Department of Natural and Behavioral Sciences

Professor and Chair
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Professors
Ferris R. Byxbe, Ph.D., (Criminal Justice); Martin G. Urbina, Ph.D., (Criminal Justice)

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Daniel H. Foley, III, Ph.D., (Biology); Wesley D. Wynne, Ph.D., (Psychology),

Assistant Professors
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The Department of Natural and Behavioral Sciences combines several related academic disciplines into one administrative unit. The Department offers the Bachelor of Arts degree in Psychology, Bachelor of Science in Biology, Criminal Justice, and Mathematics. The Department also works with the Department of Education to offer course work leading to teacher certification. All degree programs require a minimum of 30 semester credit hours at SRSU-RGC and a minimum of 39 advanced semester credit hours.

Students majoring in programs offered by the Department of Natural and Behavioral Science may also be required to participate in an assessment study. Each student should consult their advisor about specific requirements for their major.

Biology
Major
The curriculum in biology is balanced between the scientific preparation to enter such fields as wildlife biology, environmental science, medicine, teaching and postgraduate work in biology as well as the liberal arts preparation of scientifically literate members of society who have the knowledge to contribute and compete in a rapidly changing world. The biology program offers students an opportunity to gain an appreciation of the biological world, to develop an inquisitive nature and to think scientifically.

The major orientation of the biology program is towards an organismal and ecological approach to the life sciences, emphasizing ecological and evolutionary plant and animal interrelationships. The course work is designed to provide a broad training in most aspects of modern biology and will prepare students for almost any advanced specialty discipline.

Required Core Curriculum (see page 37)        42 s.c.h.

Department course requirements for a major in Biology (courses may have been used to meet core requirements):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1406</td>
<td>Biology for Science Majors I</td>
<td>3/1</td>
</tr>
<tr>
<td>BIOL 1407</td>
<td>Biology for Science Majors II</td>
<td>3/1</td>
</tr>
<tr>
<td>CHEM 1311/1111</td>
<td>General Chemistry I and Laboratory I</td>
<td>3/1</td>
</tr>
<tr>
<td>CHEM 1312/1112</td>
<td>General Chemistry II and Laboratory II</td>
<td>3/1</td>
</tr>
<tr>
<td>MTH 3302</td>
<td>Probability and Statistics I</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>College Algebra</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>MATH 1316</td>
<td>Plane Trigonometry or MATH 2312 PreCalculus</td>
<td>3 s.c.h.</td>
</tr>
</tbody>
</table>

Biology course requirements for a major in Biology:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 3306</td>
<td>Genetics</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>BIO 4301</td>
<td>Cell Biology</td>
<td>3 s.c.h.</td>
</tr>
</tbody>
</table>

2 courses chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2401</td>
<td>Anatomy and Physiology I</td>
<td>4 s.c.h.</td>
</tr>
<tr>
<td>BIOL 2402</td>
<td>Anatomy and Physiology II</td>
<td>4 s.c.h.</td>
</tr>
<tr>
<td>BIOL 2406</td>
<td>Environmental Biology</td>
<td>4 s.c.h.</td>
</tr>
<tr>
<td>BIOL 2421</td>
<td>Microbiology for Science Majors</td>
<td>4 s.c.h.</td>
</tr>
</tbody>
</table>

5 additional advanced Biology courses chosen from: 3302, 3307, 3401, 3402, 3406, 3407, 4402, 4403, 4404, 4409, 4415 (students may not take 3300)

Total Biology course hours required for major

42-44 s.c.h.
Electives to total 120 s.c.h.

Requirements for SRSU Rio Grande College degree:
1. A minimum of 120 semester credit hours;
2. A minimum of 39 semester credit hours of advanced course work;
3. A minimum of 30 semester credit hours with SRSU-RGC; and
4. Cumulative GPA of 2.0 or better; cumulative GPA for major and minor, 2.0 or better.

Minor
A minor in Biology requires a minimum of eighteen semester credit hours, including a minimum of nine semester credit hours of advanced coursework at SRSU-RGC. A maximum of nine semester credit hours of transfer courses can be used. Students may not take BIO 3300.

Chemistry

Minor
Chemistry 1311 and 1111 4 s.c.h.
Chemistry 1312 and 1112 4 s.c.h.
Required:
   Chemistry 3401, 3403, 3423 12 s.c.h.
Select 3-4 hours from:
   Chemistry 3315, 3402, 3404, 3425, 3431, 4313, 4351, 4380, 4389, 4407, 4410, or 4501 3-4 s.c.h.
Total For Minor: 23-24 s.c.h.

