ST. CLOUD TECHNICAL & COMMUNITY COLLEGE

Biology Transfer Pathway Associate of Science (AS) 2023-2024

This 60-credit degree offers students an opportunity to complete an associate degree that fully transfers to a Biology bachelor's degree program at any one of seven universities within the Minnesota State system that offers the major. The entire curriculum has been carefully designed to meet designated bachelor's degree program requirements for transfer students.

Program Goals /Outcomes

1. Analyze simple data sets using appropriate descriptive and inferential statistics.
2. Able to use public literature databases to find appropriate published material, and should be able to read, understand, and evaluate the validity and importance of the scientific literature and to integrate new concepts into their existing knowledge frameworks.
3. Communicate their own and others data and analysis in oral and written format, using computers where necessary to visualize data or to create clear and compelling papers, posters, or presentations.
4. Analyze scientific studies in light of their ecological, social, economic, ethical, and cultural implications.
5. Communicate and work productively with others in designing, conducting, and evaluating projects, experiments, and other course related deliverables as an essential skill in science.
6. Ability to utilize other disciplines as sources of context and skills to inform the learning and work they are engaged in.
7. Skill development in basic light microscopy and exposure to more advanced forms of microscopy and digital imaging is fundamental to further study in biology.

Developmental Courses

Some courses may require appropriate test scores or may need preparatory courses in the areas of English, mathematics, or reading. Courses numbered below 1000 will not apply toward this degree.

General Requirements

A minimum:

- of 60 semester credits in courses numbered 1000 or above.
- GPA of 2.0 at SCTCC or courses transferred in courses numbered 1000 or above.
- 15 semester credits applied toward the degree must be taken from SCTCC.

"C" or better grades will be transferable into the major.

Completion of the Biology Transfer Pathway AS degree does NOT fulfill requirements for the AA or MnTC. Students are advised to choose goal areas depending on their transfer university destination.

Program Course Requirements

MnTC GOAL 1 Communications **7 cr**

Written (choose one option)

ENGL 1312 OR (4 cr)

ENGL 1308 & ENGL 1309 (6 cr)

AND Choose one from: (3 cr)

Oral (choose one option)

CMST 1320 OR CMST 2310

MnTC GOAL 3 Natural Resources **12 cr**

Biology Requirements:

BLGY 1351 General Biology I (4 cr)

BLGY 1355 General Biology II (4 cr)

BLGY 2340 Genetics (4 cr)

Biology Electives: **4 cr**

Select One of the Following:

BLGY 2330 Microbiology (4 cr)

BLGY 2350 Cellular Biology (4 cr)

BLGY 2360 Ecology (4 cr)

Chemistry Requirements: **8 cr**

CHEM 1350 General Chemistry I (4 cr)

CHEM 1355 General Chemistry II (4 cr)

MnTC GOAL 4 Math Requirements **6 cr**

Choose two courses from: MATH 1360, MATH 1370, MATH 1380, MATH 2321, MATH 2330, MATH 2340 or MATH 2350

MnTC GOAL 5 Social, Behavior Sciences and History **3 cr**

Choose one course (3 cr)

MnTC Goal 6 The Humanities and Fine Arts **3 cr**

Choose one course (3 cr)

Elective Credits **17 cr**

College Level Courses

Please consult with your advisor for course selection.

Useful elective credits within the sciences may include: Geology, Calculus, Anatomy and Physiology, Organic Chemistry I and II, Physics, Environmental Science, and Statistics.

