



New Academic Program Workflow Form

General

Proposed Name: Science Law

Transaction Nbr: 00000000000242

Plan Type: Major

Academic Career: Undergraduate

Degree Offered: Bachelor of Science

Do you want to offer a minor? Y

Anticipated 1st Admission Term: Sprg 2026

Details

Department(s):

LAWC

DEPTMNT ID	DEPARTMENT NAME	HOST
3603	Law	N

SCNC

DEPTMNT ID	DEPARTMENT NAME	HOST
0442	Science Administration	Y

Campus(es):

ONLYN

LOCATION	DESCRIPTION
ONLYN	Online

Admission application terms for this plan: Spring: Y Summer: Y Fall: Y

Plan admission types:

Freshman: Y Transfer: Y Readmit: Y Graduate: N

Non Degree Certificate (UCRT only): N

Other (For Community Campus specifics): N

Plan Taxonomy: 30.0101, Biological and Physical Sciences.

Program Length Type: Program Length Value: 0.00

Report as NSC Program:

SULA Special Program:

Print Option:

Diploma: Y Science Law

Transcript: Y Major in Science Law

Conditions for Admission/Declaration for this Major:

None, use existing admission criteria for College of Science

Requirements for Accreditation:

NA

Program Comparisons

University Appropriateness

Brief Program Description:

The recent and rapid rise of technology and new scientific applications generates numerous legal and regulatory issues, involving privacy, risk management, safety, bias, copyrights, patents, environmental impacts, among others. This creates a pressing need for legal actors who understand science and scientific principles, for scientists who understand law and regulation, and for collaboration and interdisciplinary exploration between law and science.

The BS in Science Law will ---combine training in science and law to achieve the following aims:

- prepare undergraduates in basic literacy of the law in general and in relation to science and technology;

- prepare undergraduates in science and scientific principles;

- prepare undergraduates for attractive science-and-law-related careers that do not require a JD degree. Examples include patent agents, compliance officers, human resources, risk management, healthcare and research administration, grant administration, and regulatory affairs;

- respond to changes in the legal profession in which more legal work is

conducted outside of the traditional law firm; and draw national attention to Arizona through the development of BS in Science Law degree, the first of its kind for undergraduate students in the United States, and promote the University's focus on access to higher education and interdisciplinary collaboration

The BS in Science Law thus meets at least two U of A grand challenges: (1) the need to prepare students as adaptive problem solvers with the skills and mindsets to lead in the 4th Industrial Economy and 2) the need of our land grant mission to drive social, cultural, and economic impact in the state. These needs are particularly great in areas of law that intersect with science and technology that require knowledge of science and law but do not require the application of science in a lab or a formal law degree. The breadth offered by the BS in Science Law will prepare these students to adapt in ever-changing technical and scientific areas. Current degree requirements for a BS in a scientific discipline and a BA relating to law or policy present challenges for students wishing to complete double degrees within a 4-year period. The BS in Science Law provides students the flexibility needed to obtain expertise in both. Of just a handful of BA and BS degrees in law in the nation, none combine science and law and only a few offer fully online studies.

The BS Science Law is completely unique from other majors on campus in course make-up and structure, and so it will not replicate student interests in other degrees. Except for a 3-credit capstone course, the program draws from courses already offered through AZO in the College of Science and the College of Law. The major includes the foundation courses in both disciplines, and so it will prepare students for a successful experience even though the classes are used in other majors.

Arizona University System

NBR	PROGRAM	DEGREE	#STDNTS	LOCATION	ACCRDT
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Peer Comparison

Resources

Library

Acquisitions Needed:

Physical Facilities & Equipment

Existing Physical Facilities:

No additional facilities or equipment are needed; all courses except one

are already offered at UA

Additional Facilities Required & Anticipated:

See above

Other Support

Other Support Currently Available:

Current staff support course delivery

Other Support Needed over the Next Three Years:

We include funding for one program manager and one academic advisor starting in year one

Comments During Approval Process

3/26/2025 1:04 PM

MELANIECMADDEN

Comments
Approved.

**NEW ACADEMIC PROGRAM – MAJOR
Preliminary Proposal Form**

I. Program Details

- a. **Name (and Degree Type) of Proposed Academic Program:** Bachelor of Science in Science Law
 - i. **Emphases (if applicable):** n/a
- b. **Academic Unit(s)/College(s):** College of Science and College of Law (shared equally)
- c. **Campus/Location(s):** Arizona Online, Main Campus
- d. **First Admission Term:** Fall 2025
- e. **Primary Contact and Email:** Rebecca Gomez (rgomez@arizona.edu), Keith Swisher (keithswisher@arizona.edu)

II. Executive Summary:

The recent and rapid rise of technology and new scientific applications generates numerous legal and regulatory issues, involving privacy, risk management, safety, bias, copyrights, patents, environmental impacts, among others. This creates a pressing need for legal actors who understand science and scientific principles, for scientists who understand law and regulation, and for collaboration and interdisciplinary exploration between law and science. The BS in Science Law will combine training in science and law to achieve the following aims:

- prepare undergraduates in basic literacy of the law in general and in relation to science and technology;
- prepare undergraduates in science and scientific principles;
- prepare undergraduates for attractive science-and-law-related careers that do not require a JD degree. Examples include patent agents, compliance officers, human resources, risk management, healthcare and research administration, grant administration, and regulatory affairs;
- address changes in the legal profession in which more legal work is being “outsourced” to non-lawyers while increasing the number of legal personnel in-house at large organizations;
- draw national attention to Arizona through the development of BS in Science Law degree, the first of its kind for undergraduate students in the United States.

III. Brief Program Description:

The BS in Science Law meets a growing need for individuals with expertise in science and scientific principles who understand law and regulation to address legal and regulatory issues involving privacy, risk management, safety, bias, copyright, patent, and environmental impact stemming from the rapid rise of technology and new scientific applications. Students will take undergraduate courses in law offering an institutional, practical, theoretical, and doctrinal perspective, as well as introductory courses and labs in biology, chemistry, and physics. Upper division law courses will deepen students' understanding of the law through subject-specific content. In parallel, they will take upper division science electives in one of 6 areas of science including: 1) psychology, 2) earth systems & sustainability, 3) cell and molecular biology, 4) biochemistry, 5) neuroscience, and 6) cognitive science and cognitive neuroscience. Students will conclude their major with a capstone course SCI/LAW 498: Law and Science - Discovering and Explaining Interdisciplinary Connections.

