School of Mathematics, Science, and Health Sciences

Dr. Keith Martin, Dean

Departments
- Biology
- Health Sciences
- Mathematics and Physical Sciences
Mathematics, Science, and Health Sciences Degrees

Baccalaureate Degrees

Biology (B.S.)
  • Environmental Conservation
  • Medical/Molecular Biology

Nursing (B.S.)

Minors
  • Biology
  • Chemistry

Associate Degrees

Biological Science (A.S.)

Emergency Medical Services (A.A.S.)

Nursing (A.A.S.)
  • Bridge NREMT – Paramedic/LPN to RN

Physical Science (A.S.)
  • Chemistry
  • Geology
  • Engineering/Physics/Math
DEPARTMENT OF BIOLOGY
SCHOOL OF MATHEMATICS, SCIENCE, AND HEALTH SCIENCES

Dr. Jerry Bowen, Department Head

Ms. Claudia Glass       Dr. Jae-Ho Kim       Dr. Jin Seo
Mr. Don Glass          Dr. Eric Lee         Dr. Craig Zimmermann
Dr. Sue Katz-Amburn

MISSION STATEMENT AND PURPOSES
The mission of the Department of Biology at Rogers State University is to support students in their pursuit of knowledge in biology and life science. Our purposes are:

1. To increase the student's critical thinking and reasoning abilities.
2. To increase the student's understanding and appreciation of the biological world, and the ability to apply this understanding in his/her personal and professional life.
3. To increase the student's awareness of the benefits of incorporation of technology into science studies.
4. To increase the student's ability to interpret and understand his/her world.
5. To prepare a student to matriculate into a four-year degree program in math or science-related fields or graduate.
6. To serve as a resource for the community, utilizing the expertise of the faculty.

PROGRAMS OF STUDY

Bachelor of Science
- Biology
  - Option: Environmental Conservation
  - Option: Medical/Molecular Biology

Minor
- Biology

Associate in Science
- Biological Science
BACHELOR OF SCIENCE

BIOLOGY

OPTION: ENVIRONMENTAL CONSERVATION (112E)
OPTION: MEDICAL/MOLECULAR (112M)

Under the Bachelor of Science in Biology, there are two emphases: the Environmental Conservation emphasis and the Medical/Molecular emphasis. The four-year program seeks to develop a biologist well founded in either area of emphasis. The student integrates mathematical and physical science concepts into biology. The student uses the scientific method as well as evaluates others’ use of this method of inquiry. He/she writes and presents scientific papers and reports. The degree is augmented with individual research and internships for successful postgraduate and professional careers.

REQUIRED HOURS ........................................... 121

Communications ........................................... 9
ENGL 1113 Composition I
ENGL 1213 Composition II
SPCH 1113 Speech Communication

Social and Behavioral Sciences ......................... 9
History ...................................................... 3
Select from the following:
HIST 2483 American History to 1877
HIST 2493 American History since 1877

POLS 1113 American Federal Government ........... 3

Social Science ............................................. 3
Select from the following:
ECON 2113 Principles of Macroeconomics
ECON 2123 Principles of Microeconomics
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

Science and Mathematics ................................. 12
Physical Science ......................................... 5
Select from the following:
*CHEM 1315 General Chemistry I
GEOL 1014 Earth Science
GEOL 1114 Physical Geology
GEOL 1124 Physical Geography
GEOL 1224 Historical Geology
GEOL 2124 Astronomy
PHYS 1014 General Physical Science
PHYS 1114 General Physics I

Biological Science ....................................... 4
Select from the following:
BIOL 1114 General Biology
BIOL 1134 General Environmental Biology
*BIOIL 1144 General Cellular Biology

Mathematics ............................................... 3
Select from the following:
MATH 1503 Mathematics for Critical Thinking
*MATH 1513 College Algebra
MATH 1613 Trigonometry
MATH 1715 Pre-Calculus
MATH 2264 Analytical Geometry & Calculus I

Humanities ............................................... 6
Select from the following:
ART (HUM) 1113 Art Appreciation
COMM (HUM) 2413 Theatre Appreciation
ENGL 2113 Introduction to Literature
HUM 2113 Humanities I
HUM 2223 Humanities II
HUM 2893 Cinema
MUSC (HUM) 2573 Music Appreciation
PHIL 1113 Introduction to Philosophy

Global Studies ........................................... 3
Select from the following:
BIOIL 3103 Plants and Civilization
ECON 2113 Principles of Macroeconomics
ECON 2123 Principles of Microeconomics
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

Elective .................................................... 3
Select three additional hours from the courses listed above and not previously selected.

