ PHRM 5400- Pillars of Pharmacy 1 (1)
§ PHRM 5200- Essential Skills for Pharmacy Practice 1 (1)
§ PHRM 5500- US Healthcare (2)
PHRM 5000- Foundations of Person-Centered Care (1.5)
IPPE 1000- Pharmacist Career Exploration (1)
PHRM 5300- PharmFusion 1 (1)

Total Transferred: 11.5 credits transferred

Second Semester (Year 1 – Spring)

§PHRM 5111 -Anatomy and Physiology of Drug Absorption, Distribution, and Elimination (3)
§PHRM 5610- Clinical Pharmacology 1 (3)
§PHRM 5610- Essential Skills for Pharmacy Practice 2 (3)
§PHRM 5110- Human Immunology (1)
§PHRM 5112 – Principles of Microbiology (1)
§PHRM 5401 Pillars of Pharmacy 2 (1)
PHRM 5611- Foundations of Therapeutics 1 (3)
PHRM 5301 PharmFusion 2 (1)
IPPE 1100 Person-Centered Care 1 (1)
IPPE 2100 – Community Pharmacy Immersion (3)
Total Transferred: 12 credits

Certificate Of Completion

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School Identifier:

Document Identifier:

Student Identifier:

Source Envelope:

Document Pages: 7

Signatures: 6

Envelope Originator:

Certificate Pages: 2

Initials: 0

Meghan Bruce Bojo

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Baltimore, MD 21201

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mbojo@umaryland.edu

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mbojo@umaryland.edu

Signer Events

Sarah Michel

smichel@rx.umaryland.edu

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Sarah Michel

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Roger Ward

rward@umaryland.edu

Provost and Dean, Graduate School

University of Maryland, Baltimore

Security Level: Email, Account Authentication (None)

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Roger Ward

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Electronic Record and Signature Disclosure:

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Bruce Jarrell

bjarrell@umaryland.edu

President

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Bruce Jarrell

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Electronic Record and Signature Disclosure:

Not Offered via Docusign

Steven Combs

scombs@frostburg.edu

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Steven Combs

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Darlene Brannigan Smith dbsmith@frostburg.edu Interim President Security Level: Email, Account Authentication (None)	 <p>Signed by: 41D0F96EE433479...</p> <p>Signature Adoption: Pre-selected Style Using IP Address: 2601:156:8381:5b20:dd86:e461:ab26:9925 Signed using mobile</p>	Sent: 5/22/2026 1:58:44 PM Viewed: 5/22/2026 6:09:40 PM Signed: 5/22/2026 6:10:25 PM
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