IV. Program Rationale:

The BS in Science Law meets two U of A grand challenges: the need to prepare students as adaptive problem solvers with the skills and mindsets to lead in the 4th Industrial Economy, and 2) the need of our land grant mission to drive social, cultural, and economic impact in the state. These needs are particularly great in areas of law that intersect with science and technology that require knowledge of science and law but do not require the application of science in a lab or a formal law degree. The breadth offered by the BS in Science Law will prepare these students to adapt in ever-changing technical and scientific areas. Current degree requirements for a BS in a scientific discipline and a BA relating to law or policy present challenges for students wishing to complete double degrees within a 4-year period. The BS in Science Law provides students the flexibility needed to obtain expertise in both. Of just a handful of BA and BS degrees in law in the nation, none combine science and law and only a few offer fully online studies.

V. Projected Enrollment for the First Three Years:

Year 1	Year 2	Year 3
50	100	150

VI. Evidence of Market Demand:

The degree is unique and will have no competition in that sense, and employment outlook appears strong for graduates with a BS in Science Law. There are no existing programs combining science and law and thus no CIP code one can use to generate a marketing report. Therefore, we do not include this information. Instead, we attach separate reports for the CIP code for General Science (30.010) and the CIP code for

Legal Studies (22.000) for Arizona and the US. Nationally, job growth for Compliance Officers is up +71.08% since 2010, and +143.81% for the same period just in Arizona. Projected job growth for Medical and Health Services Managers, nationally through 2032, is +40.85%. (Source: Lightcast Q3 2023 Data Set). Other complementary occupations, such as environmental planner, safety manager, patent agents, and policy analysts, also show similarly strong employability.

Finally, the somewhat analagous UA degrees – the BS/BA in Science and the BA in Law – have been popular with students. Students have thus shown a strong interest in taking science courses and taking law courses; this interdisciplinary degree combines law and science.

VII. Similar Programs Offered at Arizona Public Universities:

No similar programs exist in Arizona or nationwide. The BS Science Law is completely unique from other majors on campus in course make-up and structure, and so it will not replicate student interests in other degrees. The BA in Law at the University of Arizona, a partnership between the College of Law and the School of Government and Public Policy within the College of Social and Behavioral Sciences, is the closest law-related program, but it is limited to law and policy and includes no science curriculum. Conversely, the College of Science currently offers science discipline courses but no law curriculum. The new BS in Science Law provides the first and most efficient pathway for students to receive a rigorous education in law, science, and the intersection between the two.

VIII. Resources

a. Summarize new resources required to offer the program:

Almost no new resources will be needed for this new degree. Marketing and communications will be shared by the existing MarComm units in each College. No new hires are expected in these areas. The Colleges will also appoint one faculty member each to jointly teach the interdisciplinary capstone course. These two faculty members will be existing faculty members or adjuncts. Finally, advising costs will be split equally by the Colleges. Until the new degree reaches 150 students, no new advising hires are anticipated. Once the 150 threshold is reached, a dedicated advisor would be hired by the Colleges, which will be a joint hire apportioned evenly between the two Colleges.

IX. Required Signatures *(the following should be included in the notification memo to campus after ABOR approval):*

A. College Dean/Associate Dean:

- i. Signature: Carmala Garzione
- ii. Name and Title: Carmala Garzione

iii. Date:

B. College Dean/Associate Dean:

i. Signature: 

ii. Name and Title: Marc L. Miller

iii. Date



ADDITIONAL INFORMATION FORM
To be used once preliminary proposal has been approved.

I. MAJOR REQUIREMENTS—

UNDERGRADUATE

Total units required to complete the degree	120
Upper-division units required to complete the degree	42
Foundation courses	
Second language	2 nd Semester Proficiency
Math	Moderate: M-Strand
General education requirements	<p>Entry course/1 unit – UNIV 101</p> <p>4 courses/12 units: Exploring Perspectives (one course from each domain required)</p> <ul style="list-style-type: none"> - Humanist - Artist - Social Scientist - Natural Scientist <p>3 courses/9 units: Building Connections</p> <p>Exit course/1 unit – UNIV 301</p>
Pre-major? (Yes/No).	No
List any special requirements to declare or gain admission to this major	No special requirements
Major requirements	
Minimum # of units required in the major (units counting towards major units and major GPA)	70
Minimum # of upper-division units required in the major	30
Minimum # of residency units to be completed in the major	18



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<p>Required supporting coursework (courses that do not count towards major units and major GPA, but are required for the major).</p>	<p style="text-align: center;">Complete 1 of the following:</p> <ul style="list-style-type: none"> -Math 113 (3) Elements of Calculus -Math 122A (1) Functions of Calculus & Math 122B (4) First semester Calculus -Math 125 (3) Calculus
<p>Major requirements. List all major requirements including core and electives. If applicable, list the emphasis requirements for each proposed emphasis*. Courses listed count towards major units and major GPA.</p>	<p style="text-align: center;"><u>Core Courses</u></p> <p style="text-align: center;">Statistics Requirement. (3 units) Complete 1 of the following:</p> <ul style="list-style-type: none"> -Math 263 (3) Intro to Statistics and Biostatistics -BASV 314 (3) Mathematics for Applied Sciences -PSY 230 (3) Psychological Measurement and Statistics <p style="text-align: center;">Core Science Requirement. (16 units) Complete 4 of the following (complete at least one course from each of biology, chemistry, and physics):</p> <ul style="list-style-type: none"> -MCB 181 R/L (4) Introductory Biology I with lab -ECOL 182 R/L (4) Introductory Biology 2 with lab -CHEM 141 & 145 (4) General Chemistry 1: Quantitative Approach with lab -CHEM 142 & 146 (4) General Chemistry 2: Quantitative Approach with lab <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> -CHEM 151 (4) Chemical Thinking 1 -CHEM 151 (4) Chemical Thinking 2 -PHYS 102 & 181 (4) Introductory Physics 1 with lab -PHYS 103 & 182 (4) Introductory Physics 2 with lab <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> -PHYS 110 (4) Introductory Studio Physics I -PHYS 111 (4) Introductory Studio Physics 2 <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> -PHYS 141 (4) Introductory Mechanics -PHYS 241 (4) Introductory Electricity and Magnetism -PHYS 242 (4) Introductory Relativity and Quantum Mechanics <p style="text-align: center;">Core Law Requirement (12 units)</p> <p style="text-align: center;">Complete four of the five courses below</p> <ul style="list-style-type: none"> -LAW 401 Procedure (civil, criminal, and administrative procedure)



