

Equine Science - B.S.

The Equine Science bachelor's degree program offers a rigorous science curriculum combined with equine-specific academic classes and experience-based equine management labs. The equine-specific academic classes include focused study of anatomy, physiology, nutrition, genetics and diseases, as well as practical knowledge of lameness assessment, ration analysis and preventative herd health programs. The equine labs concentrate on horse handling, medical skills and farm management practices that are necessary to be successful in the equine industry. Elective credits offer opportunity for riding classes as well. The Equine Science curriculum design allows students the option of pre-veterinary medicine study, equine-assisted activities and therapies study or future graduate studies in science.

Upon completion of the program, graduates are expected to:

- Apply the scientific method and critical thinking skills to address equine science questions.
- Design a comprehensive health plan that addresses the interaction between nutrition and disease and predicts the needs of different classes of horses.
- Identify, analyze and apply knowledge of equine behavior to justify best practices in equine management and handling.
- Recognize ethical concerns pertinent to equine science and determine ethical practices.
- Perform basic preventive measures and therapeutic skills on a horse.

Equine Science students take science courses from the College of Arts & Sciences designed to provide a strong foundation in the fundamental principles of biology. The biology courses allow students to explore the molecular and cellular basis of life, the structure and function of organisms, and the ecological interactions of organisms.

Specialized equine science classes develop the understanding of the functioning of the horse with study in anatomy, lameness, physiology, sports therapy, genetics, nutrition, diseases and reproduction. Students gain hands-on experience in all aspects of horse management including health and dental maintenance, nutrition, facilities management, equipment usage, trailering, lunging, vaccination and anthelmintic programs.

All students participate in the internship program which allows them to work in the equine industry or veterinary profession at approved establishments.

Core and elective courses in the College of Arts & Sciences provide the critical thinking and communication skills that are considered essential by employers along with the chance for students to explore areas of personal interest.

The Equine Science program offers an elective 16-credit specialization that enhances and strengthens the qualifications of graduates interested in equine-assisted activities and therapies. This specialization gives students the opportunity to gain additional knowledge and skills in the expanding field of therapeutic riding and equine-assisted learning. Students completing this specialization can pursue careers in therapeutic riding instruction, therapeutic horse management, therapeutic riding program management, and equine-assisted learning and therapy.

Upon completion of the Equine-Assisted Activities and Therapies specialization students are expected to:

- Demonstrate the skills and knowledge compulsory for the educational component of certification as a therapeutic riding instructor with the Professional Association of Therapeutic Horsemanship, Intl (PATH Intl).

The Equine Science program offers an elective 20-credit specialization in Pre-Veterinary Studies that enhances and strengthens the qualifications of graduates interested in applying for admissions to Doctor of Veterinary Medicine programs. This specialization gives students the opportunity to complete major prerequisite course requirements for application to American Veterinary Medical Association-accredited veterinary schools within the United States. Students completing this specialization can pursue application to DVM programs as well as other equine and science-related graduate studies programs.

Upon completion of the Pre-Veterinary Studies specialization students are expected to:

- Identify, evaluate and analyze scientific information.

To participate in the Equine Science program, each student, with or without reasonable accommodations must be able to safely (including the safety of

the horse, where applicable) meet minimum technical standards as described for this program.

Extracurricular Activities

Johnson & Wales' equine programs offer a variety of extracurricular activities for students, including seminars and clinics with nationally and internationally recognized speakers from equine industry, an equine-specific job fair, annual attendance to the Equine Affaire, and field-trips to regional training and competition farms.

Johnson & Wales University participates in equine sports through two distinct competitive teams: Intercollegiate Horse Show Association (IHSA) and Intercollegiate Dressage Association (IDA).

The IHSA team competes in hunter seat equitation throughout New England, is consistently regionally and nationally competitive, and hosts shows annually at the Center for Equine Studies. In 2018 Johnson & Wales University had a National Champion in Individual Intermediate Over Fences.

The IDA team at Johnson & Wales University is a charter member, hosts two competitions yearly and travels regionally to compete. The IDA team has won numerous regional and national awards. In 2012 Johnson & Wales University won the National Championship and in 2013 was the reserve national champion team for IDA.

The Facility

The home of Johnson & Wales' Equine Studies programs, the Center for Equine Studies, is located in Rehoboth, Massachusetts, a short drive from Providence. The farm includes a 32-stall barn with attached 170' x 70' mirrored indoor riding hall with waxed footing, radiant heat and a 75" flat panel display system with integrated smart-classroom technology. The facility is equipped with a pine-paneled observation room housing communication technology that allow clinicians to address students and spectators during mounted lessons, a traditional digitally equipped classroom for on-property lectures and a student lounge area for study and relaxation between classes.

