2+2 Transfer Guide
AAS in Biotechnology to
BS in Biological Sciences, Research & Technology

2018-2019

Using this Guide:
This guide outlines a path for completion of the baccalaureate degree at Webster University for the ***Bachelor of Science in Biological Sciences with an Emphasis in Research and Technology*** for students entering with an ***Associate of Applied Science degree in Biotechnology*** from St. Louis Community College. This guide is not intended to replace individual academic advising. Students are strongly encouraged to meet with a Webster University Admissions representative early on to help ensure a smooth transfer experience.

About Biological Sciences Major at Webster:
At Webster University, biological sciences majors engage in a rigorous, cross-disciplinary educational program in the physical sciences designed to help them keep pace with that evolution. Coursework in biology, chemistry, physics, and mathematics equips students with the knowledge and skills necessary to pursue careers from biotechnology to medicine. Students in the biological sciences program also have the option to focus their degree with an area of emphasis in research and technology, which is designed primarily for students pursuing a career path in: (a) commercial, academic, or government research, (b) high-demand technical and laboratory positions, and (c) graduate studies in advanced biology fields and related areas such as biochemistry and biophysics.

Webster Admission Requirements:
When considering an application, Webster looks for evidence of potential for academic success. A cumulative GPA on all college level coursework of at least 2.5 on a 4.0 scale is preferred; however, each applicant is given individual consideration. If you have circumstances which might affect your admission, this may be discussed confidentially with a member of the admissions staff. The University operates on rolling admission, and application files are reviewed by Admissions as soon as all requested credentials have been received.

Each transfer applicant must submit:

- A completed application for undergraduate transfer admission
- A $35.00 nonrefundable application fee
- An official transcript from St. Louis Community College and an official transcript from all other postsecondary institutions previously attended sent to:

Webster University Office of Admission
470 East Lockwood Avenue
St. Louis, MO 63119

General Transfer Policy Information:

- Webster has a minimum residency requirement that 30 of the student's last 36 credits must be taken at Webster University. All students must have a minimum of 128 credit hours to graduate.
- Transfer students must complete a minimum of 18 credit hours at Webster University within the Biological Sciences Department. This must include BIOL 4400 and BIOL 4430 and 12 credit hours of 3000-4000 level courses in biology or chemistry.
- Science courses taken more than 10 years ago may not count as the prerequisite for certain advanced courses.

- Webster University provides full transfer of coursework successfully completed as part of an associate degree awarded by a regionally accredited institution. Transfer of additional lower-division credit beyond the associate's degree is restricted. All transfer credit is capped at 98 credit hours.
- All transfer coursework must be college-level (100-level or above) with a passing grade. Pass/Fail courses will count for transfer credit if the student received a Pass. For repeated courses only the second grade will be counted. Incomplete grades are not accepted in transfer. Courses completed with a grade of D have severe transfer restrictions. Formal evaluation of transfer credit is conducted by the Office of the Registrar upon admission to the University.

WEBSTER DEGREE REQUIREMENTS:

A minimum of 128 credit hours consisting of the following:

- 64 credit hours BS core coursework
- 20 credit hours Research & Technology emphasis
- Applicable University Global Citizenship Program hours
- Electives

GENERAL EDUCATION/GLOBAL CITIZENSHIP PROGRAM:

Webster University requires all baccalaureate students to complete a general education program. The Global Citizenship Program (GCP) is a set of undergraduate degree requirements and a general education program developed by Webster University faculty to help prepare students to confront global problems and 21st century challenges.

Students completing the Associate of Applied Science degree will have previous credits reviewed on a course-by-course basis for applicability to the GCP. *See GCP Transfer Guide developed for St. Louis Community College.*

2+2 ARTICULATION FOR AAS DEGREE TO BS DEGREE

The next section will identify, for STLCC students earning the Associate of Applied Science degree in Biotechnology, what requirements will be remaining to earn the Bachelor of Science in Biological Sciences with an emphasis in Research & Technology at Webster University.

AAS BIOTECHNOLOGY (YEARS 1 AND 2 AT ST. LOUIS COMMUNITY COLLEGE)

STLCC Degree Requirement	Webster Degree Requirement Fulfilled
GENERAL EDUCATION 21 CR.	
ENG 101 College Composition I (3)	Written Communication (WCOM)
MTH 160 College Algebra (4) or MTH 210 Analytic Geometry & Calculus I (5) *Students are recommended to take Calculus I in place of College Algebra, if possible. This would satisfy the math requirement at St. Louis Community College, and upon transfer to Webster, would satisfy the Calculus I requirement for BS degree.*	Quantitative Literacy (QL) **or** Quantitative Literacy (QL) **and** MATH 1610 Calculus
COM 101 Oral Communication (3)	Oral Communication (OCOM)
Missouri State Requirement (3) (*choose one):* Recommended: HST 101, 102, 107, 137, 138 *If students choose another Missouri State Requirement course from STLCC, this may affect remaining GCP/general education classes to be taken at Webster.*	Roots of Culture (ROC)
Social & Behavioral Sciences Elective (3): Recommended: SOC 101 Introduction to Sociology *If students choose another social & behavioral sciences elective from STLCC, this may affect remaining GCP/general education classes to be taken at Webster.*	Social Systems & Behavior (SSHB)
PHL 109 Bio-Medical Ethics (3)	Ethical Reasoning (ETHR)