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	<p>-LAW 402A The American Common Law System I (torts and contracts) -LAW 402B The American Common Law System II (property) -Law 404 The American Public Law System (constitutional and administrative law) -Law 407: Legal Analysis, Research, and Writing</p> <p>Additional Science Requirement (6 units). Complete 2 of the following: -NSCS 200 (3) Fundamentals of Neuroscience & Cognitive Science -PSY 101 (4) Introduction to Psychology -CHEM 241A (3) Organic Chemistry Lecture I -CHEM 241B (3) Organic Chemistry Lecture 2</p> <p>Capstone Requirement (3 units) -SCI/LAW 498 (3) Science Law Capstone</p> <p><u>Upper division science electives (5 courses, 15 units)</u> Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.</p> <p>Psychology -PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain -PSY 340 (3) Introduction to Cognitive Development -PSY 352 (3) Personality -PSY 360 (3) Social Psychology -PSY 381 (3) Abnormal Psychology -PSY 383 (3) Health Psychology -PSY 324 (3) Fundamentals of Aging -PSY 412 (3) Animal Learning -PSY 480 (3) Forensic Psychology</p> <p>Earth Systems and Sustainability</p>
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- ATMO 336 (3) Weather, Climate, and Society
- HWR 350 (3) Principals of Hydrology
- ATMO 436A (3) Weather Fundamentals
- ENVS 305 (3) Pollution Science
- ENVS 462 (3) Environmental Soil and Water Chemistry
- ENVS 425 (3) Environmental Microbiology
- ENVS 420 (3) Environmental Physics
- RNR 384 (3) Natural Resources Management Practices
- WFSC 385 (3) Zoo and Aquarium Conservation
- RNR/GEOG/GIST 417 (3) GIS for Natural and Social Sciences
- RNR/GEOG/GIST 422 (3) Resource Mapping using Aerial systems
- RNR/LAR 448 (3) Conservation Planning and Wildland Recreation

Cell, and Molecular Biology

- MCB 325 (3) The Biology of Cancer
- MCB 404 (3) Bioethics
- MCB 410 (3) Cell Biology
- MCB 411 (3) Molecular Biology
- MCB 422 (3) Problem Solving with Genetic Tools
- MCB 442 (3) Human Genetics: Sex, Crime, and Disease

Biochemistry

- BIOC 384 (3) Foundations in Biochemistry
- BIOC 385 (3) Metabolic Biochemistry
- NSC 308 (3) Nutrition and Metabolism
- NSC 408 (3) Nutritional Biology

Neuroscience

- *NROS 307 (3) Cellular Neurophysiology
- *NROS 310 (3) Molecular and Cellular Biology of Neurons
- *NROS 418 (3) Fundamental Principles of systems Neuroscience
- NROS 308 (3) Methods in Neuroscience
- NROS 330 (3) Principles of Neuroanatomy: Cells to Systems
- NROS 430 (3) Neurogenetics

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-NROS 440 (3) How to build a Brain: Mechanisms of Neural Development
(*recommended courses)

Cognitive Science

-CGSC 320 (3) Issues and Themes in Cognitive Science
-CGSC 344 (3) Modeling the Mind: Computational Models of Cognition
-CGSC 310 (3) Multisensory Perception
-PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain (note: students may count this course toward one grouping only)

Upper division law electives (15 units)

Students take at least 2 courses in one area and the remaining 3 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below.

Trial Science

-LAW 458: Introduction to Criminal Law (3)
-LAW 472: Criminal Procedure: Investigation & Arrest (3)
-LAW 408: Evidence (3)

Environmental Law and Policy

-LAW 454: Environmental Law and Policy (3)
-LAW 461: Legislative Analysis (3)
-LAW 459: Public International Environmental Law (3)

Intellectual Property

-LAW 455: Intellectual Property (3)
-LAW 480: Introduction to Information Privacy (3)
-LAW 442: Entertainment Law (3)

Compliance

-LAW 411: Agriculture, Environmental and Legal Issues (3) (not currently online)
-LAW 416: Intro to Business Law (3)
-LAW 436: Risk, Management/Insurance (3) (not currently online)
-LAW 444B: Introduction to International Commercial Transactions (3)



ADDITIONAL INFORMATION FORM

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	<p>-LAW 452: Health Law (3) (not currently online)</p> <p>-LAW 454: Environmental Law and Policy (3)</p> <p>-LAW 455: Intellectual Property (3)</p> <p>-LAW 457: Employment Law (3)</p> <p>-LAW 480: Introduction to Information Privacy (3)</p> <p>-LAW 480B: Data Privacy and Cybersecurity in Healthcare (3)</p> <p>Regulatory Science</p> <p>-LAW 476A: Drug Discovery, Development and Innovation to Reach the Marketplace (3)</p> <p>-LAW 475D: Leadership and Equity in the Life Sciences (3)</p> <p>-LAW 488A: Translational Pathways for Medical Devices (3)</p> <p>Health Law and Policy</p> <p>-LAW 478A: Legal and Regulatory Aspects of Healthcare Delivery (3)</p> <p>-LAW 479A: Legal and Regulatory Fundamentals for Healthcare Business (3)</p> <p>-LAW 477: Introduction to Biomedical Informatics (3)</p> <p>-LAW 480A: Liability and Regulation of Healthcare Professionals (3)</p> <p>-LAW 452: Health Law (3) (not currently online)</p> <p>Legal Studies (General)</p> <p>Take 15 units of upper-division elective law courses</p>
Internship, practicum, applied course requirements (Yes/No). If yes, provide description.	No
Senior thesis or senior project required (Yes/No)	No
Additional requirements (provide description)	None
Minor (specify if optional or required)	None required
Any double-dipping restrictions (Yes/No)?	-Up to 12 units may double dip with major requirements



