2+2 Articulation Agreement for Community College of Baltimore County and Towson University

Associate's Degree: A.A.S. in Information Technology
Bachelor's Degree: B.S. in Information Technology
Effective Term: Fall 2020

Section 1: Course Completion Plan for CCBC

This section outlines the courses to take for the Community College of Baltimore County (CCBC) general education and program requirements in order to complete both the CCBC and TU degrees within a total of 4 years and 120 credits. The following tables do not include any nontransferable or prerequisite coursework outside of the curriculum.

Table 1: General Education Courses Applied to TU Core Curriculum

CCBC Requirement	CCBC Course to Take	Credits	Towson University Equivalent Course
English Composition	ENGL 101 College Composition I	3	ENGL 102 Writing for a Liberal Education
Mathematics	MATH 153 Intro to Statistical Methods	4	MATH 231 Basic Statistics
Arts & Humanities	CMNS 101 Fundamentals of Communication	3	COMM 131 Public Speaking
Social & Behavioral Sciences	Any diversity course in the social & behavioral science category.	3	Equivalency will vary by course.
Biological & Physical Sciences	Any biological & physical sciences course with or without a lab.	3-4	Equivalency will vary by course.
Information Technology	CSIT 101 Technology and Information Systems	3	COSC 111 Information & Technology for Business
Program Requirement	ENGL 102 College Composition II	3	ENGL TLL English Elective
Program Elective	CSIT 120 Diversity in a Technological Society	3	COSC TLL Computer Science Elective

Total general education applied to the TU Core Curriculum: 25-26 credits

Completing the courses above will satisfy the general education program for A.A.S. degrees at CCBC. See section 2 for details on course placement in TU Core Curriculum requirements.

Table 2: Program Requirements and Electives Applied to TU Degree

CCBC Requirement	CCBC Course to Take	Credits	Towson University Equivalent Course
Program Requirement	CSIT 111 Logic & OO Design	3	COSC 175 General Computer Science

CCBC Requirement	CCBC Course to Take	Credits	Towson University Equivalent Course
Program Requirement	CSIT 121 Web Standards	3	ITEC 231 Fundamentals of Web Technologies
Program Requirement	CSIT 142 Introduction to MIS	3	CIS 211 Fundamentals of Information Systems & Technology
Program Requirement	CSIT 154 Database Concepts	4	COSC TLL Computer Science Elective
Program Requirement	CSIT 161 Introduction to Information Assurance	3	CIS T77 Introduction to Cybersecurity
Program Requirement	CSIT 166 Intro to Mobile Application Development	3	COSC TLL Computer Science Elective
Program Requirement	CSIT 210 Introduction to Programming	4	ITEC 236 Introduction to Computer Science I
Program Requirement	DCOM 101 Introduction to Data Communications	3	ITEC 250 Fundamentals of Computer Networks
Program Elective	DCOM 142 Introduction to Linux/UNIX	3	ITEC 274 Fundamentals of System Management
Program Elective	**Choose one course:** CSIT 211 Advanced Programming CSIT 212 Visual Basic Programming	4	**Equivalency varies by course:** COSC 237 Intro to Computer Science II CIS 265 Visual Basic Programming
Program Elective	CSIT 254 Emerging Database Design	4	ITEC T15 Data and Information Management

Total program requirements applied to the TU degree: 37 credits
Total transferred to TU: 62-63 credits

Students may transfer a maximum of 64 credits. If students do not adhere to the courses outlined above in Tables 1 and 2, they are not guaranteed completion of the bachelor's degree in 2 years. Refer to section 2 for specific course details and transfer planning information.

Section 2: CCBC Course Selection & Transfer Details

This section explains any specific course selections made in section 1 and provides transfer planning guidance specific to this degree plan. Students must follow the course selections outlined in this document. If students do not complete any or all of the courses outlined in this agreement, they will be required to complete outstanding requirements at TU.