BIOLOGY TRANSFER PATHWAY ASSOCIATE OF SCIENCE DEGREE (AS) 2023-2024

GOAL 1 COMMUNICATIONS Requires: 2 courses 7 credits (1 ENGL and 1 CMST course)

Written (choose one option)		Goal
ENGL 1312	Analytical Writing (4 cr)	1
OR		
ENGL 1308 & ENGL 1309	Stretch Analytical Writing I & II (6 cr)	1

Oral (choose one option)		Goal
CMST 1320	Intro to Communications Studies (3 cr)	1
CMST 2310	Interpersonal Communications (3 cr)	1

GOAL 3 NATURAL RESOURCES

Biology Requirements:		Goal
BLGY 1351	General Biology I (4 cr)	3, 10
BLGY 1355	General Biology II (4 cr)	3
BLGY 2340	Genetics (4 cr)	3
Chemistry Requirements:		
CHEM 1350	General Chemistry I (4 cr)	3
CHEM 1355	General Chemistry II (4 cr)	3

Biology Electives: (choose one course)		Goal
BLGY 2330	Microbiology (4 cr)	3
BLGY 2350	Cellular Biology (4 cr)	3
BLGY 2360	Ecology (4 cr)	3

GOAL 4 MATHEMATICS Requires: 2 courses 6 credits

Math Requirements:
Choose 2 courses from below

		Goal
MATH 1360	College Algebra (3 cr)	4
MATH 1370	Trigonometry (3 cr)	4
MATH 1380	Pre-Calculus (5 cr)	4
MATH 2321	Calculus II (5 cr)	4
MATH 2330	Calculus III (5 cr)	4
MATH 2340	Differential Equations (4 cr)	4
MATH 2350	Differential Equations with Linear Algebra (4 cr)	4

GOAL 5 HISTORY and the SOCIAL & BEHAVIORAL SCIENCES Requires: 1 course 3 credits

		Goal
ANTH 1300	Introduction to Cultural Anthropology (3 cr)	5
ART 1351	Found Art History II: Renaissance to Cont (3 cr)	5, 6
DVRS 1304	Diversity & Social Justice (3 cr)	5, 7
ECON 2320	Introduction to Macroeconomics (3 cr)	5
ECON 2330	Introduction to Microeconomics (3 cr)	5
GEOG 1300	World Regional Geography (3 cr)	5, 8
GERO 1300	Introduction to Gerontology (3 cr)	5, 7
HIST 1310	American History until 1877 (3 cr)	5, 9
HIST 1311	US Since 1877 (3 cr)	5, 9
HIST 1320	World History to 1500 (3 cr)	5, 8
HIST 1321	World History since 1500 (3 cr)	5, 8
HIST 1330	World War II (3 cr)	5, 8
HUMN 1305	Introduction to Latin American Studies (3 cr)	5, 8
PHIL 1310	Introduction to Philosophy (3 cr)	5, 6
POLS 1304	Introduction to American Politics (3 cr)	5, 9
POLS 1320	Public Issues (3 cr)	5, 9

		Goal
PSYC 1300	Introduction to Psychology (3 cr)	5
PSYC 1304	Lifespan Developmental Psychology (3 cr)	5
PSYC 1310	Psychology of Women and Gender (3 cr)	5
PSYC 1320	Psychology of Trauma (3 cr)	5,7
PSYC 1350	Positive Psychology-Building Human Strengths (3 cr)	5
PSYC 2310	Psychopathology: The Science of Mental Health (3 cr)	5
PSYC 2320	Social Psychology (3 cr)	5
PSYC 2330	Statistics for Psychology/Behavior Sciences (4 cr)	5
PSYC 2350	Human Sexuality (3 cr)	5
SOCI 1310	Intro to Sociology (3 cr)	5
SOCI 1320	Sociology Problems (3 cr)	5
SOCI 1350	Politics of Food (3 cr)	5
SOCI 1360	Sociology of Marriage & Family (3 cr)	5, 7
SOCI 2305	Environmental Sociology (3 cr)	5, 10
SPAN 1305	Introduction to Latin Studies (3 cr)	5, 8
SSCI 1300	Introduction to the Social Sciences (3 cr)	5

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GOAL 6 The HUMANITIES & FINE ARTS Requires: 1 course 3 credits

