

STEM

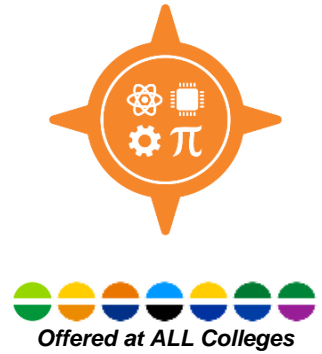
GUIDED PATHWAY: BIOCHEMISTRY

For more information, visit www.dcccd.edu/chemistry and your academic advisor at your college.

Biochemistry is involved in all human activities, from growing and cooking food to launching a space shuttle. Understanding at least basic chemistry is critical for medical fields, most science-related professions, and diverse careers from industry to government and academia. The guided pathway in Biochemistry will provide a foundation for you to move on toward a career in the fuel industry, toxicology labs, and education. An Associate of Science (AS) degree with courses in this pathway prepares you to transfer to a university to earn a bachelor's degree that opens the door to a career in the medical field, engineering, research, industry, renewable energy and many more areas.

This is an example course sequence for students interested in pursuing Chemistry. It does not represent a contract, nor does it guarantee course availability. Following this pathway will help you earn an AS degree ⁱⁱ, which will increase your chances of transfer to bachelor's-level programs. Courses that complete the Degree (D) are noted below. For official degree requirements, [click here](#).

Visit www.dcccd.edu/transfer to view the Top 15 colleges and universities to which students at the colleges of DCCCD transfer. Visit with your academic advisor to choose courses that will help you to transfer to a specific university.



COLLEGE READINESS REQUIREMENTS

Enrolling in one or more courses may be necessary if assessment activities and previous academic experiences indicate a need for additional knowledge and skills:

READING & WRITING PLACEMENT	MATH PLACEMENT	ENGLISH LANGUAGE PROFICIENCY
TSI READING MET: <input type="checkbox"/> YES <input type="checkbox"/> NO TSI WRITING MET: <input type="checkbox"/> YES <input type="checkbox"/> NO	TSI MATH MET: <input type="checkbox"/> YES <input type="checkbox"/> NO	ENGLISH PROFICIENCY: <input type="checkbox"/> YES <input type="checkbox"/> NO
IF TSI OR ENGLISH LANGUAGE PROFICIENCY NOT MET, INSERT COURSE(S) NEEDED		

<input type="checkbox"/> DREA / DWRI / DIRW (CIRCLE ONE) _____	<input type="checkbox"/> DMAT _____ <input type="checkbox"/> OTHER: _____	<input type="checkbox"/> ESOL: _____ <input type="checkbox"/> OTHER: _____
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PROGRAM SPECIFIC REQUIREMENTS ⁱⁱⁱ

- MATH 1314 ⁱⁱⁱ
 - MATH 1316 ⁱⁱⁱ
 - MATH 2412 ⁱⁱⁱ
- ⁱⁱⁱ These are pre-reqs to MATH 2413.
- Consider completing before transfer:**
- ENGL 2311 ^{iv}
 - MATH 2318 ^{iv}
 - MATH 2415 ^{iv}
 - PHYS 2425 ^{iv}

Exemptions/waivers may exist. Speak with an academic advisor regarding placement in college readiness courses and your ability to enroll in core academic coursework.

SEMESTER-BY-SEMESTER MAP FOR FULL-TIME STUDENTS ^v

ALL MAPS CAN BE MODIFIED TO FIT THE NEEDS OF PART-TIME STUDENTS

D	SEMESTER 1	ACTION ITEMS
♦	ENGL 1301 – Composition I ^{vi} (core course)	<input type="checkbox"/> Meet with your advisor to confirm your academic and career goals. <input type="checkbox"/> Meet with a career advisor/coach to research your career options with a Biochemistry degree. <input type="checkbox"/> Ask about your options for transferring to pursue the bachelor's degree.
♦	EDUC 1300 – Learning Framework ^{vii}	
♦	MATH 2413 – Calculus I ^{iii vi viii} (core course)	
♦	CHEM 1411 – General Chemistry I (core course)	