GENERAL EDUCATION

Students must take the following courses for their general education requirements:

- **Mathematics:** Take **MATH 153 Introduction to Statistics** in order to satisfy the major requirement of MATH 231.
- **Arts & Humanities:** Take **CMNS 101 Fundamentals of Communication** to satisfy the major requirement for COMM 131.
- **Social & Behavioral**: Take any **approved diversity course** within this category in order to satisfy CCBC degree requirements.
- **Total General Education Credits**: Though the CCBC degree requires only 18-20 credits of general education, TU will recognize the program requirement ENGL 102 and the program elective CSIT 120 as general education courses in order to satisfy additional TU Core Curriculum requirements.

The following information explains the transfer of students' general education courses:

- TU will recognize the courses in Table 1 (see section 1) in the following Core Curriculum requirements:
  - ENGL 101 will satisfy Core 2 English Composition
  - MATH 153 will satisfy Core 3 Mathematics
  - CSIT 101 will satisfy Core 4 Creativity and Creative Development
  - CMNS 101 will satisfy Core 5 Arts and Humanities
  - The selected social and behavioral sciences course will satisfy Core 6 Social and Behavioral Sciences.
  - The selected biological and physical sciences course will satisfy Core 7 Biological & Physical Sciences if taken with a lab or Core 8 Biological & Physical Sciences if taken without a lab. If students complete a non-lab science, they must take a lab science at TU. If they complete a lab science, they will have the option of completing either a lab or non-lab science at TU.
  - The program requirement ENGL 102 College Composition II will satisfy Core 12 Global Perspectives.
  - The program elective CSIT 120 Diversity in a Technological Society will satisfy Core 13 Diversity & Difference.
- The Core 1 Towson Seminar requirement is waived for all transfer students. Students will complete an additional 15-16 units of general education in the Core Curriculum at TU.

PROGRAM REQUIREMENTS

Students must note the following course selections and equivalency information for their program requirements:

- CSIT 210 Introduction to Programming will transfer as ITEC 236 Introduction to Computer Science I for the ITEC major only. ITEC 236 is a special equivalent to COSC 236. It will satisfy the major requirement of COSC 236 but will not

satisfy the prerequisite to enroll in COSC 237 at TU. If students also choose to take CSIT 211 as an elective (see "Program Electives"), CSIT 210 will transfer as COSC 236.

- **DCOM Requirement:** Take **DCOM 101 Introduction to Data Communications** in order to satisfy the TU major requirement of ITEC 250.
- **English or Management Requirement:** Take **ENGL 102 College Composition II** to satisfy the TU Core Curriculum requirement of Core 12 Global Perspectives.

PROGRAM ELECTIVES

The CCBC program requires 12 credits of electives. By completing the selected courses for this degree plan, students will complete a total of 14 elective credits. Students will complete more than the minimum 60 credits for the associate's degree, but their total credits will still be within the maximum of 64 accepted in transfer. Students must complete these elective courses in order to satisfy Core Curriculum or major requirements at TU:

- Take **CSIT 120 Diversity in a Technological Society** in order to satisfy the TU Core Curriculum requirement Core 13 Diversity and Difference.
- Take **DCOM 142 Introduction to Linux/Unix** in order to satisfy the ITEC major requirement for ITEC 274.
- Take either **CSIT 211 Advanced Programming** or **CSIT 212 Visual Basic Programming** in order to satisfy the lower-level elective of COSC 236 or CIS 265 for the ITEC major. Only one lower-level course may be applied to the major electives. If students choose CSIT 211, their credits for CSIT 210 will transfer as COSC 236 instead of ITEC 236.
- Take **CSIT 254 Emerging Database Design** in order to satisfy the TU major requirement of ITEC 315. CSIT 254 will transfer as ITEC T15 (see "Lower-Level Equivalents of Upper Level Courses"). Both CSIT 154 and CSIT 254 must be completed with a C or higher in order to receive the ITEC T15 equivalency.

LOWER-LEVEL EQUIVALENTS OF UPPER-LEVEL COURSES

A course number beginning with T indicates that it is a lower-level equivalent of a 300-level TU course. ITEC T15 will satisfy the major requirement of ITEC 315 but will not count toward the TU degree requirement for 32 upper-level units.

DEGREE COMPLETION INFORMATION

CCBC requires any student who is new to college to take ACDV 101 Academic Development: Transitioning to College. 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. This 1-credit course is designed to be taken in the first semester at CCBC. ACDV 101 transfers to TU as a general elective.

