

**ARTICULATION AGREEMENT FOR  
AS NATURAL RESOURCE BIOLOGY AND BS ZOOLOGY  
BETWEEN NORTHWEST COLLEGE AND THE UNIVERSITY OF WYOMING**

**OVERVIEW:**

This formal program articulation agreement is made and entered into by Northwest College, hereinafter referred to as NWC, and University of Wyoming, hereinafter referred to as UW. By this agreement NWC and UW express a shared commitment to increasing opportunities for student access to and success in higher education.

**PURPOSE:**

This agreement provides students who have completed the **Associate of Science** degree with articulated coursework in the area of Zoology, the opportunity to complete a **Bachelor of Science in Zoology** at UW. Any NWC student who has earned an Associate of Science degree with coursework that adheres to the guidelines within this agreement is guaranteed that UW will accept designated major related credits and that all general education credits will apply to the Bachelor of Science degrees in a manner consistent with the treatment of native UW students and given junior status in the major.

**CONDITIONS OF TRANSFER:**

**Section I: Admissions and Matriculation**

NWC students maintaining continuous enrollment under this agreement will be afforded the same treatment and protection as native UW Zoology, College of Arts and Sciences students enrolled under a specific catalog.

Criteria for acceptance into College of Arts and Sciences will be consistent with the criteria outlined in the institutional articulation agreement between NWC and UW.

NWC, upon request of students, will provide verification of completed courses to UW through its Office of Registration and Records.

Transfer students from NWC will have access to financial aid, scholarships, and student services on the same basis as native students.

UW will apply the same academic progress and graduation standards to NWC transfer students as those applicable to native UW students.

**Section II: Program Plan**

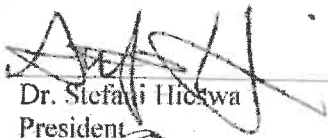
While a course-by-course equivalence was used in the development of this plan, this agreement presumes that the general education core requirements at NWC meet general education requirements at UW. Students falling under this program articulation agreement will be responsible for successfully completing the additional prescribed requirements. *42h, of the minimum 120h required for a BS degree, MUST be at the upper division level*

**TERMS of AGREEMENT:**


This agreement is made and entered into the academic year 2015-2016 and remains in force unless a new articulation agreement is signed by all parties. The agreement is subject to annual review to assure currency with the respective degree requirements, and may be amended at any time via written request by either NWC or US. Should either party desire to discontinue this agreement, advance notification of one year will be required.

**SIGNATURES:**


Northwest College and University of Wyoming hereby enter into this program articulation agreement leading from the Association of Science degree with articulated coursework in Bachelor of Science in Physiology by the affixing of signatures of the academic officers of both institutions.

  
\_\_\_\_\_  
Dr. Stefani Hieswa  
President  
Northwest College


12/10/15  
Date

  
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Dr. Gerry Giraud  
Vice President of Academic Affairs  
Northwest College

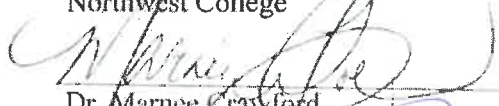
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Dr. David Jones  
Vice President of Academic Affairs  
University of Wyoming


1/7/15  
Date

  
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Dr. Matthew Ewers  
Dean of Instruction  
Northwest College

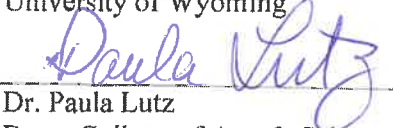
12/15/15  
Date

  
\_\_\_\_\_  
Dr. Marnee Crawford  
LIS Division Chair  
Northwest College

12/15/15  
Date

  
\_\_\_\_\_  
Dr. Donal Skinner  
Head, Department of Zoology and Physiology  
University of Wyoming

12/30/15  
Date

  
\_\_\_\_\_  
Dr. Paula Lutz  
Dean, College of Arts & Sciences  
University of Wyoming

1/6/15  
Date

Table 1. Course-by-course transfer articulation (NWC and UW)

General Education requirements at NWC and the University Studies Program at UW transfer as a block articulation between NWC and UW.

NWC Course			UW Equivalent Course		
Course	Course Title	Credits	Course	Course Title	Credits
BIOL 1010	General Biology	4	LIFE 1010	General Biology	4
BIOL 2020	General Biology II		LIFE 2022	Animal Biology	4
BIOL 2400	General Ecology	3	LIFE 3400	General Ecology	3
BIOL 2410	Field Ecology	2	LIFE 3410	Field Ecology Laboratory	2
CHEM 1020	General Chemistry I	4	CHEM 1020	General Chemistry I	4
CHEM 1030	General Chemistry II	4	CHEM 1030	General Chemistry II	4
MATH 1400	College Algebra	4	MATH 1400	College Algebra	3
MATH 1450	PreCalc Algebra & Trig	5	MATH 1450	Algebra & Trigonometry	3
STAT 2050	Fundamentals of Statistics	4	STAT 2050	Fundamentals of Statistics	4