*Required
Program Core Requirements .............................. 16
  BIOL  2104  General Botany
  BIOL  2205  General Zoology
  BIOL  3024  Genetics
  BIOL  4602  Biology Research Methods I
  BIOL  4801  Biology Research Methods II

Environmental Conservation Emphasis .......... 23
  BIOL  3004  Field Botany
  BIOL  3014  Ecology of Mammals
  BIOL  3034  General Ecology
  BIOL  3513  Environmental Conservation
  BIOL  4014  Ornithology
  BIOL  4524  Field Zoology

Environmental Conservation Required
  Support Courses ................................. 14
  CHEM  1415  General Chemistry II
  CHEM  3125  Organic Chemistry I
  PHYS  1114  General Physics I

Environmental Conservation Guided
  Selected Electives .............................. 13
  Guided Electives (BIOL, CHEM, GEOL, MATH, PHYS)
  (Minimum 6 hours of 3000-4000 upper-division courses)

Selected Electives ................................. 13

Medical/Molecular Emphasis ....................... 16
  BIOL  3204  Physiology
  BIOL  3504  Molecular Cell Biology
  BIOL  3525  Biology of Microorganisms
  BIOL  4153  Molecular Genetics

Medical/Molecular Required
  Support Courses ................................. 27
  CHEM  1415  General Chemistry II
  CHEM  3125  Organic Chemistry I
  CHEM  3225  Organic Chemistry II
  CHEM  3404  Biochemistry
  PHYS  1114  General Physics I
  PHYS  1214  General Physics II

Medical/Molecular Guided
  Selected Electives .............................. 8
  BIOL 3000-4000 upper-division biology courses

Selected Electives ................................. 12

Total Credit Hours ............................... 121
A minor requires completion of at least 18-24 designated credit hours of coursework outside the student's major field, including a minimum of 9 upper-division credit hours, and may have a required core. The same courses may not be used to fulfill the requirements for both a major and a minor. To complete a minor, a student is required to earn six 3000-4000 level credit hours in that minor at RSU.

MINOR IN BIOLOGY (003B)

Requirements ........................................... 12-14

BIOL 1144 General Cellular Biology

and two of the following three courses:

BIOL 2104 General Botany
BIOL 2205 General Zoology
BIOL 2124 Microbiology

or

BIOL 3525 Biology of Microorganisms

Electives ................................................... 9

Nine upper-division hours in Biology

Recommendation for Physical Science requirement in General Education:

CHEM 1315 Chemistry I

Total Credit Hours ................................. 21–23

Not open to students choosing Bachelor of Science in Biology degree.
ASSOCIATE IN SCIENCE

BIOLOGICAL SCIENCE (003)

The Associate in Science in Biological Science consists of the general education curriculum and the supporting science courses. In support of the mission of the University, the school, and the department, the degree seeks to develop a student with a broad and diverse background in science and general education.

REQUIRED HOURS ................................................. 64

Communications ................................................. 9

ENGL 1113 Composition I
ENGL 1213 Composition II
SPCH 1113 Speech Communication

Social and Behavioral Sciences .................................. 9

History ............................................................................. 3
Select from the following:
HIST 2483 American History to 1877
HIST 2493 American History since 1877

POLS 1113 American Federal Government ................. 3

Social Science ................................................................. 3
Select from the following:
ECON 2113 Principles of Macroeconomics
ECON 2123 Principles of Microeconomics
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

Science and Mathematics ............................................. 12

Physical Science ............................................................ 5
Select from the following:
*CHEM1315 General Chemistry I
GEOL 1014 Earth Science
GEOL 1114 Physical Geology
GEOL 1124 Physical Geography
GEOL 1224 Historical Geology
GEOL 2124 Astronomy
PHYS 1014 General Physical Science
PHYS 1114 General Physics I