Physical Education (2)	General Elective
AREA OF CONCENTRATION 50 CR.	
BIO 104 Basic Laboratory Methods for Biotechnology (3)	General Elective* – see BIO 152 below
BIO 140 Principles of Biology I (4)	BIOL 1550/1551 Essentials of Biology I w/lab - also meets Physical & Natural World (PNW) Requirement
BIO 152 Quantitative Methods in Biology (2)	BIOL 1560/1561 Essentials of Biology II *This equivalency only holds if the student has completed both BIO 152 AND BIO 104 (listed above as a general elective)
BIO 218 Microbiology for Biotechnology (4)^	BIOL 3120/3121 Microbiology w/Lab^
BIO 219 Biotechnology I (5)^	BIOL 4000/4001 Methods in Molecular Biology w/Lab^
BIO 220 Biotechnology II (5)^	BIOL 3600 Topics in Biology^
BIO 221 Workplace Learning: Biotechnology (3)^	BIOL 4700 Independent Research in Biology I^
BIO 225 Genetics (5)	BIOL 3050, 3051 Genetics
BIO 226 Advanced Topics in Biotechnology (3) (choose one): Plant Transformation, Bio Processing, Forensics, QPCR Techniques, Proteomics, RNA Interference	BIOL 3080/3081 Cell Biology w/Lab
BIO 226 Advanced Topics in Biotechnology (3)^ (choose one): Plant Transformation, Bio Processing, Forensics, QPCR Techniques, Proteomics, RNA Interference	BIOL 3600 Topics in Biology^
CHM 105 General Chemistry I (5)	CHEM 1100/1101 General Chemistry I w/Lab
CHM 106 General Chemistry II (5)	CHEM 1110/1111 General chemistry II w/Lab
GE 101 Technical Computer Applications (3)	General Elective
TOTAL FROM STLCC: 71 CR.	

BS BIOLOGICAL SCIENCES EMPHASIS IN RESEARCH & TECHNOLOGY (YEARS 3 AND 4 AT WEBSTER UNIVERSITY)

Webster University
MAJOR
BIOL 2010 Evolution (3)
BIOL 4400 Research Methods (3)
BIOL 4430 BS Senior Thesis (4)
CHEM 2100, 2101 Organic Chemistry I (4)
CHEM 2110, 2111 Organic Chemistry II (4)
CHEM 3100, 3101 Biochemistry I (4)
MATH 1610 Calculus I (5) (unless completed at STLCC)
MATH 3200 Statistics or MATH 3100 Inferential Statistics (3)
PHYS 2030, 2031 University Physics I (4)
PHYS 2040, 2041 University Physics II (4)
EMPHASIS/MAJOR ELECTIVES: *Students with the AAS Biotechnology from STLCC have satisfied a majority of the electives specifically required for the Research & Technology emphasis. STLCC courses applying toward the emphasis are marked above with ^ symbol.*
JOUR 3900 Journal Club (3)
TOTAL REMAINING MAJOR: 41 CR.

GLOBAL CITIZENSHIP PROGRAM	
FRSH 1200 First Year Seminar (3 cr.)	*Satisfied by completion of the AAS degree at STLCC*
ROC Roots of Cultures Knowledge (6 cr., 2 different prefixes)	*Partially satisfied by STLCC HST requirement*
SSHB Social Systems & Human Behavior (6 cr., 2 different prefixes)	*Partially satisfied by STLCC SOC 101*
PNW Physical & Natural World Knowledge (3 cr.)	*Satisfied by STLCC BIO 140*
GLBL Global Understanding Knowledge (3 cr.)	
ARTS Arts Appreciation Knowledge (3 cr.)	

QL Quantitative Literacy Knowledge (3 cr.)	*Satisfied by STLCC MTH 160 or MTH 210*
WCOM Written Communication Skill (3 cr.)	*Satisfied by STLCC ENG 101*
OCOM Oral Communication Skill (3 cr.)	*Satisfied by STLCC COM 101*
**CRI Critical Thinking Skill (3 cr.)	
**INTC Intercultural Competence Skill (3 cr.)	
**ETH Ethical Reasoning Skill (3 cr.)	*Satisfied by STLCC PHL 109*
Global Keystone Seminar (3 cr.)	
GCP Remaining: *15 credits* *****With careful advising and course selection, students will fulfill remaining GCP skills with the remaining GCP knowledge areas at Webster. For example, Art Appreciation will satisfy Arts Appreciation and Critical Thinking. A foreign language course with satisfy Global Understanding and Intercultural Competence.*	

71 CR. – STLCC College transfer
41 CR. – Webster major remaining
16 CR. – Webster GCP & Electives remaining
128 total hours