

ED-SEC ED BIOLOGICAL SCI-BA

Program Overview

Bachelor of Arts - Secondary Education - Biological Science and ELAD Endorsement

Nevada Department of Education Licensure Requirements

According to the Nevada Revised Statutes, all teaching licenses in Nevada are granted by the Nevada State Board of Education.

All Teacher Education Program students must meet the Nevada Department of Education requirements in order to be licensed.

General Education and Program Core Requirements

Lower-Division General Education Requirements

Written Communications (choose one)

ENG 100 Composition-Enhanced 5 Credits

Allows students to fulfill their first semester of English while completing the remediation process. Designed for students who did not place into ENG 101 on the placement test/writing sample, but did not score so low that they need ENG 95. Allows a student to refine specific skill deficiencies while completing the first semester of freshman composition (ENG 100 is equivalent to ENG 101). Students will have additional Academic Success Center requirements. Although it is a five-credit course, it does not replace ENG 102. After successful completion of ENG 100, a student must take ENG 102 to complete the general education requirement.

ENG 101 Composition I 3 Credits

Critical reading and writing of the expository essay. Emphasizes pre-writing, strategies for organization, and revision.

Evidence-Based Communications

ENG 102 Composition II 3 Credits

Continuation of English 101. Emphasizes writing from sources, argument, the investigative paper, and research techniques.

Mathematics: Choose from the list below or any higher-level Mathematics course. Excludes MATH 389

MATH 127 Precalculus II 3 Credits

Topics include circular functions, their graphs, and applications; trigonometric identities and equations; conic sections; vectors; sequences and mathematical induction. It is recommended that students have completed prerequisites within two years of enrolling in this course.

MATH 128 Precalculus and Trigonometry 5 Credits

Topics include equations, relations, functions, graphing; polynomial, rational, exponential, logarithmic, and circular functions with applications; coordinate geometry of lines and conics; analytic trigonometry; matrices and determinants; and binomial theorem. It is recommended that students have completed prerequisites within two years of enrolling in this course.

Additional Math (one course required)

MATH 182 Calculus II 4 Credits

A continuation of MATH 181. The course covers transcendental functions, methods of integration, conic sections, infinite sequences and series, and first-order differential equations. It is recommended that students have completed prerequisites within two years of enrolling in this course.

STAT 152 Intro to Statistics 3 Credits

Includes descriptive statistics, probability models, random variables, statistical estimation and hypothesis testing, linear regression analysis, and other topics. Designed to show the dependence of statistics on probability. It is recommended that students have completed prerequisites within two years of enrolling in this course.

Science

BIOL 190 Intro Cell/Molecular Biology 4 Credits

Structure and function of cells. Major molecules of life; composition and physiology of cellular organelles; cell metabolism, reproduction, motility, and gene function of both plant and animal cells. Required for biology majors. Concurrent enrollment in a corresponding lab section is required for this course.

CHEM 121 General Chemistry I 4 Credits

Fundamentals of chemistry including reaction stoichiometry, atomic structure, chemical bonding, molecular structure, states of matter, and thermochemistry.

Humanities (choose one)**Fine Arts (choose one)****ART 100 Visual Foundations 3 Credits**

A beginning art class that includes a survey of art and the basic components of design. The class explores visual concepts as they relate to the history of art through class presentations, discussions, and a variety of media. Students should plan for three hours of studio work outside the class.

ART 101 Drawing I 3 Credits

A disciplined foundation in drawing concepts based on visual observation skills.

ART 107 Design Fundmntls I (2-D) 3 Credits

Explores the fundamentals of design using various media focusing on 2-D design.

ENG 205 Intro to Creative Writing 3 Credits

A creative writing course designed to introduce students to the production of fiction and poetry.

MUS 101 Music Fundamentals 3 Credits

Notation, terminology, intervals, and scales. Designed to furnish a foundation for musicianship. Recommended for teachers in public schools and all others desiring a basic music background.

THTR 100 Introduction to Theatre 3 Credits

A survey of the basic principles, facts, and theories providing an understanding of the art of theatre. Course also includes a special focus on the practical technical aspects of the theatre and on live theatre experiences.

THTR 105 Introduction to Acting I 3 Credits

Examines acting fundamentals and focuses on development of vocal, physical, and creative tools to be used on stage.

THTR 121 Stage Makeup 3 Credits

This course focuses on the history of makeup and basic approaches to applying make-up for the stage and screen. Make-up supplies will be studied, as well as techniques for corrective, old-age, character, stylized, and special effects makeup.

