Biotechnology Enrollment Status Report

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Enrollment Numbers

When analyzing the current state of our Biotechnology Program, enrollment in BIOL1414 serves as a benchmark given that students cannot continue to the higher courses without this introductory course.

Historically, we had enough students to necessitate multiple sections per semester. Beginning in 2013, we stopped offering the option to complete an AAS in Biotechnology, but we continued to offer a certificate. This change did not result in a large drop in enrollment.

Removal from the Texas Common Course Numbering System (TCCNS)

There was a change around 2017 that caused Collin College's BIOL1414 and 1415 courses to no longer appear on the Texas Common Course Numbering System. They are still not there as of today. The schools that do show are:

Institution	Courses Listed	Year Removed	Year Added
Amarillo College	BIOL1414/1415		2019
Austin Community College	BIOL1414/1415	2017	2020
Lone Star College System	BIOL1414	2017	2018
South Plains College	BIOL1414		2018
St. Edward's University	BIOL1414/1415		2020
St. Philip's College (ACCD)	BIOL1414/1415		2018
University of St. Thomas	BIOL1414/1415		2021

St. Edward's and University of St. Thomas have different listings for their Biotech courses that do not match the standard numbering systems, but they still appear on the TCCNS website. We work closely with Austin Community College and use their lab manual for BIOL1414 and 1415. If they are showing on the TCCNS system, Collin should be too.

Removal from the Academic Course Guide Manual (ACGM)

Deeper investigation showed all Biotech courses were set to be removed from the ACGM in 2017, but lobbying changed this decision. Despite this reversal, all BIOL1414/1415 courses for all institutions were removed from TCCNS in 2017 as funding was set to be removed Aug. 31, 2017. The ACGM in 2018 has the courses listed for scheduled deletion, but the 2019 version has them back with no qualifiers. While some schools had their courses relisted on TCCNS in the following years, Collin College, as well as others like Temple College, were never listed again. Our course catalog descriptions have always matched the ACGM descriptions.

Banner Attributes Removed

Additionally for Collin College, these courses lost their "Attributes" on Banner to be included in the course offerings for "Life & Physical Sciences" or "Component Area Option" around the same time. They did not show in the available courses if students searched by Attributes. If students found the courses through other search methods, the Attributes column was blank or said "No Attributes" which indicated the courses would not fulfill any part of a degree plan. This is despite the courses still being listed as Life & Physical Science options in the printed course catalog every year; current and previous year's catalogs are viewable here:
https://www.collin.edu/academics/catalog.html

Search Results — 1 Classes
Term: Credit Fall 2020 **Subject:** Biology (BIOL) **Course Number:** 1414

Title	Subject Descriptic	Course Number	Section	CRN	Status	Attribute
Introduction to Biotechnology I Lecture/Lab	Biology (BIOL)	1414	001	13843	2 of 12 seats remain.	No Attributes

This image is from the Fall 2020 listing, the earliest Banner search currently available for BIOL1414. We are unsure when the attributes were removed, but this issue in Banner was only fixed for Fall 2022. Even now, courses like BITC1340: Quality Assurance still appear without attributes. There are also websites like "AS Math & Science Course Options" https://www.collin.edu/academics/programs/AS_Science_Math_Courses.html that do not list BIOL 1414 or 1415 as options despite the current course catalog stating otherwise.

Comparisons to Other Institutions

These are the current Biotechnology program offerings from community colleges in Texas according to the THECB:

Institution	CIP Code	Award Given			
Alamo Community College - St. Philip's College (ACCD)	26.1201.00		A		
Amarillo College	26.1201.00		A		
Austin Community College	41.0101.00	C	A		T
Blinn College District	41.0101.00	C	A		T
Collin County Community College District	41.0101.00	C			
Del Mar College	41.0101.00	C	A		
Houston Community College System (HCCS)	41.0101.00				T
Lone Star College - Montgomery (LSCS)	41.0101.00		A		T
Temple College	41.0101.00		A	E	T

C = Certificate, A = Associate, E = Enhanced Skills Certificate, T = Advanced Technical Certificate. CIP Code 26.1201.00 is for Program Name: Biotechnology. These are more academic focused. CIP Code 41.0101.00 is for Program Name: Biology/Biotechnology Technology/Technician. These are more workforce focused.

Some of these listings may not be accurate due to program restructuring at other schools. We currently offer two levels of certificates, but our Level II Certificate does not meet the requirements for an "Advanced Technical Certificate" due to courses like those involving instrumentation not being offered.

Articulation Agreements

In 2016, it was announced that we would be joining an articulation agreement with Texas A&M University – Texarkana to form a 2+2 program. Our course catalogue

included references to this 2+2 program up until 2020. This program was discontinued when our partner school ended their degree program.

We are currently in the process of finalizing an articulation agreement with University of North Texas Health Science Center, but this is contingent on Collin's program not being discontinued.

Advertising and Community Outreach

Collin's Biotech program also received less advertising in recent years. We previously relied on community outreach starting from Day of Science, up to research partnerships with high schools and CASMNS, and through our Biotech Club. Covid restrictions made many of these events no longer possible. Advertising has increased very recently with new public relation materials created this year, but that only helps if the information listed on our website is accurate. We also administered our first Biotechnician Assistant Credentialing Exam (BACE) in June. This will make it possible for students to be nationally certified after only one semester at Collin.

Conclusion

In summation, the low student enrollment can be traced back to the courses inaccurately being removed from the ACGM in 2017. Collin College should have filed to have them relisted on TCCNS the following year as students will not enroll in a course they are not sure will transfer to other schools. This coincided with the "Life & Physical Science" attribute being removed from Banner. Students are less likely to enroll in a course that will not fulfill a requirement of their degree plan. Even with this partially remedied now, some of the Collin's websites do not list the courses as options for fulfilling degree requirements. Fixing these errors and increasing community outreach will return the Biotechnology Program back to its previous levels of success. Finalizing articulation agreements will create an even greater boost in enrollment.