Biological Science ........................................................... 4
Select from the following:
BIOL 1114 General Biology
BIOL 1134 General Environmental Biology
*BIOL 1144 General Cellular Biology

Mathematics ................................................................. 3
Select from the following:
MATH 1503 Mathematics for Critical Thinking
*MATH 1513 College Algebra or higher
MATH 1613 Trigonometry
MATH 1715 Pre-Calculus
MATH 2264 Analytical Geometry and Calculus I

Humans ................................................................. 6
Select from the following:
ART (HUM)1113 Art Appreciation
COMM (HUM) 2413 Theatre Appreciation
ENGL 2613 Introduction to Literature
HUM 2113 Humanities I
HUM 2223 Humanities II
HUM 2893 Cinema
MUSC (HUM) 2573 Music Appreciation
PHIL 1113 Introduction to Philosophy

Global Studies ......................................................... 3
Select from the following:
BIOL 3103 Plants and Civilization
ECON 3003 International Economic Issues and Policies
GEOG 2243 Human Geography
GERM 1113 Beginning German I
HIST 2013 World Civilization I
HIST 2023 World Civilization II
HUM 3633 Comparative Religion
LANG 1113 Foundations of World Languages
NAMS 1143 Native Americans of North America
NAMS 2503 Cherokee I
PHIL 1313 Values and Ethics
POLS 3053 International Relations
SPAN 1113 Beginning Spanish I

Elective ................................................................. 3
Select three additional hours from the courses listed above and not previously selected.

*Required

Program Requirements ............................................... 18
BIOL (Any course 2000 or higher)
BIOL 2104 General Botany
BIOL 2205 General Zoology
CHEM 1415 General Chemistry II

Support and Related .................................................. 4
Select from the following:
BIOL (Any course 2000 or higher)
CHEM 3125 Organic Chemistry I
CHEM 3225 Organic Chemistry II
MATH 2843 Statistics
PHYS 1114 General Physics I
PHYS 1214 General Physics II

Total Credit Hours ................................................... 64
MISSION STATEMENT AND PURPOSES

The Department of Health Sciences is one of eleven academic departments at Rogers State University and supports the mission of Rogers State University. The department mission is to prepare students to achieve personal and professional goals and to educate safe and competent beginning practitioners of selected health fields. The department also prepares students majoring in other fields with health courses to support their degrees.

The faculty is committed to excellence in teaching and student service. Learning is best accomplished by providing students with accurate and reliable information, opportunities for individualized learning experiences, and guidance and direction through supportive resources. The teacher-learner relationship is enhanced when accountabilities and expected outcomes are clear. Students are supported and guided by the faculty to become active participants in learning in order to achieve professional and personal goals. The Health Sciences faculty believes that scientific reasoning and critical thinking are reflected as clinical judgment.

The purposes of the RSU Health Sciences Department mission are to:

1. Provide a baccalaureate degree, associate degrees, and educational opportunities for students, both traditional and nontraditional.

2. Provide opportunities for students to demonstrate competence in written and oral communications, scientific reasoning, and critical thinking that emphasizes qualitative as well as quantitative skills.

3. Promote and encourage a positive academic climate with students, community, faculty, and staff for instruction and communication.

PROGRAMS OF STUDY

Bachelor of Science
Nursing

Associate in Applied Science
Emergency Medical Services
Nursing
Option: Bridge NREMT–Paramedic/LPN to RN
The Bachelor of Science in Nursing, specifically designed for the Registered Nurse, provides an opportunity for any licensed registered nurse educated at the associate degree or diploma level to achieve academic and personal goals and to develop stronger clinical reasoning and analytical skills to advance their careers. The Bachelor of Science in Nursing program is accredited by the Accreditation Commission for Education in Nursing.

**Mission Statement:**
The Rogers State University Bachelor of Science Program exists to build on Associate degree nursing graduates' (ADN) and Diploma graduates' educational preparation. The degree provides an opportunity for ADN and Diploma registered nurses to achieve academic and personal goals and to develop stronger clinical reasoning and analytical skills to advance their careers. Graduates of the Bachelor of Science degree in nursing are prepared for graduate programs in nursing... The nursing faculty supports the mission of Rogers State University. The faculty believes nursing education is best suited to institutions of higher learning and that evidence based practice and the use of critical thinking provide the foundation for appropriate clinical decision making. Concepts inherent in the practice of nursing are person, health, environment, nursing, nursing process, communication, learning, and nursing education at the associate and bachelor degree levels.

