

HARFORD COMMUNITY COLLEGE to UNIVERSITY OF MARYLAND EASTERN SHORE – SCHOOL OF PHARMACY

Appendix I: The following page indicates the *course-to-course equivalency*, including general education requirements, as agreed upon within the articulation agreement between the Associate of Sciences Degree, Chemistry, Calculus based Physics of Harford Community College and the Doctor of Pharmacy degree program at University of Maryland Eastern Shore.

HARFORD COMMUNITY COLLEGE to UNIVERSITY OF MARYLAND EASTERN SHORE					
Transferrable Prerequisite Requirements					
HCC Course	Area Satisfied	Credits	UMES Equivalent	Credits	Area Satisfied
First Semester					
CHEM 111: General Chemistry I (GL)	Program Req./ General Ed.	4	General Chemistry (with lab, for science majors)	4	
ENG 101: English Composition (GE)	General Ed.	3	English Composition and Literature	3	
MATH 203: Calculus I (GM)	Program Req.	4		4	
ECON 101: Macroeconomics (GB) OR ECON 102: Microeconomics (GB)	General Ed.	3	Economics	3	
Second Semester					
BIO 120: General Biology I	Program Elect.	4	General Biology (with lab, for science majors)	4	
CHEM 112: General Chemistry II A (GL)	Program Req.	4	General Chemistry (with lab, for science majors)	4	
MATH 204: Calculus II (GM)	Program Req.	4	Calculus	4	
PHYS 203: General Physics: Mechanics and Particle Dynamics (GS)	Program Req.	3		3	
PHYS 200: General Physics I Lab	Program Elect.	1		1	
Third Semester					
BIO 205: Microbiology OR one of the remaining prerequisite BIO courses required for admissions to the UMES program (see courses below)	Program Elect.	4	Microbiology with Lab	4	
CHEM 207: Organic Chemistry I	Program Req.	4	Organic Chemistry (with lab, for science majors)	4	
CMST 210: Group Communication and Leadership (GH)	General Ed.	3	Public Speaking/Interpersonal Communication	3	
PHYS 204: General Physics: Vibrations, Waves, Heat, Electricity and Magnetism (GL)	Program Req.	4	Physics	4	
Fourth Semester					
CHEM 208: Organic Chemistry II	Program Req.	4	Organic Chemistry (with lab, for science majors)	4	
MATH 216: Introduction to Statistics (GM)	Program Elect.	4	Statistics	4	
Arts/Humanities Elective (GH)*	General Ed.	3		3	
Behavioral/Social Science Elective (GB)*	General Ed.	3		3	
Physical Education Elective	Program Req.	1		1	
Total:		60		60	

*One of these general education electives must also be a diversity (D) course in order to satisfy HCC's diversity requirement.

Appendix II: Additional Program Requirements: All HCC transfer students seeking the Doctorate of Pharmacy must successfully complete the following additional course work:

**Prerequisite Courses		
HCC Course Information	Credits	UMES Requirement
**Remaining Prerequisites: 17		
BIO 203: Anatomy and Physiology I (GL)	4	Anatomy and Physiology
BIO 204: Anatomy and Physiology II (GL)	4	Anatomy and Physiology
Arts/Humanities Elective (GH)***	3	Humanities/Social Sciences
Behavioral/Social Science Elective (GB)***	3	Humanities/Social Sciences
English Composition or Literature Elective	3	English II or Literature

**Students are required to complete these courses prior to admission to the UMES Doctor of Pharmacy degree program. Prerequisite courses can be taken at HCC or at UMES.