Criminal Justice

Major
A Bachelor of Science degree in Criminal Justice is designed to meet the needs of students pursuing a career in one of several areas of the criminal justice system. The curriculum provides students with both the opportunity and assistance to acquire the knowledge necessary to understand the roles of policing, courts, corrections, juvenile justice and laws as they contribute to social order. It further provides a theoretical foundation of the discipline and offers a thorough understanding of contemporary legal processes applied in criminal justice. The goal at Sul Ross State University Rio Grande College is to provide students with a structured, nurturing environment conducive to learning. The program leads to a Bachelor of Science degree in Criminal Justice which will qualify graduates for employment in many public service professions. Positions of employment currently exist for educated men and women as Criminal Justice practitioners at the federal, state, and local levels of government and many private sector agencies.

Students are advised that no more than 12 semester credit hours of Criminal Justice course work may be transferred from a two year (lower-level) institution.

Required Core Curriculum (see page 37) 42 s.c.h.

Department course requirements for a major in Criminal Justice: (courses may have been used to meet core requirements)
Science (at least two lab courses) 12-16 s.c.h.
Mathematics 1314, or any course(s) higher 6 s.c.h.

Criminal Justice course requirements for major in Criminal Justice:
Cognate #1 (Criminology-based courses; select four courses) 12 s.c.h.
CRIM 3300, 3302, 3306, 3309, 3311, 4300, 4303, 4304, 4308, 4312
Cognate #2 (Legal/Law-based courses; select four courses) 12 s.c.h.
CRIM 3301, 3303, 3304, 3305, 3307, 3308, 3310, 4301, 4302, 4305, 4310
Cognate #3 CRIM 4309 (required capstone course) 3 s.c.h.
Additional Criminal Justice courses (transfer credit hours) 12 s.c.h.

Note: CRIM 3311 is required for all Criminal Justice majors

Total Criminal Justice course hours required for major: 39 s.c.h.
Electives to total 120 s.c.h.

Requirements for SRSU Rio Grande College degree:
1. A minimum of 120 semester credit hours;
2. A minimum of 39 semester credit hours of advanced course work;
3. A minimum of 30 semester credit hours with SRSU-RGC; and
4. Cumulative GPA of 2.0 or better; cumulative GPA in major and minor, 2.0 or better.

Minor
A minor in Criminal Justice requires a minimum of eighteen semester credit hours, including a minimum of nine semester credit hours of advanced coursework at SRSU-RGC. A maximum of nine semester credit hours of transfer courses can be used.

Master of Science in Criminal Justice
The Master of Science in Criminal Justice offered by Sul Ross Rio Grande College is through a cooperative arrangement with the Sul Ross State University main campus in Alpine. For details about the program, consult the online university catalog. Academic admission requirements are the same as other graduate programs. Applicants need to consult with a graduate advisor for admission details, course selection, and other degree requirements.

Mathematics
Major
A Bachelor of Science degree in Mathematics provides the opportunity to prepare for careers in industry, government agencies and teaching, and for graduate study in mathematics. Students seeking teacher certification in this major should refer to the Education Department section of this catalog for program admission requirements, required courses and course descriptions.

Required Core Curriculum (see page 37) 42 s.c.h.

Department course requirements for a major in Mathematics: (courses may have been used to meet core requirements)
- Precalculus Mathematics (MATH 2312) 3 s.c.h.
- Science (at least two lab courses) 12-16 s.c.h.

Mathematics course requirements for major in Mathematics:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MTH 3301</td>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MTH 3303</td>
<td>Multi-variant Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MTH 3304</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MTH 4301</td>
<td>Modern Abstract Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MTH 4307</td>
<td>Real Variables</td>
<td>3</td>
</tr>
<tr>
<td>MTH 4327</td>
<td>Readings and Research</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional mathematics hours from 3302, 3305, 3306, 3307, 3310, 3312, 3313 or any 4000 level courses not used to satisfy other requirements (students may not take 3308, 3309, or 3311) 12 s.c.h.

Total Mathematics course hours required for major: 35 s.c.h.

Additional Requirements for the major in Mathematics:
1) Passing score on the practice mathematics 8-12 TExES exam during the year prior to graduation; and
2) Preparation and deliverance of a research paper and oral presentation as part of MTH 4327 during the year prior to graduation.

A maximum of 14 semester credit hours in mathematics may be transferred from another institution for the major in mathematics.

Requirements for SRSU Rio Grande College Degree:
1) A minimum of 120 semester credit hours;
2) A minimum of 39 semester credit hours of advanced course work;
3) A minimum of 30 semester credit hours with SRSU-RGC; and
4) Cumulative GPA of 2.0 or better; cumulative GPA in major and minor, 2.0 or better.
Electives to total 120 s.c.h.

**Minor**

A minor in Mathematics requires a minimum of eighteen semester credit hours, including a minimum of nine semester credit hours of advanced coursework at SRSU-RGC. A maximum of nine semester credit hours of transfer courses can be used. Students may not take MTH 3308, 3309, or 3311.