**REQUIRED HOURS** ........................................... 124

**Communications** ........................................... 9

<table>
<thead>
<tr>
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<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
</tr>
<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
</tr>
<tr>
<td>SPCH 1113</td>
<td>Speech Communication</td>
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**Social and Behavioral Sciences** ........................................... 9

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<th>Title</th>
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<tr>
<td>HIST 2483</td>
<td>American History to 1877</td>
</tr>
<tr>
<td>HIST 2493</td>
<td>American History since 1877</td>
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<tr>
<td>POLS 1113</td>
<td>American Federal Government</td>
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</table>

**Select from the following:**

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<th>Title</th>
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<tbody>
<tr>
<td>ECON 2113</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 2123</td>
<td>Principles of Microeconomics</td>
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**Basic Science** ........................................... 12

**Physical Science** ........................................... 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>*CHEM 1315</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>GEOL 1014</td>
<td>Earth Science</td>
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<tr>
<td>GEOL 1114</td>
<td>Physical Geology</td>
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<tr>
<td>GEOL 1124</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>GEOL 1224</td>
<td>Historical Geology</td>
</tr>
<tr>
<td>GEOL 2124</td>
<td>Astronomy</td>
</tr>
<tr>
<td>PHYS 1014</td>
<td>General Physical Science</td>
</tr>
<tr>
<td>PHYS 1114</td>
<td>General Physics I</td>
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</table>

**Biology** ........................................... 4

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<tbody>
<tr>
<td>BIOL 1114</td>
<td>General Biology</td>
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<tr>
<td>BIOL 1134</td>
<td>General Environmental Biology</td>
</tr>
<tr>
<td>BIOL 1144</td>
<td>General Cellular Biology</td>
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**Mathematics** ........................................... 3

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<tr>
<td>MATH 1303</td>
<td>Mathematics for Critical Thinking</td>
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<td>*MATH 1513</td>
<td>College Algebra</td>
</tr>
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<td>MATH 1613</td>
<td>Trigonometry</td>
</tr>
<tr>
<td>MATH 1715</td>
<td>Pre-Calculus</td>
</tr>
<tr>
<td>MATH 2264</td>
<td>Analytical Geometry &amp; Calculus I</td>
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**Humanities** ........................................... 6

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<th>Title</th>
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<tr>
<td>ART (HUM) 1113</td>
<td>Art Appreciation</td>
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<tr>
<td>COMM (HUM) 2413</td>
<td>Theatre Appreciation</td>
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<td>ENGL 2613</td>
<td>Introduction to Literature</td>
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<td>HUM 2113</td>
<td>Humanities I</td>
</tr>
<tr>
<td>HUM 2223</td>
<td>Humanities II</td>
</tr>
<tr>
<td>HUM 2893</td>
<td>Cinema</td>
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<td>MUSC (HUM) 2573</td>
<td>Music Appreciation</td>
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<tr>
<td>PHIL 1113</td>
<td>Introduction to Philosophy</td>
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**Global Studies** ........................................... 3

<table>
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<tbody>
<tr>
<td>BIOL 3103</td>
<td>Plants and Civilization</td>
</tr>
<tr>
<td>ECON 3003</td>
<td>International Economic Issues and Policies</td>
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<tr>
<td>GEOG 2424</td>
<td>Human Geography</td>
</tr>
<tr>
<td>GERM 1113</td>
<td>Beginning German I</td>
</tr>
<tr>
<td>HIST 2013</td>
<td>World Civilization I</td>
</tr>
<tr>
<td>HIST 2023</td>
<td>World Civilization II</td>
</tr>
<tr>
<td>HUM 3633</td>
<td>Comparative Religion</td>
</tr>
<tr>
<td>LANG 1113</td>
<td>Foundations of World Languages</td>
</tr>
<tr>
<td>NAMS 1143</td>
<td>Native Americans of North America</td>
</tr>
<tr>
<td>NAMS 2503</td>
<td>Cherokee I</td>
</tr>
<tr>
<td>PHIL 1313</td>
<td>Values and Ethics</td>
</tr>
<tr>
<td>POLS 3053</td>
<td>International Relations</td>
</tr>
<tr>
<td>SOC 3213</td>
<td>Minority Groups</td>
</tr>
<tr>
<td>SPAN 1113</td>
<td>Beginning Spanish I</td>
</tr>
</tbody>
</table>
Elective ........................................ 3
Select three additional hours from the courses listed above and not previously selected.

