

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-CHIROPRACTIC EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a school of chiropractic program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a school of chiropractic program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC110, MA111

Second Semester: SC132, MA112

Third Semester: SC134, SC140/SC142, SC120

Fourth Semester: SC135, SC141/SC143, SC121

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the Bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

CM101 English Composition I (3 cr)

CM102 English Composition II (3 cr)

CM115 Public Speaking (3 cr) or

CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

Art Humanities

Music Literature

Theatre Philosophy

Foreign Language History

Mathematics Requirement 3

Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

Physical Science (4-5 cr)

Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

Economics Anthropology

Psychology Political Science

Sociology Geography

Elective Courses* 32 cr

MA111 College Algebra 3

MA112 Trigonometry

MA115 Linear Algebra and General Calculus 3

SC110 Principles of Biology I 5

SC111 Microbiology Lecture 3

SC112 Microbiology Lab 2

SC120 Human Anatomy & Physiology I 4

SC121 Human Anatomy & Physiology II 4

SC128 Pathophysiology 4

SC131 Chemistry I 5

SC132 Chemistry II 5

SC134 Organic Chemistry I 5

SC135 Organic Chemistry II 5

SC140 College Physics I or

SC142 University Physics I 5

SC141 College Physics II or

SC143 University Physics II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-CHIROPRACTIC EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	<u>5 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry	3 credit hours
SC 132	Chemistry II	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

SC 134	Organic Chemistry I*	5 credit hours
SC 140	College Physics Elective*	5 credit hours
SC 120	Human Anatomy & Physiology I*	4 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 135	Organic Chemistry II*	5 credit hours
SC 141	College Physics II*	5 credit hours
SC 121	Human Anatomy & Physiology II*	4 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15-20 credit hours* 64 credit hours

*Students may choose which path they want to take. All three sequences of courses are ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-DENTISTRY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a school of dentistry program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a school of dentistry program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC110, MA111

Second Semester: SC132, MA112

Third Semester: SC134, SC140/SC142, SC120

Fourth Semester: SC135, SC141/SC143, SC121

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the Bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

CM101 English Composition I (3 cr)

CM102 English Composition II (3 cr)

CM115 Public Speaking (3 cr) or

CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

Art Humanities

Music Literature

Theatre Philosophy

Foreign Language History

Mathematics Requirement 3

Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

Physical Science (4-5 cr)

Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

Economics Anthropology

Psychology Political Science

Sociology Geography

Elective Courses* 32 cr

MA111 College Algebra 3

MA112 Trigonometry 3

MA115 Linear Algebra and General Calculus 3

SC110 Principles of Biology I 5

SC111 Microbiology Lecture 3

SC112 Microbiology Lab 2

SC120 Human Anatomy & Physiology I 4

SC121 Human Anatomy & Physiology II 4

SC128 Pathophysiology 4

SC131 Chemistry I 5

SC132 Chemistry II 5

SC134 Organic Chemistry I 5

SC135 Organic Chemistry II 5

SC140 College Physics I or

SC142 University Physics I 5

SC141 College Physics II or

SC143 University Physics II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-DENTISTRY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	<u>5 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry	3 credit hours
SC 132	Chemistry II	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

SC 134	Organic Chemistry I *	5 credit hours
SC 140	College Physics Elective*	5 credit hours
SC 120	Human Anatomy & Physiology I*	4 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 135	Organic Chemistry II*	5 credit hours
SC 141	College Physics II*	5 credit hours
SC 121	Human Anatomy & Physiology II*	4 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15-20 credit hours* 64 credit hours

*Students may choose which path they want to take. All three sequences of courses are ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-MEDICINE EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
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clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a school of medicine program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a school of medicine program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC110, MA111

Second Semester: SC132, MA112

Third Semester: SC134, SC140/SC142, SC120

Fourth Semester: SC135, SC141/SC143, SC121

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

CM101 English Composition I (3 cr)

CM102 English Composition II (3 cr)

CM115 Public Speaking (3 cr) or

CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

Art Humanities

Music Literature

Theatre Philosophy

Foreign Language History

Mathematics Requirement 3

Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

Physical Science (4-5 cr)

Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

Economics Anthropology

Psychology Political Science

Sociology Geography

Elective Courses* 32 cr

MA111 College Algebra 3

MA112 Trigonometry 3

MA115 Linear Algebra and General Calculus 3

SC110 Principles of Biology I 5

SC111 Microbiology Lecture 3

SC112 Microbiology Lab 2

SC120 Human Anatomy & Physiology I 4

SC121 Human Anatomy & Physiology II 4

SC128 Pathophysiology 4

SC131 Chemistry I 5

SC132 Chemistry II 5

SC134 Organic Chemistry I 5

SC135 Organic Chemistry II 5

SC140 College Physics I or

SC142 University Physics I 5

SC141 College Physics II or

SC143 University Physics II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-MEDICINE EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	<u>5 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry	3 credit hours
SC 132	Chemistry II	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