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II. CURRENT COURSES—

Course prefix and number (include cross-listings)	Units	Title	Pre-requisites	Modes of delivery (online, in-person, hybrid)	Typically Offered (F, W, Sp, Su)	Dept signed party to proposal? (Yes/No)
MATH 263	3	Introduction to Statistics and Biostatistics	Placement or completion of MATH 108, 112, 113, 116, 119A, 122B, or 125 in the last year	Online	F,Sp,Su	Yes
BASV 314	3	Mathematics for Applied Sciences	No prerequisites	Online	F,Sp,Su	Yes
PSY 230	3	Psychological Measurement and Statistics	PSY 101 or PSY 150A1	Online	F,Sp,Su	Yes
MCB 181R/L	4	Introductory Biology 1 with lab	placement	Online	F,Sp,Su	Yes
ECOL 182R/L	4	Introductory Biology 2 with lab	placement	Online	Fall (7W1 & 7W2), Spring (7W1 & 7W2), Summer (5W1 & 5W2)	Yes
CHEM 141	3	General Chemistry 1: Quantitative Approach	placement	Online	F,Su	Yes
CHEM 145	1	General Chemistry 1 Lab: Quantitative Approach	placement	Online	F,Su	Yes
CHEM 142	3	General Chemistry 2: Quantitative Approach	CHEM 141	Online	Sp,Su	Yes
CHEM 146	1	General Chemistry 2 Lab: Quantitative Approach	CHEM 142	Online	Sp,Su	Yes
CHEM 151	4	Chemical Thinking I	placement	Main	Sp,Su	Yes
CHEM 152	4	Chemical Thinking II	placement	Main	Sp,Su	Yes



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PHYS 102	3	Introductory Physics 1	placement	Online	F,Sp	Yes
PHYS 181	1	Introductory Physics 1 Lab	placement	Online	F,Sp	Yes
PHYS 103	3	Introductory Physics 2	PHYS 102	Online	F,Sp	Yes
PHYS 182	1	Introductory Physics 2 Lab	PHYS 181	Online	F,Sp	Yes
PHYS 141	4	Introductory Mechanics	Calc 1, concurrent enrollment in MATH 129	Online	F,Sp	Yes
PHYS 241	4	Introductory Electricity and Magnetism	PHYS 141, CR, MATH 223	Online	F,Sp	Yes
PHYS 242	3	Introductory Relativity and Quantum Mechanics	PHYS 141, PHYS 142, PHYS 241 or OPTI 226	Online	F,Sp	Yes
NSCS 200	3	Fundamentals of Neuroscience & Cognitive Science	MCB 181R and PSY 101 or equivalent	Online	F,Sp	Yes
PSY 101	4	Introduction to Psychology	None	Online	F,W,Sp, Su	Yes
CHEM 241A	3	Organic Chemistry Lecture I	CHEM 105B, CHEM 142, CHEM 152 or CHEM 162.	Online	F,Su	Yes
CHEM 241B	3	Organic Chemistry Lecture II	CHEM 241A or CHEM 242A or CHEM 246A.	Online	F,Su	Yes
NSC 101	3	Introduction to Human Nutrition	Students must not have taken NSC 170C1	Online	F,Sp,Su	Yes
NSC 170C1	3	Nutrition, Food and You	Students must not have taken NSC 101	Online	F,Sp,Su	Yes
PSY 300	3	Cognitive Neuroscience: A Guide to Mind and Brain	None	Online	F,W,Sp, Su	Yes
PSY 340	3	Introduction to Cognitive Development	PSY 101 or PSY 150A1	Online	F,Sp,Su	Yes
PSY 352	3	Personality	PSY 101 or PSY 150A1	Online	Sp,Su	Yes
PSY 360	3	Social Psychology	PSY 101 or PSY 150A1	Online	Fa,Su	Yes
PSY 381	3	Abnormal Psychology	PSY 101 or PSY 150A1	Online	Sp,Su	Yes
PSY 383	3	Health Psychology	PSY 101 or PSY 150A1	Online	Fa,Su	Yes
PSY 324	3	Fundamentals of aging	PSY 101 or PSY 150A1	Online	Fa	Yes
PSY 412	3	Animal Learning	PSY 101 or PSY 150A1	Online	Sp	Yes
PSY 480	3	Forensic Psychology	PSY 101 or PSY 150A1	Online	Sp	Yes



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ATMO 336	3	Weather, Climate and Society	None	Online	Fa, Sp, Su	Yes
HWRS 350	3	Principals of Hydrology	MATH 122B or MATH 125	Online	Fa	Yes
ATMO 436A	3	Weather Fundamentals	MATH113 or MATH 122B and physics background (high school physics suffices)	Online	Sp	Yes
ENVS 305	3	Pollution Science	MIC 205A	Online	F	Yes
ENVS 420	3	Environmental Physics	PHYS 102 or PHYS 141	Online	F	Yes
ENVS 425	3	Environmental Microbiology	MIC 205A	Online	Sp	Yes
ENVS 462	3	Environmental Soil and Water Chemistry	(ENVS 200 AND CHEM 142) or (three CHEM courses and not ENVS 200)	Online	F	Yes
RNR 384	3	Natural Resources Management Practices	ECOL 302 or RNR 316 recommended	In-person, hybrid	Sp	Yes
WFSC 385	3	Zoo and Aquarium Conservation	None	Online	F, Su	Yes
RNR/GEOG/GIST 417	3	GIS for Natural and Social Sciences	MATH 263, BASV 200	Online	F, Sp, Su	Yes
RNR/GEOG/GIST 422	3	Resource Mapping using Aerial systems	GIS or remote sensing course recommended	Online	F	Yes
RNR/LAR 448	3	Conservation Planning and Wildland Recreation		Online	F, Sp	Yes
MCB 325	3	The Biology of Cancer	MCB 181R	Main	Sp,Su	Yes
MCB 442	3	Human Genetics: Sex, Crime, and Disease	MCB 181R and one of MCB 304 or MCB 422	Online	Sp	Yes
MCB 404	3	Bioethics	One year of college-level introductory biology; botany not acceptable.	Online	F,Sp,Su	Yes
MCB 410	3	Cell Biology	Not an MCB BS major. MCB 181R, MCB 181L, ECOL 182R, ECOL 182L.	Online	Fa,Su	Yes
MCB 411	3	Molecular Biology	Not an MCBBS major. Prerequisites MCB 181R, MCB 181L.	Online	Sp,Su	Yes