*Required

Program Core Requirements ...................... 56
Professional Specialty – 29 hours*
NURS 4003 Professional Nursing Role
NURS 4013 Health Assessment/Promotion
NURS 4113 Rural Nursing
NURS 4213 Nursing Science and Research
NURS 4214 Management and Leadership in Nursing
NURS 4223 Professional Nursing Practice Seminar
NURS 4224 Family, Community and Public Health Nursing I
NURS 4234 Family, Community and Public Health Nursing II

Support Course Requirements ...................... 23
BIOL 2124 Microbiology
BIOL 3204 Physiology
HLSC 3323 Pathophysiology for the Health Professions
MATH 2843 Statistics or
SBS 3063 Social and Behavioral Statistics
NUTR Nutrition Elective
PHAR 2113 Fundamentals of Pharmacology
PSY 3033 Developmental Psychology

Free Elective ........................................ 3

Total Credit Hours .................................. 124

* Advanced standing credit. Since this degree builds upon initial associate degree or diploma nursing preparation, the Registered Nurse receives advanced standing credit for a portion of the nursing major. Twenty-nine (29) hours of 3000 level nursing credit will be awarded via advanced standing based on appropriate state licensure documentation. These hours are represented on the degree plan as Professional Specialty.
ASSOCIATE IN APPLIED SCIENCE  
EMERGENCY MEDICAL SERVICES (094E)

Mission Statement:
The EMS Education Program faculty at Rogers State University is committed to delivering the highest quality of current medical education in order to graduate EMS professionals who meet or exceed the level of an entry-level practicing paramedic in the cognitive, affective, and psychomotor domains. The faculty believe that providing innovative, lifelong learning opportunities to our students in the pre-hospital and other medical environments are the best way to ensure high-level pre-hospital emergency care to the public. The EMS Education Program faculty are dedicated to preparing EMS leaders of the future by ensuring our students obtain a well-rounded educational experience in areas relevant to a professional Paramedic.

The Rogers State University Emergency Medical Services Program began in 1991 and is approved by the Oklahoma State Department of Health-Emergency Medical Services Division. The Emergency Medical Services Program is also nationally accredited by the Commission on Accreditation of Allied Health Education Program. This program exists to provide students with educational opportunities in the classroom and in clinical settings, and to prepare them to enter the profession of Emergency Medical Services. Upon successful program completion, graduates in the curriculum are eligible to take the National Registry Examination to become licensed as a Paramedic. PHTLS, ACLS, and PALS are included. The curriculum provides a collegiate-level educational experience well beyond the minimum requirements of licensure agencies. Admission is competitive.

EMS curriculum will be modified to accommodate changes in the EMT-Paramedic National Curriculum which has been developed by the National Transportation Board under the auspices of the United States Department of Health and Human Services, Health Resources and Human Services Administration, Maternal and Child Health Bureau. Please check with the Health Sciences department for information as to when the revised curriculum will be implemented.

Program Prerequisites

1. Basic Emergency Medical Technician (EMS 1108 or licensure)

2. Students must clear all academic deficiencies before admission to the program.

3. Computer Proficiency: Successful completion of institutional computer science proficiency exam or CS 1113 Microcomputer Applications.

4. All prerequisite courses must be completed prior to Fall admittance.

REQUIRED HOURS .................................. 76

Communications ............................ 6
   ENGL 1113 Composition I
   ENGL 1213 Composition II

Social and Behavioral Sciences .......... 9
   History .................................... 3
   Select from the following:
      HIST 2483 American History to 1877
      HIST 2493 American History since 1877
   POLS 1113 American Federal Government .... 3

Science and Mathematics .................. 9
   Biological Science
      BIOL 1144 General Cellular Biology*
      BIOL 2215 Anatomy and Physiology*

Orientation .................................. 1
   ORIE 1151 The College Experience**

