

MEMORANDUM OF UNDERSTANDING
COMMUNITY COLLEGE OF BALTIMORE COUNTY & TOWSON
UNIVERSITY
October 15, 2018

INFORMATION SYSTEMS B.S. Degree

Community College of Baltimore County, Catonsville, 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 (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 Community College of Baltimore County 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 Community College of Baltimore County 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 Community College of Baltimore County 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 Community College of Baltimore County'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. Community College of Baltimore County 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 Community College of Baltimore County and Towson University agree to work together to facilitate the transfer of students from Community College of Baltimore

County 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 five 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 Community College of Baltimore County 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.

**Community College of Baltimore County (CCBC) – Computer Science A.S. Degree
Towson University (TU)/ Information Systems B.S. Degree**

COMMUNITY COLLEGE OF BALTIMORE COUNTY			TOWSON UNIVERSITY		
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	COMMENTS	COURSE ID#
General Education Applied to CORE					
			TSEM 102 (waived)	Towson Seminar Waived	13192
ENGL 101	Composition (E)	3	ENGL 102		2348
MATH 251	Calculus I (M)	4	MATH 273	Satisfies Required Math course for major at TU	4407
CSIT 111	Logic and OO Design (I)	3	COSC 175		1335
GENED AH	Arts & Humanities General Education (A)*	3	Depends On Choice		
GENED AH	Arts & Humanities General Education (A)*	3	Depends On Choice		
GENED S/BS	Social and Behavioral Science Gen Ed (S)*	3	Depends On Choice		
GENED S/BS	Social and Behavioral Science Gen Ed (S)*	3	Depends On Choice		
GENED BPS	Biol/Chem/Phys Biol & Phys Sci Gen Ed (B)	4	Depends On Choice		
GENED BPS	Biol/Chem/Phys Biol & Phys Sci Gen Ed (B)	4	Depends On Choice		
ENGL 102	College Composition II (E) (program elective) **	3	ENGL TLL		10267
MATH 243	Discrete Mathematics (M)	3	MATH 263	Satisfies Required Math course for major at TU	4401
MATH 257	Linear Algebra (M)	4	MATH 265		4403
Units Applied to TU Core		40			
CSIT 210	Introduction to Programming	4	COSC 236	Satisfies Required IS courses for major at TU. BOTH CSIT 210 & 211 MUST BE COMPLETED TO RECEIVE CREDIT FOR COSC 236 & COSC 237. IF ONLY ONE COURSE IS COMPLETED STUDENT WILL RECEIVE ELECTIVE CREDIT AND MUST TAKE BOTH COSC 236 AND 237 AT TU.	1344
CSIT 211	Advanced Programming	4	COSC 237		1345
MATH 252	Calculus II	4	MATH 274		4408
CSIT 214	C++ Programming	4	COSC TLL	equivalent to COSC 175; transfers as COSC TLL for this agreement	10186
MATH 153	Introduction to Statistical Methods **	4	MATH 231	Satisfies Required Math course for major at TU	4393
ACDV 101	Academic Development: Transition (SEE NOTE)	(1)	NT	NOT TRANSFERABLE	
Program Requirements Applied		20			
Total Degree Requirements at CCBC		60-61	Core Package 4 : AACR 400 (13065)		
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 satisfy CCBC requirements toward A.S. degree, and to satisfy TU major and Core Curriculum requirements. See page 2 for more details.

NOTE: Credit students who are new to college (have not successfully completed transferable college credits from other institutions) are required to take ACDV 101 – Academic Development – Transitioning to college. This 1-credit course is designed to be taken in the first semester at CCBC. Students must provide an official transcript(s) from an accredited institution to document successful completion of college coursework for the ACDV 101 requirement to be waived.

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CCBC Course Selections:

Program requirements/ electives:

1. Students should choose **ENGL 102 College Composition II** for a Program elective to satisfy a Core requirement at TU. Students who do not take **ENGL 102** *may need to take an additional Core course at TU.*
2. Students should choose **MATH 153 Introduction to Statistical Methods** as one of their program electives in order to satisfy a required MATH course for the Information Systems (IS) major (MATH 231). Students who do not choose this elective *will have to complete MATH 231 or MATH 330 at TU* to satisfy major requirements.

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CORE Curriculum requirements to be completed at TU:		3 Units
CORE 9	ENGL 317 Writing for Business and Industry	3
Required Information Systems (IS) Courses		24 Units
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	3
Capstone		3 Units
CIS 475	Analysis and Design for Web Sites	3
Required MATH Course		0-4 Units
MATH 231 <i>or</i>	Basic Statistics <i>or</i>	3 <i>or</i>
MATH 330	Introduction Statistics Methods	4
*Students must complete one of these courses at TU if course selections at CCBC were not made as indicated on page 2 of this agreement.		
Other Requirements		0 Units
ENGL 317	Writing for Business and Industry (<i>counted above</i>)	(3)

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Students must choose one of the following tracks within the Information Systems Major:

1. Systems Track: 22 Units

COSC 336	Data Structures and Algorithm Analysis	3
COSC 412	Software Engineering	3
COSC 436	Object-Orientation Design & Programming	3
COSC 484	Web-Based Programming	3
CIS 440	System Development/ e-Commerce	3

Select two of the following:

CIS 212 <i>or</i>	Introduction to Business Programming <i>or</i>	
CIS 265	Visual Basic Programming	
CIS 377	Information Systems Security	
CIS 397	Internship in Information Systems	
CIS 425	Decision Support Systems	
CIS 426	Gaming Interface Design	
CIS 433	Select Topics in Information Systems	
CIS 468	Applied Data Mining and Visual Analytics	
CIS 495	Independent Study in Computer Information Systems	
ITEC 345	Scripting Languages	
ITEC 423	Emerging Internet Technologies	
ITEC 427	Cloud Computer for Enterprises	

2. Interface Design Track: 21 Units

CIS 334	Data Organization	3
CIS 445	Universal Usability: Designing Computer Interfaces for Blind Users	3
CIS 468	Applied Data Mining and Visual Analytics	3
ART 103	2D Process	3
ART 217	Digital Concepts: Image and Surface	3

Select two of the following:

ART 365	Design for the WWW	
CIS 397	Internship in Information Systems	
CIS 425	Decision Support Systems	
CIS 426	Gaming Interface Design	
CIS 433	Select Topics Information Systems	
CIS 436	e-Government	
CIS 495	Independent Study in Computer Information Systems	
DFST 101	Introduction to Deaf Studies	
OCTH 211	Philosophy of Occupational Therapy	

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3. E-Government Track	21 Units
CIS 334 Data Organization	3
CIS 436 e-Government	3
ITEC 336 Legal and Policy Issues in Information Technology	3
POSC 103 American National Government	3
POSC 207 State Government	3

Select two of the following:

CIS 377 Information Systems Security
CIS 397 Internship in Information Systems
CIS 433 Select Topics Information Systems
CIS 425 Decision Support Systems
CIS 445 Universal Usability: Designing Computer Interfaces for Blind Users
CIS 495 Independent Study in Computer Information Systems
POSC 375 Public Administration

Total Units to B.S. Degree	120 Units*
CCBC Computer Science A.S.	60
Completion of University Core at TU	3
Completion of Information Systems program requirements	48-53
Electives	4-9

**This program is designed to be completed in 120 credits. Students who do not take courses at CCBC 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).*