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MCB 422	3	Problem Solving with Genetic Tools	MCB 181R and 181L.	Online	Su	Yes
NSC 308	3	Nutrition and Metabolism	CHEM 152 or 142, and (MCB 181R or PSIO 201), and (NSC 101 or 170C1)	Online	F,Sp, Su	Yes
BIOC 384	3	Foundations in Biochemistry	MCB 181R and (CHEM 142 or CHEM 152 or CHEM 105B or CHEM 162) and (CHEM 241A or CHEM 242A or CHEM 246A). BIOCBA and BIOCBS Students may not enroll.	Online	F,W,Sp,Su	Yes
BIOC 385	3	Metabolic Biochemistry	MCB 181R and (CHEM 142 or CHEM 152 or CHEM 105B or CHEM 162) and (CHEM 241A or CHEM 242A or CHEM 246A). BIOCBA and BIOCBS Students may not enroll.	Online	F,W,Sp,Su	Yes
NSC 408	3	Nutritional Biology	CHEM 241A and (PSIO 380 or PSIO 202) and NSC 308. Prerequisite or concurrent enrollment in BIOC 384 OR BIOC 385.	Online	F,Sp,Su	Yes
NROS 307	3	Cellular Neurophysiology	MCB181R , CHEM 151 with lab.	Online	F,Sp	Yes
NROS 308	3	Methods in Neuroscience	Prerequisite or concurrent enrollment in NSCS 307.	Online	F,Sp	Yes
NROS 310	3	Molecular and Cellular Biology of Neurons	NSCS 200	Online	F,Sp	Yes
NROS 418	3	Fundamental Principles of Systems Neuroscience	None	Online	F,Sp	Yes
NROS 330	3	Principles of Neuroanatomy: Cells to Systems	NSCS 200 and prerequisite or concurrent enrollment in	Online	F,Sp	Yes



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			NROS 307. Other courses may be accepted at the discretion of instructor.			
NROS 430	3	Neurogenetics	MCB 181R (required), NROS 310 (recommended).	Online	F,Sp	Yes
NROS 440	3	How to Build a Brain: Mechanisms of Neural Development	NSCS 200 (in progress OK)	Online	F,Sp	Yes
CGSC 320	3	Issues and Themes in Cognitive Science	NSCS 200	Online	Fa,Sp	Yes
CGSC 344	3	Modeling the Mind: Computational Models of Cognition	NSCS 200	Online	Fa,Sp	Yes
CGSC 310	3	Multisensory Perception	NSCS 200	Online	Su	Yes
LAW 150C1	3	Introduction to U.S. Legal Systems	None	Online	F, Sp, Su	Yes
LAW 195	1	Law First Year Colloquium	None	Online	Su	Yes
LAW 295	1-3	Colloquium/Special Topics in Law		Online	Su	Yes
LAW 389	3	Sex, Race, Drugs, & Power in the Supreme Court		Online	Sp	Yes
LAW396A	3	From the laboratory to Capitol Hill: Science & Law Seminar		Currently not online	Sp	Yes
LAW 407	3	Legal Analysis, Writing and Research		Online	F, Sp, Su	Yes
LAW 408	3	Evidence in Modern Legal Practice		Online	F, Sp, Su	Yes
LAW 409	3	Due Diligence and Entitlements		Online	F	Yes
LAW 410	3	Professional Responsibility in Modern Legal Practice		Online	F, Sp, Su	Yes
LAW 411	3	Agriculture, Environmental and Legal issues		Currently not online	F	Yes
LAW 413A	3	The Ethical Entrepreneur		Online	F	Yes



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LAW 413B	3	Law Economic & Civil Society		Online	F	Yes
LAW 415	3	Healthcare Ethics		Online	Sp	Yes
LAW 416	3	Introduction to Business Organizations Law		Online	F, Sp	Yes
LAW 421	3	Administrative Law		Online	F, Su	Yes
LAW 421A	3	Arizona Administrative Procedure and Advocacy		Online	F	Yes
LAW 440A	3	Introduction to Human Rights Law		Online	F, Sp, Su	Yes
LAW 442	3	Entertainment Law		Online	Sp, Su	Yes
LAW 444B	3	Introduction to International Commercial Transaction		Online	Sp, Su	Yes
LAW 448	3	Law and Economics		Online	F	Yes
LAW 450A	3	Native American Law & Policy		Online	F, Sp, Su	Yes
LAW 450D	3	Wrongful Convictions		Online	F, Sp	Yes
LAW 452	3	Health Law		Currently not online (but a possibility)	F	Yes
LAW 453	3	Introduction to Immigration Law and Policy		Online	F, Sp	Yes
LAW 453A	3	International Trade Law and Policy		Online	Sp	Yes
LAW 454	3	Environmental Law and Policy		Online	F, Sp, Su	Yes
LAW 455	3	Intellectual Property		Online	Sp, Su	Yes
LAW 456	3	Family Law		Online	F, Sp, Su	Yes
LAW 457	3	Employment Law		Online	Su	Yes
LAW 458	3	Introduction to Criminal Law		Online	F, Sp, Su	Yes
LAW 458A	3	Arizona Criminal Procedure and Advocacy		Online	F, Sp, Su	Yes
LAW 459	3	Public International Environmental Law		Online	Sp, Su	Yes



ADDITIONAL INFORMATION FORM
To be used once preliminary proposal has been approved.

