

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

FORENSIC CHEMISTRY 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 Forensic Chemistry (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 Science – Chemistry Area of concentration program at Community College of Baltimore County may transfer into Towson University’s Forensic Chemistry 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 – SCIENCE – AREA OF CONCENTRATION CHEMISTRY A.S. DEGREE
TOWSON UNIVERSITY/ FORENSIC CHEMISTRY B.S. DEGREE

COMMUNITY COLLEGE OF BALTIMORE COUNTY			TOWSON UNIVERSITY		
COURSE #	COURSE TITLE	CRS	TU EQUIVALENCY	COMMENTS	COURSE ID#
General Education Applied to CORE					
				Towson Seminar Waived	13192
ENGL 101	College Composition I (E)	3	ENGL 102		2348
MATH 251*	Calculus I (M)	4	MATH 273	Satisfies TU major requirement (Required Courses – All Tracks).	4407
CSIT 101 or CSIT 111	Technology and Information Systems (I) or Logic and OO Design (I)	3	COSC 111 COSC 175		13369 1335
CMNS 101	Fundamentals of Communication (A)	3	COMM 131		1221
A/H Gen Ed	Arts/Humanities (A)	3	Depends on choice.		
CRJU 101*	Intro to Criminal Justice (S) [Soc/Beh Sci. Elective]	3	CRMJ 254	Satisfies major requirement (Ancillary Course).	7729
S/B Gen Ed	Social and Behavioral Science (S)	3	Depends on choice.		
CHEM 131*	General Chemistry I (B)	4	CHEM 131 & 131L	Satisfies TU major requirement (Required Courses – All Tracks).	13097 & 13098
PHYS 151*	General Physics I (B)	4	PHYS 241	Satisfies major requirement (Ancillary Course) at TU.	6805
BIOL 110*	Biology I: Molecular and Cells (B)	4	BIOL 200 & 200L	Satisfies major requirement (Ancillary Course) at TU.	13759 & 13760
MATH 259	Elementary Differential Equations (M)	3	MATH T74	Lower-level equivalent of MATH 374.	10493
Units Applied to TU Core		37			
CHEM 133*	General Chemistry II	4	CHEM 132 & 132L	Satisfies TU major requirement (Required Courses – All Tracks).	13099 & 13100
CHEM 200*	Organic Chemistry I and	3	CHEM T31	Lower-level equivalent of CHEM 331. Satisfies major requirement	10134
CHEM 201*	Organic Chemistry I Laboratory	1		(Required Courses for All Tracks) at TU.	
CHEM 202*	Organic Chemistry II and	3	CHEM T32	Lower-level equivalent of CHEM 332. Satisfies major requirement	10135
CHEM 203*	Organic Chemistry II Laboratory	1		(Required Courses for All Tracks) at TU.	
MATH 252	Calculus II	4	MATH 274		4408
PHYS 251*	General Physics II (B)	4	PHYS 242	Satisfies major requirement (Ancillary Course).	6806
PROG ELECT	Program Elective	3	Depends on choice.		
ACDV 101	Academic Development: Transitioning to College	1	Not Transferable.		
Program Requirements Applied		23			
Total Degree Requirements at CCBC		60-61			
Maximum Units in Transfer		64	Core Transfer Package AACR 400 (13065)		

*Course satisfies program requirement for both Associate's degree and Bachelor's degree. Please note that the Bachelor's degree cannot be completed in four years (total) if course selections are not made as indicated. (See details on next page.)

Note: CHEM 131, MATH 251, and PHYS 151 may require prerequisites which will increase the total number of credits students complete at CCBC. Students should consult CCBC's catalog for complete prerequisite information.

ACDV 101: Credit students who are new to college (no 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. **NOTE:** This course does not transfer to TU.

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CCBC Course Selection:

GENERAL EDUCATION:

- 1) Students should choose **CRJU 101 Introduction to Criminal Justice** as one of their **Social and Behavioral Science General Education electives (S)** to satisfy a Core Curriculum requirement and **required ancillary course** for the FCHM major at TU. Students who not complete CRJU 101 at CCBC will be required to take CRMJ 254 at TU. **NOTE:** Students who do not take CRJU 101 will need to satisfy CCBC's diversity requirement with another general education elective.