SC 134	Organic Chemistry I*	5 credit hours
SC 140	College Physics Elective*	5 credit hours
SC 120	Human Anatomy & Physiology I*	4 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 135	Organic Chemistry II*	5 credit hours
SC 141	College Physics II*	5 credit hours
SC 121	Human Anatomy & Physiology II*	4 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15-20 credit hours* 64 credit hours

*Students may choose which path they want to take. All three sequences of courses are ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHARMACY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
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Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a pharmacy program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a pharmacy program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, MA120
Second Semester: SC132, MA121
Third Semester: SC134, SC140/SC142
Fourth Semester: SC135, SC141/SC143

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Elective Courses* 32 cr

- MA111 College Algebra 3
- MA112 Trigonometry 3
- MA120 Analytic Geometry & Calculus I 5
- MA121 Analytic Geometry & Calculus II 5
- SC131 Chemistry I 5
- SC132 Chemistry II 5
- SC134 Organic Chemistry I 5
- SC135 Organic Chemistry II 5
- SC140 College Physics I or
- SC142 University Physics I 5
- SC141 College Physics II or
- SC143 University Physics II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHARMACY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	5 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry (or higher)*	3 credit hours
SC 132	Chemistry II	5 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

MA 120	Analytic Geometry and Calculus I (Math elective)*	5 credit hours
SC 134	Organic Chemistry I	5 credit hours
SC 140	College Physics Elective*	5 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	15 credit hours

Semester 4

SC 135	Organic Chemistry II	5 credit hours
SC 141	College Physics II	5 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	16 credit hours
		64 credit hours

*Students may choose which math sequence they need to take. Calculus is ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHYSICIAN ASSISTANT EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
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Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a physician assistant program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a Baccalaureate of Science program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC120
Second Semester: SC132, SC121, MA111
Third Semester: SC128, BE122
Fourth Semester: SC110, SC103

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physician Assistant, Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$40,000 to \$60,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Elective Courses* 31 cr

- BE122 Medical Office Vocabulary 2
- MA111 College Algebra 3
- SC103 Physical Science 5
- SC110 Principles of Biology I 5
- SC111 Microbiology Lecture 3
- SC112 Microbiology Lab 2
- SC120 Human Anatomy & Physiology I 4
- SC121 Human Anatomy & Physiology II 4
- SC128 Pathophysiology 4
- SC131 Chemistry I 5
- SC132 Chemistry II 5

Credits Required 63

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHYSICIAN ASSISTANT EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
	Humanities General Education	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 120	Human Anatomy & Physiology I	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 111	College Algebra (or higher)*	3 credit hours
SC 132	Chemistry II	5 credit hours
SC 121	Human Anatomy & Physiology II	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 3

BE 122	Medical Office Vocabulary	2 credit hours
SC 128	Pathophysiology	4 credit hours
	Science Elective Course	5 credit hours
	Humanities General Education	3 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 103	Physical Science	5 credit hours
SC 110	Principles of Biology I	5 credit hours
	Social Science General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	16 credit hours
		63 credit hours

*Students may choose which math sequence they need to take. Calculus is ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-NURSING BSN EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Contact: Dr. Craig Lamb
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Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a Baccalaureate of Science Program in Nursing. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a Baccalaureate of Science program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution.

Recommended Course Sequence:

First Semester: SC120, MA111, SS101

Second Semester: SC121, SC110

Third Semester: SS105, BE122, SC111, SC112

Fourth Semester: MA114, SC128, SC131, SS130

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as nurses and numerous health related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as nursing and numerous related occupations. Entry-level employments in these fields are in the \$40,000 to \$60,000 range.

