

MEMORANDUM OF UNDERSTANDING
HARFORD COMMUNITY COLLEGE & TOWSON UNIVERSITY
September 25, 2017

MATHEMATICS, Actuarial Science and Risk Management Concentration B.S. Degree

Harford Community College, Bel Air, Maryland, and Towson University, agree to follow the articulation of courses outlined in the articulation (course equivalency) document, for completion of requirements for the Bachelor of Science degree in Mathematics (Actuarial Science and Risk Management Concentration) (Attachment A), which is attached to, and incorporated by reference into, this Memorandum of Understanding (MOU). The following principles guide the operation of this MOU, with the requirements for transfer in specific curricula set forth in Attachment A.

1. Towson University will accept a maximum number of 64 credits from Harford Community College as outlined in the Attachment A. The number of transferable credits specific to this program is reflected in Attachment A.
2. Students who have completed the Associate of Arts Degree in the General Studies program at Harford Community College may transfer into Towson University's Mathematics program with junior standing provided that the student has completed all courses identified on Attachment A (which is attached to, and incorporated by reference into, this MOU) with a cumulative GPA of 2.00 or higher. Courses completed at Harford Community College with 300 or 400 level Towson University course equivalencies will transfer as lower-level credit but will satisfy course content as indicated.
3. Only courses in which a grade of C (2.00) or better is earned will apply toward the major at Towson University.
4. In accordance with the MHEC transfer policy pertaining to general education requirements, Towson University will accept the completion of Harford Community College's general education requirements (GenEds) and students will be required to complete courses at Towson University to satisfy the remaining *University Core* requirements as shown in Attachment A.
5. Towson University recognizes college-level experiential learning gained through previous work, military and/or volunteer service or life experience. Credit for prior learning may also be established through course challenge or standardized credit by examination.
6. Harford Community College students transferring to Towson University will be given every consideration for financial aid and will be eligible to compete for academic scholarships upon entrance to Towson University subject to stated scholarship deadlines.
7. Both Harford Community College and Towson University agree to work together to facilitate the transfer of students from Harford Community College to Towson University to work cooperatively to insure the high quality of the programs at the respective

institutions. Transfer of students will be in accordance with policies and procedures of both institutions, as they may be amended from time to time.

8. This MOU will be in effect initially for ten years, beginning *fall 2017*, with a review every two years by both parties. Any revisions the parties deem necessary must be evidenced in writing and signed by the authorized officials of each institution. The MOU may be terminated by either party for due cause and after adequate notice of not less than six months is given to the other party.
9. Towson University will establish procedures to provide information on the academic progress of Harford Community College students enrolled as part of this MOU.
10. This MOU, when signed, constitutes the entire agreement between the parties and supersedes all prior agreements and understandings between the parties respecting the matter hereof.

HARFORD COMMUNITY COLLEGE AND TOWSON UNIVERSITY



Dr. Steven Thomas
Vice President for
Academic Affairs

Date 9.29.2017



Dr. Timothy Chandler
Provost and Vice-President for
Academic Affairs

Date 10/13/17

HARFORD COMMUNITY COLLEGE GENERAL STUDIES A.A. DEGREE
TOWSON UNIVERSITY MATHEMATICS ACTUARIAL SCIENCE & RISK MANAGEMENT CONCENTRATION B.S. DEGREE

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY			
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	CORE	COMMENTS	COURSE ID#
ENG 101	English Composition (GE)	3	TSEM 102 waived	1.	Towson Seminar	
MATH 203*	Calculus I (GM)	4	ENGL 102	2.	English Composition	2348
CMST 101 (GH)*	Speech Fundamentals (GI)	3	MATH 273	3.	Mathematics	4407
ECON 101*	Arts/Humanities Elective (GH)	3	COMM 131	4.	Creativity & Creative Development	13370
(GL)	Macroeconomics (GB)	3	Depends on choice.	5.	Arts & Humanities	
(GS)	Biological/Physical Science Elective w/lab (GL)	4	ECON 202	6.	Social & Behavioral Sciences	1789
	Biological/Physical Science Elective (GS)	3	Depends on choice.	7.	Biological & Physical Science w/Lab	
			Depends on choice.	8.	Biological & Physical Science	
ECON 102*	Microeconomics (GB)	3	ECON 201	9.	Advanced Writing Seminar	1788****
HLTH 101**OR	Contemporary Health Issues (GI)	3	HLTH 101	10.	Metropolitan Perspectives	3624
HLTH 103** OR	Wellness Theory and Applications (GI)	3	KNES 235	11.	The United States as a Nation	4176
HLTH 106**	Nutrition for Personal Wellness (GI)	3	HLTH 204	12.	Global Perspectives	3634
GEN EDUC*	General Education Elective	3	Depends on Choice	13.	Diversity & Difference	
HIST ELECTIVE**	History Elective (GB) (must be General Education)	3	Depends on choice.	14.	Ethical Issues & Perspectives	
PHIL 205 *	Ethics (GH)	3	PHIL 253			6548****
Total CORE in Transfer		38				
MATH 204****	Calculus II	4	MATH 274			4408
MATH 206****	Calculus III	4	MATH 275			4409
MATH 217****	Linear Algebra	4	MATH 265			4403
ACCT 101 ***	Accounting Principles I	3	ACCT 201			0004
ACCT 102 ***	Accounting Principles II	3	ACCT 202			0005
PE	Physical Education Electives	2	PHEA TLL			10564
ENG 102 OR	English Composition and Literature	3	ENGL TLL			10267
ENG 109	English Composition: Research Writing		ENGL 152			2352
Program Requirements at Harford		23				
Total Harford Program Requirements at Harford		61				
Maximum Credits in Transfer		64				