Program Requirements .................... 47
   EMS 1103 Introduction to EMS and Patient Assessment
   EMS 1113 Pharmacology for Pre-Hospital Providers
   EMS 1124 Advanced Skills in Emergency Medical Services
   EMS 1203 Field Operations
   EMS 1213 ECG Interpretation
   EMS 1225 Trauma Assessment and Management
   EMS 2104 Medical Emergencies
   EMS 2115 Special Patient Populations
   EMS 2125 Cardiac/Respiratory Emergencies
   EMS 2202 OB/GYN Emergencies
   EMS 2241 EMS Leadership
   EMS 2213 Physician Internship
   EMS 2245 EMS Internship
   EMS 2221 Public Health Principles

Support and Related ....................... 4
   HLSC 1233 Medical Terminology
   HLSC 1051 Blood Borne Pathogens and Hazard Communication

Total Credit Hours .......................... 76

*Pre-requisite Course

**ORIE 1151 will be waived for students transferring at least 24 collegiate semester hours. Credit hours transferred from a technology center will not count toward the total.
ASSOCIATE IN APPLIED SCIENCE
NURSING (054)

The Nursing Program began in 1981 and is approved by the Oklahoma Board of Nursing and accredited by the Accreditation Commission for Education in Nursing. The degree consists of a 72 credit hour program and can be completed in two years with a prerequisite semester by a full-time student. Admission is competitive.

Mission Statement
The Rogers State University Associate Nursing Program exists to provide selected students with educational opportunities, in the classroom and clinical settings, to prepare for the entry into the profession of nursing. Graduates of the Rogers State University Associate Degree Nursing Program are eligible to apply to the State Board of Nursing to take the National Council Licensure Examination to become a Registered Nurse. The associate graduate is prepared at an entry level of nursing practice and will require ongoing education, both formal and informal to advance in the expertise of nursing practice...The nursing faculty supports the mission of Rogers State University. The faculty believes nursing education is best suited to institutions of higher learning and that evidence based practice and the use of critical thinking provide the foundation for appropriate clinical decision making. Concepts inherent in the practice of nursing are person, health, environment, nursing, nursing process, communication, learning, and nursing education at the associate and bachelor degree levels.

Program Prerequisites
1. Reading score of: ACT Reading 19, ACT Compass 83 or Nelson Denny 13.
2. All Academic deficiencies cleared including Computer Science. Proficiency in Computer Science may be achieved through Advanced Standing or successfully passing CS 1113 Microcomputer Applications with a ‘C’ or better.
3. Required GPA in the five(5) pre-requisite courses of 2.5 or higher. All prerequisite courses must be completed by the end of the Spring semester in which an application is submitted.

REQUIRED HOURS ........................................ 72

Communications ......................................... 6
ENGL 1113 Composition I* .......................... 3
ENGL 1213 Composition II ......................... 3

Social and Behavioral Sciences ...................... 9
History .................................................. 3
Select from the following:
HIST 2483 American History to 1877
HIST 2493 American History since 1877
POLS 1113 American Federal Government .......... 3

Social Science .......................................... 3
PSY 1113 Introduction to Psychology

Science and Mathematics ............................. 4
Biological Science
BIOL 1144 General Cellular Biology*

Orientation .............................................. 1
ORIE 1151 The College Experience**

Guided Electives ....................................... 3
Select from the following:
PHIL 1313 Values and Ethics
PHIL 2123 Logic
SOC 1113 Introduction to Sociology
SPCH 1113 Speech Communication

Program Requirements ................................ 34
NURS 1111 Nursing Concepts
NURS 1117 Foundations of Nursing Practice
NURS 1191 Dosage Calculation*
NURS 1228 Therapeutic Nursing Interventions I
NURS 2138 Therapeutic Nursing Interventions II
NURS 2223 Transition to Nursing Practice
NURS 2246 Nursing in a Complex Environment

Support and Related .................................. 15
BIOL 2124 Microbiology
BIOL 2215 Anatomy and Physiology*
NUTR 1113 Introduction to Nutrition
PHAR 2113 Fundamentals of Pharmacology