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 34 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course
- MA111 College Algebra (3 cr) (suggested)

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- SC131 Chemistry I (5 cr) (suggested)
- Biological Science (4-5 cr)
- SC110 Principles of Biology I (5 cr) (suggested)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics
- Anthropology
- Psychology - SS101 General Psychology (3 cr) (suggested)
- Political Science
- Sociology - SS130 Intro to Sociology (3 cr) (suggested)
- Geography

Elective Courses* 31 cr

- BE122 Medical Office Vocabulary 2
- HE124 Nutrition 3
- MA114 Elementary Statistics 3
- SC110 Principles of Biology 5
- SC111 Microbiology Lecture 3
- SC112 Microbiology Lab 2
- SC120 Human Anatomy & Physiology I 4
- SC121 Human Anatomy & Physiology II 4
- SC128 Pathophysiology 4
- SC131 Chemistry I 5
- SC132 Chemistry II 5
- SS102 Abnormal Psychology 3
- SS105 Human Growth & Development 3

Credits Required 65

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-NURSING BSN EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
SS 101	General Psychology	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 120	Human Anatomy and Physiology I	4 credit hours
HE 124	Nutrition	<u>3 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
SC 110	Principles of Biology I	5 credit hours
SC 121	Human Anatomy and Physiology II	4 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	15 credit hours

Semester 3

SC 111	Microbiology Lecture	3 credit hours
SC 112	Microbiology Lab	2 credit hours
SS 105	Human Growth and Development	3 credit hours
	Humanities General Education	3 credit hours
SS 125	Introduction to Cultural Anthropology	3 credit hours
BE122	Medical Office Vocabulary	<u>2 credit hours</u>
	Total:	16 credit hours

Semester 4

CM 115	Public Speaking	3 credit hours
SC 128	Pathophysiology	4 credit hours
SC 131	Chemistry I	5 credit hours
MA 114	Elementary Statistics	3 credit hours
SS 130	Introduction to Sociology	<u>3 credit hours</u>
	Total:	18 credit hours
		65 credit hours

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-DENTAL HYGIENE EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a dental hygiene bachelor's program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a dental hygiene bachelor's program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC120,
Second Semester: SC110, SC121
Third Semester: SC111, SC112, HE124
Fourth Semester: SC128, BE170, BE122

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$30,000 to \$50,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- | | |
|------------------|------------|
| Art | Humanities |
| Music | Literature |
| Theatre | Philosophy |
| Foreign Language | History |

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- | | |
|------------|-------------------|
| Economics | Anthropology |
| Psychology | Political Science |
| Sociology | Geography |

Elective Courses* 30 cr

- | | |
|-------------------------------------|---|
| BE122 Medical Office Vocabulary | 2 |
| BE170 Business Statistics | 3 |
| HE124 Nutrition | 3 |
| SC101 General Biology | 4 |
| SC110 Principles of Biology I | 5 |
| SC111 Microbiology Lecture | 3 |
| SC112 Microbiology Lab | 2 |
| SC120 Human Anatomy & Physiology I | 4 |
| SC121 Human Anatomy & Physiology II | 4 |
| SC128 Pathophysiology | 4 |
| SC130 General Chemistry | 5 |
| SC131 Chemistry I | 5 |
| SC132 Chemistry II | 5 |

Credits Required 62

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-DENTAL HYGIENE EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
	Humanities General Education	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 120	Human Anatomy & Physiology I	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 111	College Algebra (or higher)*	3 credit hours
SC 110	Principles of Biology I	5 credit hours
SC 121	Human Anatomy & Physiology II	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 3

HE 124	Nutrition	3 credit hours
SC 111	Microbiology	3 credit hours
SC 112	Microbiology Lab	2 credit hours
	General Science Elective	3 credit hours
	Humanities General Education	3 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

BE 122	Medical Office Vocabulary	2 credit hours
BE 170	Business Statistics	3 credit hours
SC 128	Pathophysiology	4 credit hours
	Social Science General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15 credit hours
		62 credit hours

*Students may choose which math sequence they need to take. Calculus is ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-RADIOLOGY TECHNOLOGY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a Baccalaureate of Science Program in radiology technology. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a Baccalaureate of Science Program in radiology technology. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC120,
Second Semester: SC132, SC121, MA111
Third Semester: SC128, BE122
Fourth Semester: SC110, SC103

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$40,000 to \$60,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Elective Courses* 32 cr

- BE122 Medical Office Vocabulary 2
- MA111 College Algebra 3
- SC103 Physical Science 5
- SC110 Principles of Biology I 5
- SC111 Microbiology Lecture 3
- SC112 Microbiology Lab 2
- SC120 Human Anatomy & Physiology I 4
- SC121 Human Anatomy & Physiology II 4
- SC128 Pathophysiology 4
- SC131 Chemistry I 5
- SC132 Chemistry II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-RADIOLOGY TECHNOLOGY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
	Humanities General Education	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 120	Human Anatomy & Physiology I	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 111	College Algebra (or higher)*	3 credit hours
SC 132	Chemistry II	5 credit hours
SC 121	Human Anatomy & Physiology II	<u>4 credit hours</u>
	Total:	15 credit hours