***UMES recommends satisfying this requirement with courses in sociology, psychology, arts, music, or history.

UMES Program Requirements		
UMES Course Information	Credits	Fall/Spring/Summer
<i>First Academic Year (SP1)</i>		
PHAR 530 Pharmaceutics and Biopharmaceutics	4.5	Fall
PHAR 501 Basics of Drug Information and Intro to Pharmacy Profession	1.5	Fall
PHAR 510 Fundamentals of Drug Action and Metabolism	3	Fall
PHAR 511 Genetic Controls of Cell Func., Cell Reprod. and Protein Synthesis	2.5	Fall
PHAR 512 Metabol. of Carbohydrates, Lipids, and Amino Acids	4	Fall
PHAR 523 Endocrine System: Pharm. and Med. Chem.	1.5	Fall
PHAR 540 Pharmacy Administration I – Health Care Delivery	2	Fall
PHAR 550 Pharmaceutical Calculations	2	Fall
PHAR 542 Concepts in Diversity and Communication For The Pharmacist	3	Fall
PHAR 561 Professional Development I	1	Fall
PHAR 571 IPPE I	5	Fall
PHAR 520 Principles of Neurobiology and Neuropharmacology	1	Spring/Summer
PHAR 525 Neuropharmacology and Medicinal Chemistry	3.5	Spring/Summer

PHAR 521 CV & Renal: Pharm. and Med. Chem.	2	Spring/Summer
PHAR 522 GI & GU: Pharm. and Med. Chem.	1	Spring/Summer
PHAR 513 Hematology and Immunology	4	Spring/Summer
PHAR 531 Pharmacokinetics	3.5	Spring/Summer
PHAR 524 Toxicology	1	Spring/Summer
PHAR 541 Pharmacy Law	1.5	Spring/Summer
PHAR 514 Biostatistics and Clinical Trial Design	1.5	Spring/Summer
PHAR 543 Public Health for Pharmacists	2	Spring/Summer
PHAR 544 Direct Patient Care in Pharmacy Practice	3	Spring/Summer
PHAR 562 Professional Development II	1	Spring/Summer
PHAR 572 IPPE II	5	Spring/Summer
Total SP-1 SCH Credits	60	
<i>Second Academic Year (SP-2)</i>		
PHAR 640 Pharmacy Admin II: Management	3	Fall
PHAR 610 PTMM: Principles of Pharmacotherapy	2	Fall
PHAR 614 PTMM: Pulmonology and Ophthalmology	2	Fall
PHAR 611 PTMM: Fluids, Electrolytes and Nephrology	2	Fall
PHAR 612 PTMM: Cardiology	5.5	Fall
PHAR 630 Sterile Products	1.5	Fall
PHAR 641 Practice of Drug Information and Literature Evaluation	2	Fall
PHAR 622 PTMM: Endocrinology and Urology	3	Fall
PHAR 661 Professional Development III	1	Fall
PHAR 671 IPPE III	2	Fall
PHAR 624 Integration of Pharmacy Practice I	2.5	Fall
PHAR 650 Top 200 Drugs	1	Fall
PHAR 609 Therapeutics of Self-Care and OTC Products	2	Fall
PHAR 619 PTMM: Neurology	3	Spring/Summer
PHAR 618 PTMM: Psychiatry	2.5	Spring/Summer
PHAR 615 PTMM: Gastroenterology	3	Spring/Summer
PHAR 613 PTMM: Immunology and Rheumatology 3	3	Spring/Summer
PHAR 616 PTMM: Infectious Disease I	3	Spring/Summer
PHAR 617 PTMM: Infectious Disease II	3	Spring/Summer
PHAR 620 PTMM: Hematology/Oncology	3	Spring/Summer
PHAR 660 Scientific Writing	1	Spring/Summer

PHAR 625 Integration of Pharmacy Practice II	2.5	Spring/Summer
PHAR 662 Professional Development IV	1	Spring/Summer
PHAR 672 IPPE IV	2	Spring/Summer
Elective courses*	6	Spring/Summer
Total SP-2 SCH Credits	62.5	
Third Academic Year (SP-3)		
Required Advance Practice Pharmacy Experiences-APPEs	5	Fall
PHAR 700 APPE-Advanced Community Practice	5	Fall
PHAR 701 APPE-Advanced Institutional Practice	5	Fall
PHAR 702 APPE- Acute Care	5	Fall
PHAR 703 APPE- Ambulatory Care	5	Fall
Elective APPEs (Select 4)†	20	Fall
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	2.0	Fall
Total SP-3 SCH 42.0	42.0	
Program total	241.5	

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

SUMMARY:

Total credits hours to transfer from Harford Community College:	60
Total credit hours in remaining prerequisite courses:	17
Total credit hours of Required Major Courses at UMES:	164.5
<hr/> Total credit hours for Pharm. D. degree from UMES:	241.5