Total Credit Hours .................................... 72

*Pre-requisite Course

**ORIE 1151 will be waived for students transferring at least 24 collegiate semester hours. Credit hours transferred from a technology center will not count toward the total.
ASSOCIATE IN APPLIED SCIENCE
NURSING
OPTION: BRIDGE NREMT–PARAMEDIC/LPN TO RN (054B)

Rogers State University provides an option to facilitate the transition from NREMT-Paramedic/LPN to RN. The program is designed to provide a solid foundation, training, and experience that meets all the recognized national and state accreditation guidelines. Students are required to pass equivalency nursing examinations for advanced standing. Graduates are eligible to apply to the State Board of Nursing to take the National Council Licensure Examination to become a Registered Nurse. The Nursing Program is approved by the Oklahoma Board of Nursing and accredited by the Accreditation Commission for Education in Nursing. Admission is competitive.

Mission Statement
The Rogers State University Associate Nursing Program exists to provide selected students with educational opportunities, in the classroom and clinical settings, to prepare for the entry into the profession of nursing. Graduates of the Rogers State University Associate Degree Nursing Program are eligible to apply to the State Board of Nursing to take the National Council Licensure Examination to become a Registered Nurse. The associate graduate is prepared at an entry level of nursing practice and will require on-going education, both formal and informal to advance in the expertise of nursing practice...The nursing faculty supports the mission of Rogers State University. The faculty believes nursing education is best suited to institutions of higher learning and that evidence based practice and the use of critical thinking provide the foundation for appropriate clinical decision making. Concepts inherent in the practice of nursing are person, health, environment, nursing, nursing process, communication, learning, and nursing education at the associate and bachelor degree levels.

Program Prerequisites
1. Reading score of: ACT Reading 19, ACT Compass 83 or Nelson Denny 13.
2. All Academic deficiencies cleared including Computer Science. Proficiency in Computer Science may be achieved through Advanced Standing or successfully passing CS 1113 Microcomputer Applications with a ‘C’ or better.
3. Required GPA in the nine (9) pre-requisite courses of 2.5 or higher. All prerequisite courses must be completed by the end of the Spring semester in which an application is submitted.

REQUIRED HOURS ............................ 65

Communications .............................. 6
ENGL 1113 Composition I*
ENGL 1213 Composition II

Social and Behavioral Sciences ............... 9
History ........................................ 3
Select from the following:
HIST 2483 American History to 1877
HIST 2493 American History since 1877

POLS 1113 American Federal Government .... 3

Social Science ................................ 3
PSY 1113 Introduction to Psychology

Science and Mathematics ..................... 4
BIOL 1144 General Cellular Biology*

Orientation .................................... 1
ORIE 1151 The College Experience**

Guided Elective* ............................. 3
Select from the following:
PHIL 2123 Logic
PHIL 1313 Values and Ethics
SOC 1113 Introduction to Sociology
SPCH 1113 Speech Communication

Program Requirements ...................... 27
NURS 1111 Nursing Concepts
NURS 1191 Dosage Calculation*
NURS 1433 Bridge to Registered Nursing
NURS 2138 Therapeutic Nursing Interventions II
NURS 2223 Transition to Nursing Practice
NURS 2246 Nursing in a Complex Environment
NURS 2005 Basic Patient Care I  or
NURS 2015 Basic Patient Care II

Support and Related ......................... 15
BIOL 2124 Microbiology*
BIOL 2215 Anatomy and Physiology*
NUTR 1113 Introduction to Nutrition*
PHAR 2113 Fundamentals of Pharmacology*

Total Credit Hours .......................... 65

*Pre-requisite Course

**ORIE 1151 will be waived for students transferring at least 24 collegiate semester hours. Credit hours transferred from a technology center will not count toward the total.
MISSION STATEMENT AND PURPOSES

The mission of the Department of Mathematics and Physical Sciences at Rogers State University is to support students in their pursuit of knowledge in mathematics and physical science. Our purposes are:

1. To increase the student's critical thinking and reasoning abilities.

2. To increase the student's understanding and appreciation of the physical world, and the ability to apply this understanding in his/her personal and professional life.