## UNIVERSITY OF WYOMING COURSEWORK TO COMPLETE BS IN ZOOLOGY

### Courses required for ALL Zoology majors

Course	Course Title	Credits
CHEM XXXX	3 <sup>rd</sup> Chemistry course – not CHEM1000 (usually CHEM2300)	4
LIFE 3050	Genetics	4
LIFE 3400	General Ecology	3
LIFE 3500	Evolutionary Biology	4
ZOO 4100	Communication in Biological Sciences	3
	ASD and ASG courses (College of Arts and Sciences requirement)	6

### Students must select 1 course from the following list:

*Courses not taken here may be added to the electives list below*

Course	Course Title	Credits
ZOO 4330	Ichthyology	3
ZOO 4350	Ornithology	3
ZOO 4370	Mammalogy	3
ZOO 4380	Herpetology	3
ZOO 4540	Invertebrate Zoology	4

### Elective Courses needed for major in Zoology (minimum of 18h required)

Course	Course Title	Credits
ZOO 3010	Vertebrate Anatomy, Embryology & Histology	4
ZOO 3115	Human Systems Physiology	4
ZOO 3600	Animal Behavior	3
ZOO 4190	Comparative Environmental Physiology	4
ZOO 4280	Introduction to Neuroscience	3
ZOO 4300	Wildlife Ecology & Management	5
ZOO 4310	Fisheries Management	3
ZOO 4340	Developmental Biology & Embryology	4
ZOO 4415	Behavioral Ecology	3
ZOO 4420	Conservation Biology	3
ZOO 4430	Limnology Lab (must be taken with ZOO 4440 Limnology)	2
ZOO 4440	Limnology	3
ZOO 4735	Advanced Topics in Physiology	2+
ENTO 4678	Aquatic Entomology	3
ENTO 4682	Insect Anatomy & Physiology	5
ENTO 4684	Classification of Insects	4
MOLB 3000	Introduction to Molecular Biology	3
ANSC 4120	Principles of Mammal Reproduction	3
ANSC 3100	Principles of Animal Nutrition	3
PATB 4310	Introduction to Veterinary Parasitology	3
PATB 4360	Medical Entomology & Parasitology	3
PATB 4710	Medical Virology	3
A&S 4900	Advanced Topics in (e.g. Darwin and the Galapagos)	1+

*Several of the courses listed above have prerequisites.*

# AS Biology (Natural Resource Biology: Track 1) and BS Zoology

## Northwest College

### FRESHMAN

Fall Semester			Hrs	Spring Semester			Hrs		
Dept	#	Course Title	#	Dept	#	Course Title	#		
BIOL	1010	General Biology <sup>3</sup>	4	BIOL	2020	General Biology II <sup>3</sup>	4		
CHEM	1020	General Chemistry I	4	CHEM	1030	General Chemistry II	4		
MATH	1400	College Algebra <sup>3,4</sup> <b>OR</b>	4	ENGL	1020	English II <sup>5</sup> /Tech Writing	3		
MATH	1450	Precalc Algebra & Trig	(5) <sup>3</sup>			Core Elective	3		
ENGL	1010	English I	3			General Education Requirement <sup>1</sup>	3		
		Freshman Seminar	3						
			<b>TOTAL</b>	<b>18</b>				<b>TOTAL</b>	<b>17</b>

Northwest College

W Y O M I N G

### SOPHOMORE

Fall Semester			Hrs	Spring Semester			Hrs		
Dept	#	Course Title	#	Dept	#	Course Title	#		
BIOL	2400	Ecology	3	STAT	2050	Fundamentals of Statistics	4		
BIOL	2410	Field Ecology	1	BIOL	2385	Research Life & Physical Sciences <sup>6</sup> <b>OR</b>	(3) <sup>4</sup>		
		Wellness	2			2395 Biological Research	1		
		General Education Requirement <sup>1</sup>	3	PHYS	1110	General Physics I <b>OR</b>	4		
ANTH	1200	Intro Cultural Anthropology <sup>2</sup>	3	CHEM	2320	Organic Chemistry I			
		Core Elective	4	POLS	1000	American & Wyoming Government <b>OR</b>	3		
				HIST	1221	The United States from 1865			
			<b>TOTAL</b>	<b>13</b>				General Education Requirement <sup>1</sup>	3
								<b>TOTAL</b>	<b>15</b>
								<b>Total Degree Hours</b>	<b>63</b>

