

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

**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 Chemistry – Professional 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 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 Chemistry – Professional Track 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/ CHEMISTRY- PROFESSIONAL TRACK B.S. DEGREE**

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

\*Course satisfies program requirement for both Associate's degree and major requirements in the Bachelor's degree.

\*\*At least one Arts/Humanities course or Social/Behavioral course must be a Diversity course to satisfy CCBC's General Education Requirements

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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**DEGREE REQUIREMENTS TO BE COMPLETED AT TU:**

**CORE CURRICULUM TO BE COMPLETED AT TU 3 units**

Core 9	Advanced Writing Seminar	3 units
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***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 CHEMISTRY COURSES 27 units**

CHEM 210	Analytical Chemistry	5 units
CHEM 323	Inorganic Chemistry	4 units
CHEM 345	Principles of Physical Chemistry	3 units
CHEM 372	Physical Chemistry Laboratory	2 units
CHEM 351	Biochemistry I	3 units
CHEM 310	Instrumental Analysis	4 units
CHEM 346	Theoretical Foundations of Physical Chemistry	3 units
CHEM 401	Communication Skills in Chemistry	1 unit
CHEM 491	Introduction to Research in Chemistry I*	1 unit <i>*May not be taken in a student's final semester.</i>
CHEM 492	Introduction to Research in Chemistry II*	1 unit <i>*May not be taken in a student's final semester.</i>

**MAJOR ELECTIVES – PROFESSIONAL TRACK 3 units**

Students must choose a minimum of 1 course/3 additional units, at least 2 units of which must be CHEM or FRSC coursework. Students should refer to the current TU catalog for a list of approved courses. Elective courses may require prerequisites that are not listed in the degree requirements.

**NOTE:** The Professional track is designed to meet the requirements for American Chemical Society (ACS) certification. Additional information regarding ACS certification is available in the TU catalog. Students selecting this track should plan their college careers carefully because not all the advanced chemistry courses are offered every term. A long-term schedule for these courses may be obtained from the Department of Chemistry. Advanced chemistry electives are offered periodically, subject to adequate enrollment.

**GENERAL ELECTIVES 27 units**

Students may consider filling general elective units through a number of different options, including completing additional electives in the major, adding a minor, or completing electives to explore personal and professional interests.

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**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.

**TOTAL UNITS TO B.S. DEGREE 120 UNITS**

CCBC Science – Area of Concentration Chemistry A.S. Degree	60
Completion of Core Curriculum at TU	3
Chemistry Major – Professional Track Requirements at TU	30
General Electives	27

**ADDITIONAL BACHELOR’S DEGREE REQUIREMENTS:**

- *A C (2.0) or higher is required in all major and minor 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).*