Semester 3

BE 122	Medical Office Vocabulary	2 credit hours
SC 128	Pathophysiology	4 credit hours
	Science Elective Course	5 credit hours
	Humanities General Education	3 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 103	Physical Science	5 credit hours
SC 110	Principles of Biology I	5 credit hours
	Social Science General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	16 credit hours
		63 credit hours

*Students may choose which math sequence they need to take. Calculus is ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHYSICAL THERAPY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a physical therapy program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a physical therapy program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: SC131, SC110, MA111
Second Semester: SC132, MA112
Third Semester: SC134, SC140/SC142, SC120
Fourth Semester: SC135, SC141/SC143, SC121

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science, biology, and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful Employment Data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- | | |
|------------------|------------|
| Art | Humanities |
| Music | Literature |
| Theatre | Philosophy |
| Foreign Language | History |

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- | | |
|------------|-------------------|
| Economics | Anthropology |
| Psychology | Political Science |
| Sociology | Geography |

Elective Courses* 32 cr

- | | |
|---|---|
| MA111 College Algebra | 3 |
| MA112 Trigonometry | 3 |
| MA115 Linear Algebra and General Calculus | 3 |
| SC110 Principles of Biology I | 5 |
| SC111 Microbiology Lecture | 3 |
| SC112 Microbiology Lab | 2 |
| SC120 Human Anatomy & Physiology I | 4 |
| SC121 Human Anatomy & Physiology II | 4 |
| SC128 Pathophysiology | 4 |
| SC131 Chemistry I | 5 |
| SC132 Chemistry II | 5 |
| SC134 Organic Chemistry I | 5 |
| SC135 Organic Chemistry II | 5 |
| SC140 College Physics I or | |
| SC142 University Physics I | 5 |
| SC141 College Physics II or | |
| SC143 University Physics II | 5 |

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-PHYSICAL THERAPY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	<u>5 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry	3 credit hours
SC 132	Chemistry II	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

SC 134	Organic Chemistry I *	5 credit hours
SC 140	College Physics Elective*	5 credit hours
SC 120	Human Anatomy & Physiology I*	4 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 135	Organic Chemistry II*	5 credit hours
SC 141	College Physics II*	5 credit hours
SC 121	Human Anatomy & Physiology II*	4 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15-20 credit hours* 64 credit hours

*Students may choose which path they want to take. All three sequences of courses are ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-OCCUPATIONAL THERAPY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to an occupational therapy program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to an occupational therapy program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

First Semester: MA111, SC131, SC110

Second Semester: SC132, MA112

Third Semester: SC134, SC140/SC142, SC120

Fourth Semester: SC135, SC141/SC143, SC121

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science, biology, and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Elective Courses* 32 cr

- MA111 College Algebra 3
- MA112 Trigonometry 3
- SC110 Principles of Biology I 5
- SC111 Microbiology Lecture 3
- SC112 Microbiology Lab 2
- SC120 Human Anatomy & Physiology I 4
- SC121 Human Anatomy & Physiology II 4
- SC131 Chemistry I 5
- SC132 Chemistry II 5
- SC134 Organic Chemistry I 5
- SC140 College Physics I or
- SC142 University Physics I 5
- SC141 College Physics II or
- SC143 University Physics II 5

Credits Required 64

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-OCCUPATIONAL THERAPY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 110	Principles of Biology I	<u>5 credit hours</u>
	Total:	16 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
MA 112	Trigonometry	3 credit hours
SC 132	Chemistry II	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 3

SC 134	Organic Chemistry I*	5 credit hours
SC 140	College Physics Elective*	5 credit hours
SC 120	Human Anatomy & Physiology I*	4 credit hours
	Social Science General Education	<u>3 credit hours</u>
	Total:	17 credit hours

Semester 4

SC 135	Organic Chemistry II*	5 credit hours
SC 141	College Physics II*	5 credit hours
SC 121	Human Anatomy & Physiology II*	4 credit hours
	Humanities General Education	3 credit hours
CM 115	Public Speaking	<u>3 credit hours</u>
	Total:	15-20 credit hours* 64 credit hours

*Students may choose which path they want to take. All three sequences of courses are ultimately required before acceptance into the field.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-RESPIRATORY THERAPY EMPHASIS

Associate of Science

Cloud County Community College has agreements with various Regents Universities across Kansas where students can take courses at CCCC for two years, then transfer into the university system the third year as juniors. Students who plan to major in health sciences and numerous related occupational fields may begin this bachelor's degree program at Cloud County Community College. STEM majors with bachelor's degrees enter an exciting, financially rewarding and emotionally satisfying profession. Today there is a high demand for STEM majors.