**Nursing**

This degree offering at Sul Ross State University-Rio Grande College (SRSU-RGC) is designed for the nurse who has completed the pre-license level and subsequent RN license to advance their professional qualification while continuing to live and work within our outside the region. This hybrid online program focuses on access and use of evidence in clinical decision making, the delivery of nursing care consistent with evidence based practice, the health of individuals, families, communities and populations, legal and ethical issues in health care and the assumption of increasing leadership and management roles. BSN education provides increased employment opportunities and a natural progression to graduate school and expanded roles in education, administration and advance practice including (nurse practitioner (NP), clinical nurse specialist (CNS), nurse midwifery, (CNM), and certified registered nurse anesthetist (CRNA). The curriculum is designed to provide flexibility in student progression and faculty availability in Uvalde, Eagle Pass and Del Rio.

**Required Core Curriculum** (see page 37) 42 s.c.h.

**Departmental Requirements** (number in parentheses correspond to the Texas Common Course Numbering System). Many of these departmental requirements may also meet Texas Core Curriculum requirements:

- English Composition I and II (ENGL 1301 and 1302)
- United States History (HIST 1301 and 1302)
- Humanities (either ethics or philosophy)
- Visual/Performing Arts (one course in Art, Drama, or Music)
- Introduction to Psychology (PSYC 2301)
- Human Growth & Development (PSYC 2314)
- Chemistry (one course with or without lab)
- Human Anatomy and Physiology I and II (BIOL 2401 and 2402)
- Microbiology (BIOL 2420)
- Nutrition or Diet Therapy (BIO 1322 or HECO 1322)
- College Algebra (MATH 1314)
- Pathophysiology (NURS 1311)

**Nursing Courses** 30 s.c.h. required as follows:

- NURS 3301 Trends and Issues in Professional Nursing
- NURS 3303 Nursing Theories and Concepts
- NURS 3305 Nursing Research and Application
- NURS 3307 Role of Evidence Based Professional Nursing Practice
- NURS 4301 Nursing Management and Leadership
- NURS 4303 Legal and Ethical Issues in Health Care
- NURS 4305 Population-Focused Community Health
- NURS 4307 Risk Analysis, Quality Management and Implications for Practice
- NURS 4610 Baccalaureate Nursing Practice (Internship Area Selected by Student)

**Required Upper Division credits** 9 s.c.h.

- ORGL 3304 Professional Communication for Organizations
- PHIL 3301 Bio-ethics
- Elective

No minor is required.

**Requirements for SRSU Rio Grande College Degree:**

1. A minimum of 120 semester credit hours;
2. A minimum of 39 semester credit hours of advanced course; work including a minimum of 30 s.c.h. of nursing course work with SRSU-RGC; and
3. Cumulative GPA of 2.0 or better.

Minor
No minor is available in Nursing.

Psychology
The Psychology program is designed for individuals desiring a behavioral science major, a career in a human services profession, or graduate study in psychology, counseling, and related fields.

**Required Core Curriculum** *(see page 37)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCH 1311</td>
<td>Intro to Speech Communication</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>MTH 3302</td>
<td>Probability and Statistics I</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>ENGL 3312</td>
<td>Advanced Composition</td>
<td>3 s.c.h.</td>
</tr>
</tbody>
</table>

**Department course requirements for a major in Psychology:** *(courses may have been used to meet core requirements)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language</td>
<td></td>
<td>6-8 s.c.h.</td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td>6-8 s.c.h.</td>
</tr>
</tbody>
</table>

**Psychology course requirements for a major in Psychology:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 2301</td>
<td>Introduction to Psychology</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>PSCH 3306 or PSCH 3307</td>
<td>Child Development or Adult Development</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>PSCH 3301 or PSCH 4301</td>
<td>Social Psychology or Personality Psychology</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>PSCH 4330 or PSCH 4335</td>
<td>Research in Psychology or History of Psych.</td>
<td>3 s.c.h.</td>
</tr>
<tr>
<td>PSCH 4303</td>
<td>Abnormal Psychology</td>
<td>3 s.c.h.</td>
</tr>
</tbody>
</table>

Additional psychology hours from catalog not used to satisfy other requirements: 15 s.c.h.

Total Psychology course hours required for major: 30 s.c.h.

Minor
18 s.c.h.

Electives to total 120 s.c.h.

Requirements for SRSU Rio Grande College Degree:
1. A minimum of 120 semester credit hours;
2. A minimum of 39 semester credit hours of advanced course work;
3. A minimum of 30 semester credit hours with SRSU-RGC; and
4. Cumulative GPA of 2.0 or better; cumulative GPA for major and minor, 2.0 or better.

Note: All psychology majors are strongly encouraged, but not required, to take both PSCH 3306 and 3307; as well as both PSCH 3301 and 4301. Majors are also strongly advised to take ENGL 3312 during their first semester of enrollment at SRSU Rio Grande College.

Minor
A minor in Psychology requires a minimum of eighteen semester credit hours, including a minimum of nine semester credit hours of advanced coursework at SRSU-RGC. A maximum of nine semester credit hours of transfer courses can be used.