LAW 460	3	Land-Use Planning Law		Online	F, Sp, Su	Awaiting approval
LAW 461	3	Legislative Analysis		Online	F, Su	Yes
LAW 462	1	Introduction to Alternative Dispute Resolution		Online	F, Sp, Su	Yes
LAW 462A	3	Arbitration (Workplace Dispute Resolution: Advocacy Skills and Training)		Online	Sp, Su	Yes
LAW 465B	3	Introduction to Mediation		Online	Sp, Su	Yes
LAW 467	3	Tribal Courts Practice and Procedure		Online	Sp	Yes
LAW 468	3	Tribal Courts Law and Procedure		Online	Sp	Yes
LAW 469	3	Native American Family and Domestic Relations Law		Online	Sp	Yes
LAW 472	3	Criminal Procedure: Investigation and Arrest		Online	F, Sp, Su	Yes
LAW 475D	3	Leadership and Equity in the Life Sciences		Online	Su	Yes
LAW 476A	3	Drug Discovery, Development, and Innovation to Reach the Marketplace		Online	Sp	Yes
LAW 477	3	Introduction to Biomedical Informatics		Online	Sp	Yes
LAW 478A	3	Legal and Regulatory Aspects for Healthcare Delivery		Online	Sp, Su	Yes
LAW 479B	3	Legal and Regulatory Fundamentals for Healthcare Business		Online	Sp, Su	Yes
LAW 480	3	Introduction to Information Privacy		Online	F, Su	Yes
LAW 480A	3	Liability and Regulation of Healthcare Professionals		Online	F, Su	Yes



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

Course	Credits	Topic	Prerequisites	Delivery Method	Days	Yes/No
LAW 480B	3	Data Privacy & Cybersecurity in Healthcare		Online	F, Su	Yes
LAW 480C	3	Health Information Technology		Online		
LAW 480D	3	Telehealth Law & Policy		Online	Sp	Yes
LAW 484A	3	Aging in America		Online	F, Sp, Su	Yes
LAW 484B	3	Aging and Social Justice		Online	Sp	Yes
LAW 484C	3	Technology and Aging: Legal and Ethical Developments		Online	Sp	Yes
LAW 484D	3	Law and the Elderly		Online	F	Yes
LAW 488A	3	Translation Pathways for Medical Devices		Online	F	Yes
LAW 490A	3	Access to Investigational Medical Products: Clinical Trials, Expanded Access, and Rights to try		Online	F	Yes
LAW 493A	1-3	Legal Internship (students take this for 1 to 3 credits)		Online	S, Sp, Su	Yes
LAW 497	1	Career Development in law		Currently not online (but a possibility)	Sp	Yes

III. NEW COURSES NEEDED –

Course prefix and number (include cross-listings)	Units	Title	Pre-requisites	Modes of delivery (online, in-person, hybrid)	Status*	Anticipated first term offered	Typically Offered (F, W, Sp, Su)	Dept signed party to proposal? (Yes/No)	Faculty members available to teach the courses
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ADDITIONAL INFORMATION FORM To be used once preliminary proposal has been approved.

SCI/LAW 498	3	Science Law Capstone	None	Online	D	Spring 2027	Sp	Yes	Yes
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*In development (D); submitted for approval (S); approved (A)

IV. FACULTY INFORMATION-

Faculty Member	Involvement	UA Vitae link or Box folder link
Associate Dean for Undergraduate Student Success, College of Science	Will oversee hiring of program manager for degree program	https://profiles.arizona.edu/person/rgomez
Ryan Gutenkunst	Will oversee use and delivery of MCB courses	https://profiles.arizona.edu/person/rgutenk
Michael Worobey	Will oversee use and delivery of ECOL courses	https://profiles.arizona.edu/person/worobey
Shufang Su	Will oversee use and delivery of Physics courses	https://w3.physics.arizona.edu/people/shufang-su
Arne Ekstrom	Will oversee use and delivery of Psychology courses	https://profiles.arizona.edu/person/adekstrom
Peter Troch	Will oversee use and delivery of HAS courses	https://profiles.arizona.edu/person/patroch
Craig Aspinwall	Will oversee use and delivery of Chemistry and Biochemistry courses	https://profiles.arizona.edu/person/aspinwal
Konrad Zinsmaier	Will oversee use and delivery of NROS courses and NSCS 200	https://profiles.arizona.edu/person/kez4
Jessica Andrews-Hanna	Will oversee use and delivery of CGSC courses	https://profiles.arizona.edu/person/jandrewshanna
Keith Swisher	Will oversee use and delivery of Law courses and coordinate new courses/hires	https://profiles.arizona.edu/person/keithswisher
Rob Williams	Will oversee use and delivery of Law courses (Common Law)	https://arizona.box.com/s/qf9asbncl4e14a5vmfv1l6hykig7f72
Mark Blair	Will teach Native American Law and Policy and Human Rights	https://arizona.box.com/s/w1wlkajnetkyu1u7prv0rge98fiuogb
Linus Kafka	Will teach Administrative Law and Due Diligence and Entitlements	https://arizona.box.com/s/tclq8z0feent374f2ugnewx8n2q7qsvc



ADDITIONAL INFORMATION FORM
To be used once preliminary proposal has been approved.

Gavin Milczarek-Desai	May teach Patent Law	https://arizona.box.com/s/u70hhayz0u8awax189kwk8o8dhpmmcga
Marc Miller	May teach Environmental Law and Policy or Criminal Procedure	https://arizona.box.com/s/8jyudu9hsldlgims1unggle6n8yx4qfl
Lisa Marie Queen	May teach Procedure	https://law.arizona.edu/person/lisa-marie-queen

V. GRADUATION PLAN –

Semester 1		Semester 2		Semester 3		Semester 4	
Course prefix and number	Units	Course prefix and number	Units	Course prefix and number	Units	Course prefix and number	Units
ENGL 101	3	ENGL 102	3	Semster 1 Language Requirement	4	Semster 2 Language Requirement	4
MATH 112 (Foundation MATH)	3	Statistics Requirement	3	Required Supporting Coursework (MATH 113/122A/125)	3	Additonal Science Requirement 1	3
Gen Ed (EP Artist)	3	Gen-Ed (EP Social Scientist)	3	Gen-Ed (EP Humanist)	3	Gen-Ed (EP Natural Scientist)	3
Core Law Requirement 1	3	Core Law Requirement 2	3	Core Law Requirement 3	3	Core Law Requirement 4	3
Core Science Requirement with Lab I	4	Core Science Requirement with Lab II	4	Core Law Requirement III	3	Core Law Requirement IV	3
UNIV 101	1	Core Science Requirement with Lab 1	4	Core Science Requirement with Lab 2	4	Core Science Requirement with Lab 3	4
Total	13	Total	16	Total	17	Total	17