THTR 204 Theatre Technology I 3 Credits

Lecture and discussion encompassing the philosophy and techniques of technical theatre.

WELD 200 Metal Art 3 Credits

This course is designed to give the student the basic understanding of two dimensional 2D and three-dimensional 3D metal art. Also covered in this course we will discuss different Cutting, Welding and metal finishing techniques that are used in this discipline as it relates to metal art.

Social Science (two courses required): Constitution requirement of HIST 101 and 102 or PSC 101 included in the 6 credits required)

ANTH 101 Intro Cultural Anthropology 3 Credits

Study of human cultures across the globe through examination of the basic principles underlying the organization of societies and the ways anthropologists analyze various parts of culture. Students will become familiar with the glue that holds all groups of people together, and how that glue can divide groups of people in profound ways.

CRJ 104 Intro to Admin of Justice 3 Credits

American criminal justice system, its development, components, and processes. Includes consideration of crime and criminal justice as a formal area of study.

CRJ 270 Intro to Criminology 3 Credits

Examines how society interacts with crime and delinquency through the use of the criminal justice system. Studies effective interaction and communication between the general public and members of the criminal justice system. Emphasizes the understanding of criminal behavior from a sociological and psychological perspective.

ECON 102 Prin of Microeconomics 3 Credits

Study of the causes and effects of individuals' choices among alternative uses of scarce resources. Topics include supply and demand analysis, price determination, theories of various market structures, competition and coordination, labor, the role of profit and interest, and government involvement in the economy.

ECON 103 Principles of Macroeconomics 3 Credits

Basic price and quantity relationships, study of monetary systems and policy, inflation, production and growth, recession, unemployment, fiscal policy, supply and demand perspectives, international exchange, and governmental-market relationships.

GEOG 106 Intro to Cultural Geography 3 Credits

Analyze the culture regions of the world including physical settings and cultural patterns including language, settlements, socioeconomic patterns, and historical patterns.

HIST 101 U.S. History to 1877 3 Credits

Survey of U.S. political, social, economic, diplomatic, and cultural development from colonial times through Reconstruction. When taken with HIST 102 satisfies the GBC General Education American Constitutions and Institutions Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.

HIST 102 U.S. History Since 1877 3 Credits

Survey of U.S. political, social, economic, diplomatic, and cultural development from 1877 to the present. Course satisfies the Nevada Constitution Requirement. When taken with HIST 101 satisfies the GBC General Education American Constitutions and Institutions Requirement. Can be used to satisfy the Nevada Constitution Requirement for out-of-state transfer students who have previously satisfied the United States Constitution Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.

HMS 200 Ethics in Human Services 3 Credits

Real life applications for personal and professional boundaries, beliefs, ethics, values, morals, and codes of conduct in human relationships using ethical decision-making, problem-solving, and critical-thinking activities are emphasized. This course may be repeated up to three times for continuing education credit. (Check with individual licensing boards prior to registering).

PSC 101 Intro American Politics 3 Credits

A survey of United States, national, state, and local governments with emphasis on the cultural aspects of the governing process. Satisfies the legislative requirement for the United States and Nevada Constitutions.

PSC 210 American Public Policy 3 Credits

Analysis of the interplay of forces involved in policy making at all levels of American government. Study of the impact of policy on individuals and institutions.

PSY 101 Gen Psychology 3 Credits

Survey of the discipline introducing psychological theories, research methods, and principles of behavior.

PSY 208 Psy of Human Relations 3 Credits

Explores the relationships between human beings and assists in the development of interpersonal communication skills which can be used personally and professionally.

SOC 101 Prin of Sociology 3 Credits

Sociological principles underlying the development, structure, and function of culture including society, human groups, personality formation, and social change.

Lower-Division Secondary Education Core Requirements**Communications (one course required)****COM 113 Fund Speech Communication 3 Credits**

Principles and theories of speech communication. Participation in public speaking and interpersonal communication activities.

THTR 221 Oral Interpretation 3 Credits

Introduction to and practice of oral interpretation of literary and dramatic works from Shakespeare to contemporary writers and poets.

Additional requirements**EDU 214 Prep Teachers to Use Tech 3 Credits**

Lab course on advanced skills and strategies for integrating technology into the K-12 classroom. Computer experience is required in word processing, basic spreadsheet design, and file management.

EDU 250 Foundations of Education 3 Credits

A foundations course in education and introduction to the philosophy, history, and sociology of modern education. Emphasis is placed on current trends in education.