3. To increase the student's awareness of the benefits of incorporation of technology into Science and Math studies.

4. To increase the student's ability to interpret and understand his/her world mathematically.

5. To prepare a student to matriculate into a four-year degree program in math or science-related fields or graduate.

6. To serve as a resource for the community, utilizing the expertise of the faculty.

PROGRAMS OF STUDY

Minor
Chemistry

Associate in Science
Physical Science
Option: Chemistry
Option: Engineering/Physics/Math
Option: Geology
A minor requires completion of at least 18-24 designated credit hours of coursework outside the student's major field, including a minimum of 9 upper-division credit hours, and may have a required core. The same courses may not be used to fulfill the requirements for both a major and a minor. To complete a minor, a student is required to earn six 3000-4000 level credit hours in that minor at RSU.

**MINOR IN CHEMISTRY (028C)**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1315</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHEM 1415</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHEM 3125</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM 3225</td>
<td>Organic Chemistry II</td>
</tr>
</tbody>
</table>

**Total Credit Hours** | 20

The same courses may not be used to fulfill the requirements for both a major and a minor.
The Associate in Science in Physical Science consists of general education curriculum and courses supporting other departmental programs. In support of the mission of the University, the school, and the department, the degree seeks to provide a solid general education component for all University students, provide curriculum in the physical sciences for students who are preparing for a baccalaureate-granting program, and provide programs of study to students presently in the workforce, allowing them the opportunity to continue their education.

**REQUIRED HOURS ........................................ 65**

**Communications ........................................... 9**
- ENGL 1113 Composition I
- ENGL 1213 Composition II
- SPCH 1113 Speech Communication

**Social and Behavioral Sciences ......................... 9**
Select from the following:
- HIST 2483 American History to 1877
- HIST 2493 American History since 1877
- POLS 1113 American Federal Government ........... 3

**Science and Mathematics ................................. 12**
Select from the following:
- *CHEM 1315 General Chemistry I
- GEOL 1014 Earth Science
- GEOL 1114 Physical Geology
- GEOL 1124 Physical Geography
- GEOL 1224 Historical Geology
- GEOL 2124 Astronomy
- PHYS 1014 General Physical Science
- PHYS 1114 General Physics I

**Mathematics .................................................. 3**
Select from the following:
- MATH 1503 Mathematics for Critical Thinking
- MATH 1513 College Algebra
- MATH 1613 Trigonometry
- MATH 1715 Pre-Calculus
- *MATH 2264 Analytical Geometry and Calculus I

**Humanities .................................................... 6**
Select from the following:
- ART (HUM) 1113 Art Appreciation
- COMM (HUM) 2413 Theatre Appreciation
- ENGL 2613 Introduction to Literature
- HUM 2113 Humanities I
- HUM 2223 Humanities II
- HUM 2893 Cinema
- MUSC (HUM) 2573 Music Appreciation
- PHIL 1113 Introduction to Philosophy

**Global Studies ................................................ 3**
Select from the following:
- BIOL 3103 Plants and Civilization
- ECON 3003 International Economic Issues and Policies
- GEOG 2243 Human Geography
- GERM 1113 Beginning German I
- HIST 2013 World Civilization I
- HIST 2023 World Civilization II
- HUM 3633 Comparative Religion
- LANG 1113 Foundations of World Languages
- NAMS 1143 Native Americans of North America
- NAMS 2503 Cherokee I
- PHIL 1313 Values and Ethics
- POLS 3053 International Relations
- SOC 3213 Minority Groups
- SPAN 1113 Beginning Spanish I

**Elective ......................................................... 3**
Select three additional hours from the courses listed above and not previously selected.

*Required for Engineering/Physics/Math Option (028E) only.
### Program Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1415</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1613</td>
<td>Trigonometry or</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2364</td>
<td>Analytical Geometry and Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1114</td>
<td>General Physics I or</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2015</td>
<td>Engineering Physics I</td>
<td>4</td>
</tr>
</tbody>
</table>

### Chemistry Option Support and Related Courses

Select ten credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2515</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3125</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3225</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 60**

### Engineering/Physics/Math Option Support and Related Courses

Select ten credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2364</td>
<td>Analytical Geometry and Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2464</td>
<td>Analytical Geometry and Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2843</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3113</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2115</td>
<td>Engineering Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 60**

### Geology Option Support and Related Courses

Select eight credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1014</td>
<td>Earth Science</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1114</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1124</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1224</td>
<td>Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 2124</td>
<td>Astronomy</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 60**