64 credit transfer maximum. 3 Core Curriculum units must be completed at Towson University: Core 9: Advanced Writing Seminar

Please note that the Bachelor's degree cannot be completed in four years (total) if course requirements are not taken as indicated here. Students should select courses at HCC as follows:

***General Education:** Students should take **MATH 203 (Calculus)** to satisfy the Mathematics general education requirement (GM). Students should take **ECON 101 (Macroeconomics)** and **ECON 102 (Microeconomics)** as their Behavioral/Social Science general education requirements. Students should take **PHIL 205 (Ethics)** as one of their Arts and Humanities general education requirements. Either the remaining Arts and Humanities (GH) general education requirement or the General Education elective must also satisfy the Diversity requirement at HCC. Students who do not choose these courses as recommended will be required to take additional courses at TU to satisfy Core and major requirements.

****Health Elective & History Elective:** Students should take **HLTH 101 (Contemporary Health Issues)**, **HLTH 103 (Wellness Theory and Applications)** or **HLTH 106 (Nutrition for Personal Wellness)** as their health elective to satisfy a Core requirement at TU. Students who do not choose one of these health courses may be required to take an additional Core course that is a general education course (GB) as their History elective to satisfy a Core course at TU. Students who do not choose a general education history course may be required to take an additional Core course at TU.

*****General Electives:** Students should take **MATH 204 (Calculus II)**, **MATH 206 (Calculus III)**, **MATH 217 (Linear Algebra)**, **ACCT 101 (Accounting Principles I)** and **ACCT 102 (Accounting Principles II)** as their general electives to satisfy major requirements at TU. Students who do not take these course prior to transfer should complete these at TU within the first year of transfer.

****Requires course directive for Core placement.

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CORE REQUIREMENTS TO BE COMPLETED AT TOWSON

CORE 9: ADVANCED WRITING SEMINAR **3*UNITS**
(3 UNITS)

** Additional Core courses may be required if course selections at HCC were not made as indicated on Pg. 1 of this agreement.*

PROGRAM REQUIREMENTS TO BE COMPLETED AT TOWSON

REQUIRED COURSES: **7-24 UNITS**
(4 UNITS)

MATH 267 INTRODUCTION TO ABSTRACT MATHEMATICS

MATH 265 ELEMENTARY LINEAR ALGEBRA (If MATH 217 was not taken at HCC)

MATH 273 CALCULUS I (If MATH 203 was not taken at HCC)

MATH 274 CALCULUS II (If MATH 204 was not taken at HCC)

MATH 275 CALCULUS III (If MATH 206 was not taken at HCC)

(0-16 UNITS)

SELECT ONE OF THE FOLLOWING:

MATH 369 INTRODUCTION TO ABSTRACT ALGEBRA

MATH 463 LINEAR ALGEBRA

MATH 473 INTRODUCTORY REAL ANALYSIS

(3-4 UNITS)

COURSES FOR ACTUARIAL SCIENCE AND RISK MANAGEMENT CONCENTRATION:

REQUIRED COURSES: **51-63 UNITS**
(51 UNITS)

COSC 236 INTRODUCTION TO COMPUTER SCIENCE I

FIN 331 PRINCIPLES OF FINANCIAL MANAGEMENT

FIN 333 INVESTMENTS AND EQUITY SECURITY ANALYSIS

MATH 312 THEORY OF INTEREST

MATH 331 PROBABILITY

MATH 332 MATHEMATICAL STATISTICS

MATH 337 APPLIED REGRESSION AND TIME SERIES ANALYSIS

MATH 369 INTRODUCTION TO ABSTRACT ALGEBRA

MATH 438 ACTUARIAL MODELS

MATH 439 COMPUTATIONAL PROBABILITY MODELS

MATH 442 ACTUARIAL MODEL CONSTRUCTION

MATH 448 ADVANCED ACTUARIAL MODELS

MATH 485 MATHEMATICAL FINANCE

MATH 486 RISK MANAGEMENT AND FINANCIAL ENGINEERING

MATH 498 SENIOR SEMINAR ACTUARIAL SCIENCE AND RISK MANAGEMENT

ACCT 201 PRINCIPLES OF FINANCIAL ACCOUNTING (If ACCT 101 was not taken at HCC) (0-12 UNITS)

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ACCT 202 PRINCIPLES OF MANAGERIAL ACCOUNTING (If ACCT 102 was not taken at HCC)
ECON 201 MICROECONOMIC PRINCIPLES (If ECON 102 was not taken at HCC)
ECON 202 MACROECONOMIC PRINCIPLES (If ECON 101 was not taken at HCC)

TOTAL CREDITS TO B.S. DEGREE (122-151)

Harford Mathematics A.A. Degree 61
Completion of Core Curriculum at TU 3*
Major Requirements at TU 58-87
Electives at TU 0