The arena, attached 32-stall barn and classroom areas all tout state-of-the-art high speed wifi coverage allowing for streaming and integration of remote technology with all aspects of Equine Studies programs. The property also features several pastures, turnout paddocks and two round-pens used for schooling horses.

Rounding out the facility are two show-quality outdoor arenas: a 225' x 100' multipurpose jumping ring and a 220' x 80' dressage ring with judge's box. A new addition to the facility is a derby-style jumping field with banks, ditches, and step jumps which allows students to gain knowledge and expertise of riding in various settings.

The horses for school use are all selected for their training and temperament. Many different breeds are represented, including Dutch Warmblood, Hanoverian, Swedish Warmblood, Holsteiner, Thoroughbred, Oldenburg, Quarter Horse and Arabian. Many of the horses have successful show records which include competition experience at the FEI level of dressage, on the hunter/jumper circuit and in eventing.

Equine Science

A four-year program leading to the bachelor of science degree

Major Courses	
BIO1011	General Biology - Cellular 3
BIO1016	General Biology Laboratory - Cellular 1
BIO1022	General Biology - Organismal 3
BIO1026	General Biology Laboratory - Organismal 1
BIO2201	General Microbiology 3
BIO2206	General Microbiology Laboratory 1
CHM1011	General Chemistry I 3
CHM1016	General Chemistry I Laboratory 1
EQN1001	Introduction to Equine Studies 3
EQN1006	Introduction to Equine Studies Laboratory 1
EQN1020	Equine Anatomy and Lameness 3
EQN1025	Equine Anatomy and Lameness Laboratory 1
EQN1080	Equine Management Lab 1
EQN2000	Equine Diseases 3
EQN2020	Equine Physiology and Sports Therapy 3
EQN2025	Equine Physiology and Sports Therapy Laboratory 1

EQN3010	Equine Reproduction and Genetics	3
EQN3025	Equine Nutrition	3
EQN4900	Management and Demonstration of Skills Capstone	1
Major Electives or Specialization		
Choose 19 credits of the following (at least two courses must be 3000 level or higher, maximum of three credits in horseback riding)* or Specialization listed below: †		19
BIO2021 & BIO2026	Functional Human Anatomy and Functional Human Anatomy Laboratory	
BIO3010	Principles of Biochemistry	
BIO3070	Evolution	
BIO3400	Fundamentals of Pharmacology	
BIO4040 & BIO4046	Functional Histology and Functional Histology Laboratory	
BIO4070	Fundamentals of Immunology	
CHM1022 & CHM1026	General Chemistry II and General Chemistry II Laboratory	
CHM2011 & CHM2016	Organic Chemistry I and Organic Chemistry I Laboratory	
CHM2022 & CHM2026	Organic Chemistry II and Organic Chemistry II Laboratory	
CHM2050 & CHM2056	Introduction to Organic Chemistry and Introduction to Organic Chemistry Laboratory	
CHM3200	Analytical Chemistry	
EQN1100	Fundamentals Of Collegiate Riding I	
EQN1110	Fundamentals of Collegiate Riding II	
EQN1150	Introduction to Dressage	
EQN1200	Introduction to Combined Training	
EQN1300	Equitation on the Flat	
EQN1310	Fundamentals of Hunter Seat Equitation	
EQN2001	Foundations of Riding Theory	
EQN2100	Training Level Dressage	
EQN2110	First Level Dressage	
EQN2200	Intermediate Combined Training	
EQN2320	Hunter Seat Equitation Novice	
EQN3001	Methods of Riding Instruction I	
EQN3030	Equine Competition Management and Course Design	
EQN3040	Sport Horse Evaluation and Judging	
EQN3120	Second Level Dressage	
EQN3130	Third Level Dressage	
EQN3200	Advanced Combined Training	
EQN3280	Introduction to Equine-Assisted Activities and Therapies	
EQN3290	Application of Equine-Assisted Activities and Therapies	
EQN3330	Hunter Seat Equitation Intermediate	
EQN3350	Equine Facility Design and Operation Management	
EQN3430	German Medal Training	
EQN4001	Methods of Riding Instruction II	
EQN4115	Special Topics in Equine Studies I	
EQN4140	Fourth Level and FEI Dressage	
EQN4145	Special Topics in Equine Studies II	
EQN4215	Special Topics in Equine Studies III	
EQN4340	Hunter Seat Equitation Open	
PHY1011 & PHY1016	General Physics I and General Physics I Laboratory	
PHY1022 & PHY1026	General Physics II and General Physics II Laboratory	
SCI1005	Introduction to Botany	
SCI1010	Environmental Science	
SCI2030	Introduction to Ecology	
SCI3080	The Business of Sustainability	
Applied/Experiential Learning		
Choose 6 credits from the following:		6
ASCI4799	College of Arts & Sciences Internship ^{lc}	
DEE3999	Directed Experiential Education ^D	
RSCH3830	Undergraduate Research Experience	
RSCH4020	Honors Directed Academic Experience	
Study Abroad		
Related Professional Studies		
CAR0010	Career Management	1
FYS1020	First-Year Seminar	1
A&S Core Experience		
Communications Foundation Courses		9
ENG1020	Rhetoric & Composition I	
ENG1021	Rhetoric & Composition II	
ENG1030	Communication Skills	
Integrative Learning		6