Contact: Dr. Craig Lamb
(785) 243-1435, ext 717
clamb@cloud.edu

Minimum General Education Required Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) or
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science (4-5 cr)
- Biological Science (4-5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Elective Courses* 31 cr

- BE122 Medical Office Vocabulary 2
- PE131 First Aid & Safety 3
- MA111 College Algebra 3
- MA112 Trigonometry 3
- SC110 Principles of Biology I 5
- SC111 Microbiology Lecture 3
- SC112 Microbiology Lab 2
- SC120 Human Anatomy & Physiology I 4
- SC121 Human Anatomy & Physiology II 4
- SC128 Pathophysiology 4
- SC131 Chemistry I 5
- SC132 Chemistry II 5
- SC140 College Physics I 5
- SC141 College Physics II 5

Credits Required 63

*All electives should be selected with assistance from an advisor. These options are general areas that will transfer to focused majors. Substitutions must be approved by the department chair.

Program Information: The Associate of Science degree prepares the student to continue study at a college or university in preparation for application to a respiratory therapy bachelor's degree program. Most general education courses will be met, but further undergraduate work will be required prior to acceptance to a respiratory therapy bachelor's degree program. The following list represents a suggested guide toward a program of study and is intended to meet typical requirements of a transfer institution. The program may be modified to reflect student interests and/or the requirements of a particular transfer institution.

Recommended Course Sequence:

- First Semester: SC131, SC120, MA111
- Second Semester: SC132, SC121, MA112
- Third Semester: SC111, SC112, SC140
- Fourth Semester: BE122, SC128, SC141

Requirements: Depending on ACT scores and/or placement exams, students may be required to take developmental courses which may add to the length of study.

After Cloud: The physical science, biology, and chemistry courses are designed for students who intend to transfer to four-year colleges and universities to complete educational requirements necessary for careers as chemists, geologists, geophysicists, meteorologists, physicists, astronomers, and numerous related occupations. Physical science and chemistry courses are also a part of pre-professional programs, such as engineering, agriculture, medicine, nursing, and numerous health occupations.

Gainful Employment: This program results in an Associate of Science degree, which prepares students for further study at a four-year institution. Students who obtain a bachelor's degree in this field could apply these skills to health related careers such as Physical Therapists, Occupational Therapists, Pre-Medicine, Pre-Chiropractic, Pre-Dentistry and numerous related occupations. Entry-level employments in these fields are in the \$70,000 to \$100,000 range. Pre-health related degrees are also particularly well-suited to continuing education for the career of high school teacher (requires state certification) or STEM related professions (requires professional degree beyond the bachelor's degree).

Obtaining an Associate of Science degree with an emphasis in this area should allow a student to transfer into a four-year program. This degree is not specifically a "School to Work" or "Career Ready" program. Associate degrees would make students more competitive for most entry-level positions. Gainful employment data would be comparable to various entry level positions at/or above minimum wage values.

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

Programs of Study

HEALTH PRE-PROFESSIONAL

PRE-RESPIRATORY THERAPY EMPHASIS

Associate of Science

Suggested Semester Guideline

Semester 1

CM 101	English Composition I	3 credit hours
MA 111	College Algebra (or higher)*	3 credit hours
SC 131	Chemistry I	5 credit hours
SC 120	Human Anatomy and Physiology I	<u>4 credit hours</u>
Total:		15 credit hours

Semester 2

CM 102	English Composition II	3 credit hours
	Humanities General Education	3 credit hours
SC 132	Chemistry II	5 credit hours
SC 121	Human Anatomy and Physiology II	<u>4 credit hours</u>
Total:		15 credit hours

Semester 3

SC 111	Microbiology	3 credit hours
SC 112	Microbiology Lab	2 credit hours
SC 140	College Physics I	5 credit hours
	Social Science General Education	3 credit hours
	Humanities General Education	<u>3 credit hours</u>
Total:		16 credit hours

Semester 4

BE 122	Medical Office Vocabulary	2 credit hours
CM 115	Public Speaking	3 credit hours
	Social Science General Education	3 credit hours
SC 128	Pathophysiology	4 credit hours
SC 141	College Physics II	<u>5 credit hours</u>
Total:		17 credit hours
		63 credit hours

*Students may choose which math sequences of courses they need to take. Trigonometry background is needed for College Physics.