Section 3: Degree Requirements to Be Completed at TU

This section outlines the degree requirements for students transferring into the Information Technology major. In this program, students prepare to be IT professionals by studying the selection, creation, application, integration and administration of computing and communication technologies to meet user needs in an organizational and societal context. Refer to section 4 for additional major requirements, recommendations, and university-wide degree requirements.

CORE CURRICULUM REQUIREMENTS: 15-16 UNITS

Core 7 & 8 Biological & Physical Sciences – select one:
- Core 7 Biological & Physical Sciences with Lab (4 units – required if a non-lab was taken at CCBC)
- Core 8 Biological & Physical Sciences with or without Lab (3-4 units – required if a lab was taken at CCBC)

Core 9 Advanced Writing Seminar (3 units – satisfied by ENGL 317 in the major)
Core 10 Metropolitan Perspectives (3 units)
Core 11 The United States as a Nation (3 units)
Core 14 Ethical Perspectives (3 units – satisfied by COSC 418 in the major)

MAJOR REQUIRED COURSES: 12 UNITS

CIS 435 Human-Computer Interaction (3 units)
COSC 418 Ethical and Societal Concerns of Computer Scientists (3 units – counted above in Core Curriculum requirements)
ITEC 325 System Administration and Maintenance (3 units)
ITEC 345 Scripting Languages (3 units)
ITEC 411 System Architecture and Integration (3 units)

MAJOR ELECTIVES COURSES: 15-16 UNITS

Because students will take a lower-level elective at CCBC, all major electives taken at TU must be upper-level courses. Select five of the following 3-credit courses:
- CIS 426 Gaming Interface Design
- CIS 436 E-Government
- CIS 440 System Development/E-Commerce
- CIS 445 Universal Usability: Designing Computer Interfaces for Blind Users
- CIS 468 Applied Data Mining and Visual Analytics
- ITEC 336 Legal and Policy Issues in Information Technology
- ITEC 397 Information Technology Internship
- ITEC 423 Emerging Internet Technologies
- ITEC 425 IT Enterprise Architecture
- ITEC 427 Cloud Computing for Enterprises
- ITEC 433 Cyber Security Risk Management
- ITEC 437 Disaster Recover and Enterprise Continuity

- ITEC 450 Advanced Computer Networking
- ITEC 451 Advanced Data Management & Analysis
- ITEC 464 Web Development
- ITEC 470 Special Topics in Information Technology
- ITEC 485 Information Technology Senior Practicum
- ITEC 495 Independent Study in Information Technology

MAJOR OTHER REQUIRED COURSES: 3 UNITS
ENGL 317 Writing for Business and Industry (3 units – counted in Core Curriculum requirements)
MATH 263 Discrete Mathematics (3 units)

GENERAL ELECTIVES: 10-13 UNITS
The total number of elective units required will vary depending on the total units transferred as well as the units taken in the Core Curriculum and the major. Elective units can be satisfied by taking additional major electives or courses for personal interests.

Section 4: Additional Requirements & Recommendations for TU Degree Completion

ADDITIONAL REQUIREMENTS FOR INFORMATION TECHNOLOGY MAJOR:
- A minimum of 30 units in the major must be completed at TU.

BACHELOR'S DEGREE REQUIREMENTS FOR ALL STUDENTS:
- A C (2.0) or higher is required in all major courses and prerequisites.
- 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).

Degree Completion Summary

Total Units Required for B.S. Degree	**120 UNITS**
CCBC A.A.S. Degree in Information Technology	**62-63**
Completion of Core Curriculum at TU	**15-16**
Information Technology Major Coursework at TU	**30-31**
General Electives Taken at TU	**10-13**

Update of Agreement
This agreement was originally published under a Memoranda of Understanding (MOU) between CCBC and TU. The MOU signed October 15, 2018 made this agreement effective for five years. This updated agreement reflects a change in TU's transfer policy to allow for the transfer of ACDV 101, changes to the ITEC curriculum, and updated recommendations for course selection at CCBC. This revised agreement has been approved by both CCBC and TU and remains effective through October 2023.