Two ILS courses, one at the 2000 level, and one at the 4000 level		
Arts and Humanities		6
PHIL3240	Ethics: A Global Perspective	
One course from ART, HIST, HUM, LIT, or REL		
Mathematics		6
MATH1020	Fundamentals of Algebra **	
MATH2001	Statistics I	
or MATH2010 Introduction to Biostatistics		
Science		3
BIO2001	Genetics	
Social Sciences		6
PSYC1001	Introductory Psychology	
One course from ANTH, ECON, GEND, LEAD, PSCI, RES or SOC		
A&S Electives **,**		6
BIO3040	Molecular Biology	
One course with EASC attribute		
Free Electives #		
15 credits selected from 1000–4999 numbered offerings within the university		15
Total Credits		123.0

* Students are responsible for meeting prerequisites.

** Students considering the Pre-Veterinary specialization must complete MATH1040 Calculus I and BIO3010 Principles of Biochemistry. These courses fulfill arts & sciences and/or free electives.

*** Students considering the Equine-Assisted Activities and Therapies specialization must complete PSYC2002 Abnormal Psychology and EQN2001 Foundations of Riding Theory. These courses fulfill arts & sciences and/or free electives.

†Specialization in Equine-Assisted Activities and Therapies 16

Students must select one additional 3 credit Major Elective course if selecting this specialization.

BIO2021	Functional Human Anatomy
BIO2026	Functional Human Anatomy Laboratory
EQN3001	Methods of Riding Instruction I
EQN3280	Introduction to Equine-Assisted Activities and Therapies
EQN3290	Application of Equine-Assisted Activities and Therapies
EQN4001	Methods of Riding Instruction II

†Specialization in Pre-Veterinary Studies 20

Students must use 1 credit of free-electives to complete the specialization

PHY1011	General Physics I
PHY1016	General Physics I Laboratory
PHY1022	General Physics II
PHY1026	General Physics II Laboratory
CHM1022	General Chemistry II
CHM1026	General Chemistry II Laboratory
CHM2011	Organic Chemistry I
CHM2016	Organic Chemistry I Laboratory
CHM2022	Organic Chemistry II
CHM2026	Organic Chemistry II Laboratory

^{lc}Typically, internships require a minimum of six credits. Students interested in a 9 or 12-credit internship can apply additional experiential learning and free elective credits, if available. Students are strongly encouraged to contact a faculty adviser before scheduling internship and free elective credits.

^DDirected Experiential Education (DEE) opportunities are based on project availability with community partners and student eligibility. For more information, visit Experiential Education & Career Services (EE&CS).

In addition to classes, free elective credits may be applied to a number of options such as internship, study abroad, Directed Experiential Education courses and courses in a specialization or minor as relevant. For Accelerated Master's program students, up to three graduate-level courses may apply. Students are strongly encouraged to contact a faculty adviser before scheduling free elective credits.

NOTE: Students must pass MATH0010 Pre-Algebra or have equivalent placement scores to enroll in required math course(s).

Note: Students must pass ENG0001 Writing Workshop or have equivalent placement scores to enroll in ILS 2000 level courses

In collaboration with academic colleges across all JWU campuses, JWU Global Study Abroad programs offer a variety of international options for major, minor, arts and sciences, and elective credit at many affordable price points for students during the academic year, break periods, and summer. Faculty-led, exchange, affiliate, and direct-enroll programs range in duration from one week to a full semester or full year. Financial aid may be applied and

scholarships are available. Visit the study abroad website for information, program descriptions and online applications. Where will you go?