TOTAL SEMESTER CREDIT HOURS: 14

D	SEMESTER 2	ACTION ITEMS
♦	ENGL 1302 – Composition II (core course)	<input type="checkbox"/> Begin researching universities where you would want to major in Biochemistry. <input type="checkbox"/> Meet with your advisor to confirm or update your academic/career pathway and program of study.
♦	MATH 2414 – Calculus II	
♦	CHEM 1412 – General Chemistry II (core course)	
♦	HIST 1301 – United States History II ^{viii} (core course)	

TOTAL SEMESTER CREDIT HOURS: 14

D	SEMESTER 3	ACTION ITEMS
♦	Choose One: ARTS 1304 – Art History II ^{viii} (core course) DRAM 1310 – Introduction to Theater ^{viii} (core course) MUSI 1306 – Music Appreciation ^{viii} (core course)	<input type="checkbox"/> Begin applying to your top choice universities.
♦	HIST 1302 – United States History II ^{viii} (core course)	

TOTAL SEMESTER CREDIT HOURS: 6

D	SEMESTER 4	ACTION ITEMS
♦	CHEM 2423 – Organic Chemistry I	<input type="checkbox"/> Begin applying to your top choice universities. <input type="checkbox"/> Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> o You can start the FAFSA in October for the next academic year (i.e., in October 2020 you can complete the FAFSA if you plan to register for classes at a university Fall 2021). <input type="checkbox"/> Check with your advisor for important deadlines and dates.
♦	Choose One: ENGL 2332 – World Literature I ^{viii} (core course) PHIL 1301 – Introduction to Philosophy ^{viii} (core course) PHIL 2306 – Introduction to Ethics ^{viii} (core course)	
♦	BIOL 1406 – Biology for Science Majors I	
♦	GOVT 2305 – Federal Government (core course)	
♦	PHED 1164 – Introduction to Physical Fitness and Wellness (core course)	

TOTAL SEMESTER CREDIT HOURS: 15

D	SEMESTER 5	ACTION ITEMS
♦	CHEM 2425 – Organic Chemistry II	<input type="checkbox"/> After reviewing your final program of study, apply for graduation. <ul style="list-style-type: none"> o Meet with your advisor to apply for the Associate of Science degree. o Sign up for commencement. <input type="checkbox"/> Request final transcripts to be sent to the college or university to where you will transfer. <input type="checkbox"/> Join the Alumni Network!
♦	Choose One: ANTH 2346 – General Anthropology ^{viii} (core course) ECON 2301 – Principles of Macroeconomics ^{viii} (core course) PSYC 2301 – General Psychology ^{viii} (core course) SOCI 1301 – Introduction to Sociology ^{viii} (core course)	
♦	GOVT 2306 – Texas Government (core course)	
♦	SPCH 1311 – Introduction to Speech Communication ^{viii} OR SPCH 1315 – Public Speaking ^{viii} (both core courses)	

TOTAL SEMESTER CREDIT HOURS: 13

AS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS | PATHWAY TOTAL: 62 SEMESTER CREDIT HOURS

ⁱ Degree plans may change in later catalogs. You may use this pathway if you entered one of the seven colleges on or before this date.

ⁱⁱ Students must earn at least 25% of the credit hours (15 hours) required for graduation through instruction by one of the seven DCCCD colleges awarding the degree.

ⁱⁱⁱ To register for MATH 2413, students must have completed the prerequisite math courses as follows: MATH 1314, MATH 1316, MATH 2412

^{iv} You should consider completing PHYS 2426 University Physics II before transferring to a university.

^v This is not an official degree plan. For official degree requirements, please [click here](#).

^{vi} You must earn a grade of "C" or better in English 1301 and the selected college-level mathematics course and receive a GPA of at least 2.00 on all college-level course work.

^{vii} All college students with fewer than 12 semester credit hours of successful college credit (grade of "C" or above) should take a student success course in the first semester.

^{viii} There are several options to fulfill this requirement. See your academic advisor for a specific list.