#### Transfer Recommendations and Notes:

1. Students are strongly encouraged to take at least one *General Education Requirement* (Humanities/Visual and Performing Arts/Social Science) course that corresponds to the College of Arts & Sciences Diversity (ASD) and Global Studies (ASG) electives or else they will have to take ASD & ASGs at UW. A list of D & G courses that transfer is available here ([https://wyossb.uwyo.edu/bnrprod/bwckytfc.p\\_display\\_transfer\\_catalog](https://wyossb.uwyo.edu/bnrprod/bwckytfc.p_display_transfer_catalog)). Courses that are either U3D or U3G meet the ASD and ASG, respectively. One suggested course is ANTH1200 Intro to Cultural Anthropology, which meets the ASG requirement.
2. Students are advised to take ANTH1200 as one of the *General Education Requirements* to meet the A&S ASG requirement
3. A minimum grade of C is required for BIOL1010, BIOL2020, MATH1400/1450
4. If students take MATH1450 at NWC then they will not need to take MATH1405 Trigonometry at UW
5. If students take ENGL 1020 at NWC then they must also take CO/M 1010 Public Speaking to count as COM2 at UW
6. If students opt for BIOL2385, overall hours for the Associates will increase by 2h

# BS Zoology

University of Wyoming

## JUNIOR

Fall Semester			Hrs	Spring Semester			Hrs
Dept	#	Course Title	#	Dept	#	Course Title	#
PHYS	1110	General Physics I <i>OR</i>	4	PHYS	1120	Physics II	4
CHEM	2320	Organic Chemistry I		MATH	2200	Calculus I <sup>3</sup>	4
MATH	1405	Trigonometry <sup>4,7</sup>	3			Upper Division Zoology Elective <sup>2,8</sup>	3
LIFE	3050	Genetics	4			Upper Elective <sup>6</sup>	3
		Upper Division <i>required</i> course <sup>3,4</sup>	3			Upper Elective <sup>6</sup>	3
<b>TOTAL</b>			<b>14</b>	<b>TOTAL</b>			<b>17</b>



## SENIOR

Fall Semester			Hrs	Spring Semester			Hrs
Dept	#	Course Title	#	Dept	#	Course Title	#
LIFE	3500	Evolutionary Biology <sup>2</sup>	4	ZOO	4100	Scientific Communication <sup>4</sup>	3
		Upper Division Zoology Elective <sup>2,8</sup>	3			Upper Division Zoology Elective <sup>2,8</sup>	3
		Upper Division Zoology Elective <sup>2,8</sup>	3			Upper Division Zoology Elective <sup>2,8</sup>	3
		Upper Division Zoology Elective <sup>2,8</sup>	3			Upper Elective <sup>5</sup>	4
		ASD or ASG (A&S Core)	3				
<b>TOTAL</b>			<b>16</b>	<b>TOTAL</b>			<b>13</b>
						<b>Total Degree Hours</b>	<b>123</b>
						<b>Upper Division Hours</b>	<b>42</b>

**Transfer Recommendations and Notes:**

1. Time has been allocated for one of the two D&Gs. If the G or D is not met at NWCC then an additional 3h is required
2. A minimum of 30h must be at C or better for these courses.
3. A C is required
4. **REQUIRED ELECTIVE COURSE.** Students must select a course from the following list: ZOO 4330 Ichthyology (3); ZOO 4350 Ornithology (3); ZOO 4370 Mammalogy (3); ZOO 4380 Herpetology (3); ZOO 4540 Invertebrate Zoology (4). Courses not taken can be added to the elective list below
5. CHEM2300 Introduction to Organic Chemistry is typical. *CHEM1000 may NOT count here*
6. Upper level courses that are not designated electives do not need to be be "zoological". At discretion of student
7. If students take MATH1450 at NWC then Trig not required at UW

**8. Zoology Electives (18h):** ZOO3115 Human Systems Physiology (4), ZOO3600 Animal Behavior (3), ZOO4190 Comparative Environmental Physiology (4), ZOO4300 Principles of Wildlife Ecology & Management (5), ZOO4310 Fisheries Management (3), ZOO4340 Developmental Biology & Embryology (4), ZOO4400 Population Ecology (3), ZOO4415 Behavioral Ecology (3), ZOO4420 Conservation Biology (3), ZOO4430 Limnology Lab (2), ZOO4440 Limnology (3), ZOO4560 Quantitative Conservation Biology (4), ZOO4735 Advanced Topics in Physiology (2+), ZOO5060 Fundamental Concepts in Evolution (3), ZOO5300 Wildlife Ecology & Management (1+), ZOO5690 Advanced Animal Behavior (3), A&S4900 Special Topics in \_\_\_\_\_ (1+), MOLB3000 Introduction to Molecular Biology (3), BOT4550 Computational Biology (4), BOT4664 Special Topics in Evolution (1+), BOT4790 Special Topics in Ecology (1+), ANSC3010 Comparative Anatomy and Physiology of Domestic Animals (4), ANSC3100 Principles of Animal Nutrition (3), ANSC3150 Equine Nutrition and Physiology (3), PATB4170 Diseases of Wildlife (3), PATB4310 Introduction to Veterinary Parasitology (3), PATB 4360 Medical Entomology & Parasitology (4), PATB4710 Medical Virology (3), RNEW5500 Stable Isotope Ecology (3), GEOG3150 Survey of Remote Sensing Applications (3), GEOG3480 Environmental Change (3), ENTO4300 Applied Insect Ecology (3)