Upper-Division Secondary Education Core Requirements**EDSC 311 Secndry Methd/Practicum I 1-3 Credits**

First in a sequence of field and clinical experience courses in a secondary classroom. Students work in middle-level or high school classrooms to develop skills working with students and implementing instructional plans. Students will spend approximately 15 hours observing in the public schools. Class may be repeated up to a total of three credits. [S/U]

EDSC 313 Secndry Methd/Practicum II 1-3 Credits

Second in a sequence of field and clinical experience courses in a secondary classroom. Students will observe approximately 25 hours of the middle-level or high school classrooms. The portfolio and admission process is explained. Class may be repeated up to a total of three credits. [S/U]

EDSC 315 Secndry Methd/Practm III 1-3 Credits

The third and final course in a sequence of field and clinical experience courses. Students will spend 30-60 hours at the middle-level or high school classroom. Students will be expected to work toward completion of the requirements for their portfolio project. Taken in conjunction with content area methods course. Class may be repeated up to a total of three credits. [S/U]

EDRL 471 Theory/Pract Acad Eng Lang Dev 3 Credits

This course addresses first and second language acquisition; language development universals and differences; English language structure and its particular challenges for the learner of a new language; English phonology (sounds), morphology (word formation), syntax (sentence formation), semantics (word meaning), and pragmatics (word choice); grammatical instruction and error analysis; and the writing process for English Language Learners. The course will also include the role of culture in language acquisition, evidence based practices for academic ELD, and approaches and models of instruction.

EDRL 474 Method/Curr Tch Eng Lang Learn 3 Credits

Provides systematic instruction to help ELL students (1) adjust to school; (2) acquire English for self-help and for extended interaction; and (3) develop English for extended learning. This course includes an analysis of standard second language tests for diagnosis, placement, and teaching of ELL students using WIDA standards and research-based practices.

EDRL 475 Assess/Eval Eng Lang Learner 3 Credits

Includes an analysis of standard second language tests and development and evaluation of teacher-generated instruments for placement, diagnosis, and teaching second language learners.

EDRL 477 Plcy,Iss,BstPrac ELL-Practcum 3 Credits

This three-credit course will aim to familiarize students with historical and current issues and cultivate students' skill in the design and implementation of instruction and assessment for English Learners (ELs). Students will be expected to demonstrate their in-depth understanding of academic literacy for ELs through practicum experiences.

EDSC 463 Teaching Secondary Science 3 Credits

Course will give students a broad perspective on science education from its historical development to current issues and trends, and will introduce methods of curriculum design, assessment techniques, instructional strategies, and other areas important in equipping successful science teachers. Practical material will be developed that may be used as resources in future science teaching situations.

EDSC 483 Secnd Suprvsd Tch Intnshp 1-16 Credits

The Supervised Internship provides the student with the opportunity to experience, in depth, the full role and meaning of teaching in a school setting. Experiences include planning and organizing for instruction, developing classroom teaching competencies and skills, evaluating pupil progress, participating in extracurricular activities, working with special school personnel, and utilizing school and community resources in the instructional program.

EDSC 491 Sec Ed Capstone Seminar 3 Credits

Addresses ethical, professional, and substantive issues in the teaching profession. This course forms the bridge between theory and practice where teaching skills can be analyzed, discussed, and refined; and professional competency can be assessed and achieved through professional collaboration and reflective practice.

EDSP 301 Education Excptl Child 3 Credits

A survey of the special education area for majors and non-majors, designed to acquaint the student with the special needs of learners categorized under all areas of exceptionality. Introduces methods for identifying, planning, and working effectively with exceptional children in the regular classroom. Emphasis on etiology, physical, and educational characteristics. The pre-service teacher is taught to recognize and refer exceptional learners for assessment, as well as design and implement individualized programs, instructional strategies, and classroom management strategies.

EDUC 323 Curriculum Design/Family Engage 3 Credits

Includes planning for family engagement including families from diverse backgrounds in learning-centered environments, preparing lesson plans, preparing a professional portfolio, and understanding the Nevada Academic Core Standards.

EDUC 406 Curriclm/Assess Education 3 Credits

Course covers the range of assessments used in elementary schools. Students learn to administer and interpret standardized or norm referenced tests, create appropriate criterion-referenced assessments, portfolios, performance tasks with data-collection, and record-keeping strategies for reporting student academic progress. Nevada Curriculum Standards and state testing instruments will be studied.

EPY 330 Principles of Educ Psychology 3 Credits

General principles, theories, and recent research evidence regarding human development, human learning, and human motivation, especially as they pertain to classroom instruction.