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

Semester 5		Semester 6		Semester 7		Semester 8	
Course prefix and number	Units	Course prefix and number	Units	Course prefix and number	Units	Course prefix and number	Units
GenEd Buidling Connections 1	3	GenEd Buidling Connections 1	3	GenEd Buidling Connections 1	3	UNIV 301	1
Core Science Requirement with Lab 4	4	Major Science Elective 2	3	Major Science Elective 4	3	Major Science Elective 5	3
Additonal Science Requirement 2	3	Additonal Science Requirement 3	3	Major Law Elective 3	3	Major Law Elective 5	3
Major Science Elective 1	3	Major Science Elective 3	3	Major Law Elective 4	3	SCI/LAW 498 Capstone	3
Major Law Elective 1	3	Major Law Elective 2	3	ANY ELECTIVE	3	ANY ELECTIVE	1
Total	16	Total	15	Total	15	Total	11



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

- VI. Learning Outcomes and Curriculum Map** - Complete these tables as a summary of the learning outcomes from your assessment plan and an overview of where learning outcomes are addressed in the program. Use the examples below as models and refer to the explanations beneath each table. Additional resources are available from the [University Center for Assessment, Teaching and Technology](#).

Learning Outcomes

Learning Outcome #1: Demonstrate basic knowledge of applying scientific critical thinking in at least one of seven science areas. Basic knowledge of scientific critical thinking includes 1) factual reporting of the literature, 2) critical assessment of the soundness of scientific data, 3) use of data to support a position or claim.
Concepts: Scientific literature and reporting, scientific data interpretation, core knowledge of the discipline
Competencies: understanding of scientific findings, factual reporting of data, ability to read graphs and tables, and fundamental principles and concepts inherent to scientific critical thinking including hypothesis testing, experiment design, and assessment of data.
Assessment Methods: This outcome will be assessed in exams and written assignments in four introductory science courses with labs, e.g. MCB 181 R/L, CHEM 141/145, etc. (direct). Students will complete an end of the program survey (indirect).
Measures: Direct measures include evaluation of exams, lab reports, and student projects. Indirect measures will include student self-assessments via surveys and reflections.
Learning Outcome #2: Demonstrate basic knowledge of legal procedure, legal reasoning, and a substantive area of law.
Concepts: Constitutional law, case method, legal procedure and dispute resolution, and laws applicable to the student's area of emphasis.
Competencies: Legal research, legal writing, construction of legal arguments, application of legal reasoning, and interpretation of statutes and case law
Assessment Methods: This outcome will be assessed with exams and written assignments in one core law course, e.g. LAW 401, LAW 402A, etc. and one emphasis/elective law course (direct). Students will complete an end-of-program survey and reflection (indirect).
Measures: Direct measures include evaluation of exams, written assignments, and other student projects. Indirect measures will include student self-assessments via surveys and reflections.
Learning Outcome #3: Communicate clearly, effectively, and objectively scientific knowledge, legal knowledge, and the relationship between an area of law and an area of scientific inquiry.
Concepts: Scientific and legal communication, objective writing, critical reasoning, clarity in oral and written expression
Competencies: Communicate scientific and legal knowledge clearly and objectively in oral and written formats; explain the relationship between scientific inquiry and legal frameworks; construct logical, evidence-based arguments
Assessment Methods: This outcome will be assessed using oral presentations and/or written papers in the capstone course



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Measures: Direct measures include instructor grading of written and oral work. Indirect measures will include student self-assessments via surveys and reflections
Learning Outcome #4: Collaborate effectively on interdisciplinary problems or projects in science and law.
Concepts: Interdisciplinary collaboration, mutual respect and shared values, virtual teamwork
Competencies: Collaborate effectively on interdisciplinary teams; contribute content knowledge or science and law to a project; demonstrate self-reflection, project management, and professional teamwork skills
Assessment Methods: This outcome will be assessed in written assignments, peer feedback, or group projects.
Measures: Direct measures include grades of student contribution to a project. Indirect measures will include student self-assessments via surveys and reflections

*Explanation: **Concepts** are the topics that students will learn in the program. **Competencies** are the skills they will learn. A **learning outcome** is their ability to apply the skills to the topics, or to use the skills and the topics together, in an observable way. The **assessment method** is where students will demonstrate the learning outcome, and a **measure** is how data will be pulled from the assessment method. Include both a direct and indirect assessment method and measurement for each learning outcome. Competencies and the learning outcomes need to reflect higher level learning: consider using verbs from the Application, Analysis, Synthesis, and Evaluation columns from this list when writing learning outcomes: <https://arizona.app.box.com/s/orx6coex8607hlmenrql7dznzhjicpit>. We recommend 3-5 Learning Outcomes for a degree program.*

Curriculum Map

	MCB 181/ECOL 182	CHEM 141	PHYS 102/141	LAW 401	LAW 402A/B	LAW 404	LAW 407	SCI/LAW 498
LO #1: Demonstrate basic knowledge of applying scientific critical thinking in at least one of seven science areas. Basic knowledge of scientific critical thinking includes 1) factual reporting of the literature, 2) critical assessment of the soundness of scientific data, 3) use of data to support a position or claim.	I,R	I,R	I,R					M



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LO #2: Demonstrate basic knowledge of legal procedure, legal reasoning, and a substantive area of law.				I,R	I,R	I,R	I,R	M
LO #3: Communicate clearly, effectively, and objectively scientific knowledge, legal knowledge, and the relationship between an area of law and an area of scientific inquiry.	I	I	I	I	IR	IR	IR	I,R,M
LO #4: Collaborate effectively on interdisciplinary problems or projects in science and law.	I,R				I,R		I,R	I,R,M

Explanation: The curriculum map lists the required courses for the program and indicates where each LO will be introduced (I), reinforced (R), and mastered (M). This is important to show that you are including adequate teaching of the skills and concepts to support the LOs. Each row (LO) should have at least one I, R, and M in it. Usually (but not always) there is more than one R. Usually (but not always) there is only one I and one M. Generally, Is come first, followed by Rs, and Ms are last. Each column (class) should have at least one letter in it, but not every box needs to be filled in

VII. PROGRAM ASSESSMENT PLAN- using the table below, provide a schedule for program evaluation 1) while students are in the program and 2) after completion of the major.