		Goal
ART 1300	Art Appreciation (3 cr)	6
ART 1301	Introduction to Studio Art (3 cr)	6
ART 1310	Foundation 2D Design & Materials (4 cr)	6
ART 1321	Foundation Drawing I (4 cr)	6
ART 1330	Introduction to Painting (4 cr)	6
ART 1340	Foundation Digital Photography (4 cr)	6
ART 1350	Found Art History I: Ancient to Pre-Renaissance (3cr)	6, 8
ART 1351	Found Art Hist II: Renaissance to Contemporary (3cr)	6, 5
ART 1370	Introduction to Printmaking (3cr)	6
ART 1380	Foundation 3D Design & Sculpture (3cr)	6
ENGL 1321	Introduction to Modern Fiction (3cr)	6, 8
ENGL 1322	Introduction to Literature (3cr)	6
ENGL 1340	Introduction to Multicultural Literature (3cr)	6, 7
ENGL 1341	Introduction to Women's Literature (3cr)	6, 7
ENGL 1342	Middle Eastern Literature (3cr)	6, 1
ENGL 1345	Gender in Literature (3cr)	6, 7
ENGL 1350	Creative Writing (3cr)	
ENGL 2315	Literature from our Latinx Communities (3cr)	

		Goal
HUMN 1320	Holocaust & Genocide Studies (3cr)	6, 9
HUMN 1340	Middle Eastern Cultures (3cr)	6, 8
HUMN 2350	Film and American Culture (3cr)	6
HUMN 2352	Holocaust Field Studies (1 cr)	6
MUSC 1320	Music in World Culture (3cr)	6, 8
MUSC 1340	History of Rock and Roll (3cr)	6
MUSC 1350	Experiencing Live Music (3cr)	6
MUSC 1360	Class Voice (3cr)	6
MUSC 1370	History of Musical Theatre (3cr)	6
PHIL 1310	Introduction to Philosophy (3cr)	6, 5
PHIL 1320	Ethics (3cr)	6, 9
PHIL 1360	Comparative World Religions (3cr)	6, 8
SPAN 2315	Literature from our Latinx Communities (3cr)	6,7
SPAN 2320	Intermediate Spanish II (4 cr)	6, 8
THTR 1315	Acting for Everyone (3 cr)	6
THTR 1330	Introduction to Theatre (3 cr)	6
THTR 1345	Active Collaboration (3 cr)	6

ELECTIVE CREDITS: College Level Courses 17 credits

These can be additional MnTC courses or other college level courses including specific program requirements. Please consult with your advisor for course selection.

Useful elective credits within the sciences may include: Geology, Calculus, Anatomy and Physiology, Organic Chemistry I and II, Physics, Environmental Science, and Statistics.

HELPFUL INFORMATION: Graduation and Transfer Steps

Graduation Application
After registering for your final semester to earn your degree, apply for graduation. Associate of Science (AS) degree or MN Transfer Curriculum.

Ready to Transfer:
It is recommended to attend 4-year college Transfer Fair. Apply to transfer college 6 -8 months prior to the semester start date.

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A member of Minnesota State

Biology Transfer Pathway: Transfer Options
At SCTCC, we have designed our Biology program to seamlessly transfer to any Biology bachelor's degree program for any one of the seven Minnesota State universities.

You can choose to attend Bemidji State University, Metropolitan State University, Minnesota State University, Mankato, Minnesota State University, Moorhead, St. Cloud State University, Southwest Minnesota State University, or Winona State University. With your basics covered from SCTCC, you are bound to succeed in any program you choose to move onto.

Biology Transfer Pathway: Career Choices
With a degree in Biology from SCTCC, there are several career choices you can pick from. From biology technician, genetics, education, to biochemistry, there is bound to be a profession that is right for you.

Graduates from our Biology program have worked in medical and health related fields like pharmaceuticals, research sciences, biochemistry, dietitians, and medical doctors.

Students can even work as nature and conservation specialists, zoologists, science illustrators, wildlife biologist, and water quality technicians. With so many career choices, our students are guaranteed to find the right career path for them.

Potential Employers
Potential employers for our Biology graduates have opportunities to work with medical equipment manufacturers or even in the health field itself. We teach students the skills required to succeed with potential future employers.