PROGRAM ELECTIVE (3 CREDITS):

Students who plan to pursue the General Science or DNA track may consider taking **CCBC's BIOL 251 Genetics (4 credits)** to transfer as BIOL T09 (lower-level equivalent of BIOL 309) if they want to complete an additional course within the allowable 64 transfer credits. This is not required by CCBC's associate's degree program nor is it required by TU in order to transfer under this agreement. This is only a suggestion for students interested in transferring additional credits; it is not recommended for students who plan to pursue the Trace Evidence/Drug Analysis track.

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DEGREE REQUIREMENTS TO BE COMPLETED AT TU:

CORE CURRICULUM TO BE COMPLETED AT TU

3 units

Core 9 Advanced Writing Seminar (*CHEM 301*)

3 units

Satisfied within FCHM major

NOTE: If general education courses were not completed as indicated on the first page of this document, additional CORE curriculum courses may be required at TU.

REQUIRED COURSES FOR ALL FORENSIC CHEMISTRY TRACKS

17 units

CHEM 210 Analytical Chemistry
 CHEM 301 Professional Ethics for Scientists (*counted above*)
 CHEM 351 Biochemistry I
 FRSC 367 Forensic Chemistry
 FRSC 368 Professional Practices in Forensic Science
 FRSC 440 Forensic Science, Emergency Medicine, and Death Analysis

5 units
 (3 units)
 3 units
 3 units
 3 units
 3 units

Core 9 Advanced Writing Seminar

ANCILLARY COURSES (REQUIRED OF ALL TRACKS)

13-16 units

ANTH 357 Introduction to Forensic Crime Analysis
 ANTH 457 Advanced Forensic Investigation
 CRMJ 254 Introduction to Criminal Justice (*If CRJU 101 is not taken at CCBC*)
 CRMJ 384 Advanced Criminal Law
 MATH 237 Elementary Biostatistics

3 units
 3 units
 (3 units)
 3 units
 4 units

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TRACK* (Choose one):

<u>General Science Track</u>		<u>21 units</u>
BIOL 309	Genetics	4 units
BIOL 409	Molecular Biology	4 units
CHEM 310	Instrumental Analysis	4 units
CHEM 345	Principles of Physical Chemistry	3 units
FRSC 363	Chemistry of Dangerous Drugs	3 units
FRSC 467	Forensic Analytical Chemistry	3 units
<u>Trace Evidence/Drug Analysis Track</u>		<u>18 units</u>
CHEM 310	Instrumental Analysis	4 units
CHEM 345	Principles of Physical Chemistry	3 units
CHEM 372	Physical Chemistry Laboratory	2 units
CHEM 480	Chemical Toxicology	3 units
FRSC 363	Chemistry of Dangerous Drugs	3 units
FRSC 467	Forensic Analytical Chemistry	3 units
<u>DNA Track</u>		<u>20 units</u>
BIOL 309	Genetics	4 units
BIOL 409	Molecular Biology	4 units
BIOL 410	Molecular Biology Laboratory	2 units
CHEM 356	Biochemistry Lab	2 units
MBBB 301	Intro to Bioinformatics	4 units
FRSC 420	Body Fluid Analysis	4 units

**These tracks provide the student with options to prepare for the specialized areas of forensic science in the professional work force or for graduate programs. Students should consult the TU catalog and the Forensic Chemistry department for guidance on selecting a track. Total credits required in the major may be affected by a student's choice of track.*

CHEMISTRY MAJOR REPEAT POLICY: A student may repeat no more than three courses, including multiple attempts at the same course, required for the Chemistry major or minor. This includes all foundation courses, as well as required courses and electives for the major and minor. Students exceeding this limit may not be permitted to register for additional Chemistry courses.

NOTE: This policy applies to TU coursework only. Students will not be penalized for repeating major courses prior to attending TU; they should refer to the CCBC catalog for its repeat policy

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TOTAL UNITS TO B.S. DEGREE 120 UNITS*

General Science Track 120 UNITS

CCBC Science – Area of Concentration Chemistry A.S. Degree	60
Completion of Core Curriculum at TU	3
Forensic Chemistry Major Requirements at TU	51-54
Electives	3-6

Trace Evidence/Drug Analysis Track 120 UNITS

CCBC Science – Area of Concentration Chemistry A.S. Degree	60
Completion of Core Curriculum at TU	3
Forensic Chemistry Major Requirements at TU	48-51
Electives	6-9

DNA Track 120 UNITS

CCBC Science – Area of Concentration Chemistry A.S. Degree	60
Completion of Core Curriculum at TU	3
Forensic Chemistry Major Requirements at TU	50-53
Electives	4-7

**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.*

ADDITIONAL 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).