MEMORANDUM OF UNDERSTANDING
HARFORD COMMUNITY COLLEGE & TOWSON UNIVERSITY
September 17, 2018

INFORMATION SYSTEMS – Business Track 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 Information Systems – Business Track (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 Science Degree in the Computer Science program at Harford Community College may transfer into Towson University's Information Systems 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 2018*, 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 9.28.2018

Dr. David Vanko
Interim Provost and Executive Vice-President
of **Academic Affairs**

Date 9 Oct 18

Harford Community College (HCC) – Computer Science A.S. Degree
Towson University (TU)/ Information Systems – Business Track B.S. Degree

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY		
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	COMMENTS	COURSE ID#
General Education Applied to CORE					
ENG 101	English Composition (GE)	3	ENGL 102	Towson Seminar Waived	2348
MATH 203	Calculus I (GM)	4	MATH 273	Satisfies required MATH course for major at TU	4407
GH*	Arts & Humanities Elective (GH)*	3	Depends on choice.		
GH*	Arts & Humanities Elective (GH)*	3	Depends on choice.		
GB*	Behavioral/Social Science Elective (GB)*	3	Depends on choice.		
ECON 102**	Microeconomics** (GB)	3	ECON 201	Satisfies major track requirement at TU	1788
BIO/PHSC	Biological/Physical Sciences (GL)	4	Depends on choice.		
BIO/PHSC	Biological/Physical Sciences (GS)	3	Depends on choice.		
MATH 204	Calculus II (GM)	4	MATH 274		4408
MATH 216**	Introduction to Statistics (GM)**	4	MATH 231	Satisfies required MATH course for major at TU	4393
Units Applied to TU Core		34			
Program Requirements/Electives					
CIS 115	Fundamentals of Programming	3	COSC TLL		10186
CIS 201	Assembly Programming Language	4	COSC TLL		10186
CIS 214	Programming II: Java	4	COSC TLL		10186
CIS 221	C++ Programming Language	4	COSC 175		1335
CSI 131	Computer Science I	4	COSC 236	*Satisfies required course for major at TU. Note: BOTH CSI 131 & 132 MUST BE COMPLETED TO RECEIVE CREDIT FOR COSC 236 & COSC 237.*	1344
CSI 132	Computer Science II	4	COSC 237	*IF ONLY ONE COURSE IS COMPLETED STUDENT WILL RECEIVE ELECTIVE CREDIT AND MUST TAKE BOTH COSC 236 AND 237 AT TU.*	1345
MATH 210	Discrete Structures	3	MATH 263	Satisfies required MATH course for major at TU	4401
Depends on choice	Physical Education Elective	1	PHEA TLL		10564
Program Requirements Applied		27	Core Package 3 : AACR 300		
Total Units Completed at Harford		60-61			
Maximum Units in Transfer		64			

*One General Education course from Arts and Humanities **OR** Social and Behavioral Sciences General Education categories must be a diversity (D) course.

** Students should choose specific courses in order to fulfill both the HCC requirement toward their A.S. degree, but also to complete a TU requirement in COSC or Core. See page 2 for more details.

Students under this agreement will receive a Core Package 3 provided course selections at HCC are made as indicated in this agreement. Students who do not complete courses as outlined here may need to take additional Core courses at TU.

Harford Community College (HCC) – Computer Science A.S. Degree
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Harford Community College Course Selections:

General Education:

- Students should choose **ECON 102 Microeconomics** as one of their Behavioral/Social Science Electives at HCC to satisfy both a Core and major requirement at TU. Students who do not take ECON 102 at HCC *will need to take ECON 201 at TU* to satisfy the IS program requirement.

Program requirements/ electives:

- Students should choose **MATH 216 Introduction to Statistics** as their "General Elective" at HCC to satisfy Major and Core Curriculum requirements at TU. Students who do not take MATH 216 at HCC *will need to take MATH 231 or 331 at TU* to satisfy the IS program requirement. **NOTE: MATH 216** is a 4-credit course and will increase a student's total degree credits at HCC by 1.0 credit. Students will be able to complete Bachelor's degree in 120 credits.

- Students who do not choose MATH 216 Introduction to Statistics as their "General Elective" should choose another General Education course to satisfy the requirement. Students who do not choose a MATH 216 or another General Education course will be required to take an additional Core course at TU.

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CORE Curriculum requirements to be completed at TU:

		6-9 Units
CORE 9	ENGL 317 Writing for Business and Industry	3
CORE 14	COSC 418 Ethical & Societal Concerns of Computer Scientists	3

Students who do not complete MATH 216 or general education course as indicated on page 1 and 2 of this agreement may need an additional Core course.

Required Information Systems (IS) Courses

		24 Units
CIS 211	Fundamentals of Information Systems and Technology	3
ITEC 231	Fundamentals of Web Technologies	3
CIS 239	Enterprise Systems and Architecture	3
CIS 350	Telecommunications	3
CIS 435	Human – Computer Interaction	3
CIS 379	Systems Analysis and Design	3
CIS 458	Organizational Database Management	3
CIS 479	Software Project Management	3
COSC 418	Ethical & Societal Concerns of Computer Scientists (counted above)	(3)

Capstone

		3 Units
CIS 475	Information Systems Capstone	3

Required MATH Course

		0-4 Units
MATH 231** or Basic Statistics** or		3 or
MATH 330	Introduction Statistics Methods	4

**If students do not complete MATH 216 as indicated on page 1 and 2 of this agreement.*

Other Requirements

		0 Units
ENGL 317	Writing for Business and Industry (counted above)	(3)

Business Track

		18-21 Units
ACCT 201	Principles of Financial Accounting	3
CIS 334	Data Organization	3
ECON 201	Microeconomic Principles	(3)

**If students do not complete ECON 102 as indicated on page 1 and 2 of this agreement.*

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Select two of the following: 6

CIS 377   Information Systems Security
CIS 397   Internship in CIS
CIS 426   Gaming Interface Design
CIS 433   Selected Topics in Information Systems
CIS 440   Systems Development/ e-Commerce
CIS 468   Applied Data Mining and Visual Analytics
CIS 495   Independent Study in Computer Information Systems
ITEC 427   Cloud Computing for Enterprises

Select one of the following pairs of courses: 6

ACCT 202   Principles of Managerial Accounting & ACCT 301 Intermediate Accounting I
ACCT 202   Principles of Managerial Accounting & ACCT 341 Management Accounting I
MKTG 341   Principles of Marketing & MNGT 361 Leadership and Management
MNGT 361   Leadership and Management & MNGT 395 Management of Organizational Behaviors
HLTH 207   Health Care in the U.S. & HCMN 305 Health Administration
EBTM 365   Principles of Operations Management & EBTM 419 Supply Chain Management
EBTM 365   Principles of Operations Management & EBTM 454 Business Process Management

Total Units to B.S. Degree	120 Units*
Harford Community College Computer Science A.S.	60-61
Completion of University Core at TU	6-9
Completion of Information Systems program requirements	45-52
Electives	0-9

This program is designed to be completed in 120 credits. Students who do not take courses at HCC as outlined in this document may require additional credits depending on their course selections.

Bachelor's Degree Requirements:

- *A C (2.0) or higher is required in all major courses.*
- *A cumulative grade point average (GPA) of 2.0 is required.*
- *32 units of the bachelor's degree must be completed at the upper level (courses numbered 300 or above).*