Mastery Course Requirement**One course required****MATH 389 Special Topics in Mathematics 3 Credits**

Covers specialized topics in Mathematics. Course may be repeated up to six credits if topics are different.

INT 359 Integrative Math Seminar 3 Credits

An integrative seminar on topics in mathematics. The topics will vary to address needs and interests of programs. May be repeated once for credit if the topics are different.

GEOL 335 Earth Resources/Environment 3 Credits

Geological availability, exploitation, and use of nonrenewable natural resources including metallic minerals, nonmetallic, and energy resources.

INT 369 Integrative Science Seminar 3 Credits

An integrative seminar on topics in science. The topics will vary to address needs and interests of programs. Course fulfills the upper-division integrative science general education requirements. May be repeated once for credit if the topics are different.

Content-Area Requirements - Biological Science Program

BIOL 191 Intro Organismal Biology 4 Credits

The study of the evolution, ecology, and diversity of life, both past and present. Required for biology majors, but will partially satisfy the science requirement for all associate's degrees. Concurrent enrollment in a corresponding lab section is required for this course.

CHEM 122 General Chemistry II 4 Credits

Fundamentals of chemistry including solutions, kinetics, equilibria, thermodynamics, electrochemistry, nuclear chemistry, and properties of inorganic and organic compounds. Also, introduction to qualitative analysis.

PHYS 151 Gen Physics I 4 Credits

Primarily for students in arts and science. Topics include kinematics, energy and momentum conservation, rotational dynamics, thermodynamics, fluids, harmonic motion, and sound. Laboratory experiments illustrate many of these fundamental principles.

CHEM 241 Organic Chemistry I 3 Credits

Intensive introduction to the theory of carbon chemistry with particular emphasis on understanding the relationship between the structure and behavior of organic molecules.

CHEM 241L Organic Chemistry Lab I 1 Credits

Laboratory exercises in introductory organic chemistry. Stereochemistry, separation and purification techniques, micro-scale organic reaction procedures.

BIOL 223 Human Anatomy & Physiology I 4 Credits

The morphology and physiology of cells, tissues, and the integumentary, skeletal, muscular, and nervous systems in a laboratory and lecture class. Designed for all life science majors but specifically for students in allied health programs. Concurrent enrollment in a corresponding lab section is required for this course.

BIOL 224 Anatomy & Physiology II 4 Credits

A continuation of Biology 223 with consideration of the circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems; increased emphasis on body chemistry. Concurrent enrollment in a corresponding lab section is required for this course.

BIOL 251 General Microbiology 4 Credits

A laboratory and lecture course emphasizing taxonomy, morphology, physiology, infectious diseases, and ecology of microorganisms in addition to skills in aseptic procedures, isolation, and identification. Open to all life science majors and allied health majors.

GEOL 101 Exploring Planet Earth 3-4 Credits

Fundamental principles of geology including tectonic and surficial processes, oceans, atmosphere, environmental applications, and resources. Includes a laboratory component.

Suggested Course Sequence**1st Semester - Fall**

Course	Credits
BIOL 190	4
CHEM 121	4
COM 113	3
ENG 100 or 101	3-5
PSC 101	3
TOTAL	17-19

2nd Semester - Spring

Course	Credits
BIOL 191	4
CHEM 122	4
ENG 102	3

Course	Credits
Fine Arts*	3
TOTAL	14

*Choose with advisor

3rd Semester - Fall

Course	Credits
EDRL 471	3
EDSC 311	1
EDI 214	3
EDI 250	3
MATH 127	3
Social Science*	3
TOTAL	16

*Choose with advisor

4th Semester - Spring

Course	Credits
EDSC 313	1
EDUC 323	3
EDIC 406	3
Humanities*	3
Additional Math*	3-4
GEOL 101	4
TOTAL	17-18

5th Semester - Fall

Course	Credits
CHEM 241	3
CHEM 241L	1
EDRL 474	3
Mastery Course*	3
BIOL 223	4
TOTAL	14

*Choose with advisor

6th Semester - Spring

Course	Credits
BIOL 251	4
BIOL 224	4
EDRL 475	3
EDSP 301	3
TOTAL	14

7th Semester - Fall

Course	Credits
EDRL 477	3
EPY 330	3
EDSC 314	1
EDSC 463	3
PHYS 151	4
TOTAL	14

8th Semester - Spring

Course	Credits
EDSC 483	11
EDSC 491	3
TOTAL	14