Assessment Measure	Source(s) of Evidence	Data Collection Point(s)
Job Placement Statistics	Student/Alumni Survey	At graduation annually (senior exit survey)
SCI/LAW 498 Science Law Capstone	Percentage of students meeting the acceptable target of 80% for each learning objective measured using class assignments, reflections, presentations, and reports	Annually
Senior Exit Survey (will measure percentage of students rating each learning outcome at "Agree" or "Strongly Agree")	Student Survey	At graduation annually



ADDITIONAL INFORMATION FORM
To be used once preliminary proposal has been approved.

VIII. ANTICIPATED STUDENT ENROLLMENT-complete the table below. What concrete evidence/data was used to arrive at the numbers?

5-YEAR PROJECTED ANNUAL ENROLLMENT					
	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Number of Students	50	100	150	200	225

Data/evidence used to determine projected enrollment numbers:

Although the proposed degree is unique and distinctive, we used enrollment rates in the BA in Law at The University of Arizona and two other analogous programs to anticipate program enrollment. The table below shows the total enrollment in these programs. We extrapolated a conservative value in line with these programs:

Summary of enrollments in two comparable programs			
University	Type of Degree	Degree Name	Total Enrollment (2024)
The University of Arizona	BA	Law	1000 (Main plus Online Campuses)
University of Southern California	BS	Legal Studies	161
University of Oregon	BS or BA	Multidisciplinary Science Program	215

IX. ANTICIPATED DEGREES AWARDED- complete the table below, beginning with the first year in which degrees will be awarded. How did you arrive at these numbers? Take into consideration departmental retention rates.

PROJECTED DEGREES AWARDED ANNUALLY					
	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year



ADDITIONAL INFORMATION FORM To be used once preliminary proposal has been approved.

Number of Degrees	NA	NA	NA (perhaps some if students switch majors or use transfer credits)	50	100
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Data/evidence used to determine number of anticipated degrees awarded annually:

We calculated a 60% graduation rate based on comparisons to similar programs at peer institutions. We also factored in students transferring into AZ Online and into the major.

Appendix A. Minor Requirements. Complete if requesting a corresponding minor.

MINOR

Minimum total units required	23
Minimum upper-division units required	12
Total transfer units that may apply to the minor	9
List any special requirements to declare/admission to this minor	None
Minor requirements. List all minor requirements including core and electives. Courses listed must include course prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions needed (house number limit, etc.). Provide email(s)/letter(s) of support from home	<p style="text-align: center;"><u>Science Core Courses Minimum 8 units</u></p> <p>Complete 2 of the following:</p> <ul style="list-style-type: none"> -MCB 181 R/L (4) Introductory Biology I with lab -ECOL 182 R/L (4) Introductory Biology 2 with lab -CHEM 141 & 145 (4) General Chemistry 1: Quantitative Approach with lab -CHEM 142 & 146 (4) General Chemistry 2: Quantitative Approach with lab -PHYS 102 & 181 (4) Introductory Physics 1 with lab



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

department head(s) for courses not owned by your department.

-PHYS 103 & 182 (4) Introductory Physics 2 with lab

Or

-PHYS 110 (4) Introductory Studio Physics I

-PHYS 111 (4) Introductory Studio Physics 2

Or

-PHYS 141 (4) Introductory Mechanics

-PHYS 241 (4) Introductory Electricity and Magnetism

-PHYS 242 (4) Introductory Relativity and Quantum Mechanics

Law Core Course Minimum 6 units

Complete 2 of the following:

-LAW 401 Procedure (civil, criminal, and administrative procedure)

-LAW 402A The American Common Law System I (torts and contracts)

-LAW 402B The American Common Law System II (property)

-LAW 404 The American Public Law System (constitutional and administrative law)

-LAW 407: Legal Analysis, Research, and Writing

Capstone Requirement (3 units)

-SCI/LAW 498 (3) Science Law Capstone

Science elective

Complete 1 course from any of those listed below:

Psychology

-PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain

-PSY 340 (3) Introduction to Cognitive Development

-PSY 352 (3) Personality

-PSY 360 (3) Social Psychology

-PSY 381 (3) Abnormal Psychology

-PSY 383 (3) Health Psychology

-PSY 324 (3) Fundamentals of Aging

-PSY 412 (3) Animal Learning

-PSY 480 (3) Forensic Psychology



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

Earth Systems and Sustainability

- ATMO 336 (3) Weather, Climate, and Society
- HWRS 349A (3) Principals of Hydrology
- HWRS 349B (3) Principals of Hydrology Lab
- ATMO 436A (3) Weather Fundamentals
- ENVS 305 (3) Pollution Science
- ENVS 462 (3) Environmental Soil and Water Chemistry
- ENVS 425 (3) Environmental Microbiology
- ENVS 420 (3) Environmental Physics
- RNR 384 (3) Natural Resources Management Practices
- WFSC 385 (3) Zoo and Aquarium Conservation
- RNR/GEOG/GIST 417 (3) GIS for Natural and Social Sciences
- RNR/GEOG/GIST 422 (3) Resource Mapping using Aerial systems
- RNR/LAR 448 (3) Conservation Planning and Wildland Recreation

Genetics, Cell, and Molecular Biology

- ECOL 320 (4) Genetics
- ECOL 326 (3) Genomics
- MCB 404 (3) Bioethics
- MCB 410 (3) Cell Biology
- MCB 411 (3) Molecular Biology
- MCB 422 (3) Problem Solving with Genetic Tools

Ecology, Evolution, and Animal Behavior

- ECOL 406R (3) Conservation Biology
- ECOL 437 (4) Vertebrate Physiology
- ECOL 485 (4) Mammalogy
- ECOL 487R (3) Animal Behavior
- ECOL 487L (1) Animal Behavior Lab
- ECOL 488 (4) Arizona Mammals

Biochemistry

- BIOC 384 (3) Foundations in Biochemistry
- BIOC 385 (3) Metabolic Biochemistry



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

- NSC 308 (3) Nutrition and Metabolism
- NSC 408 (3) Nutritional Biology

Neuroscience

- *NROS 307 (3) Cellular Neurophysiology
- *NROS 310 (3) Molecular and Cellular Biology of Neurons
- *NROS 418 (3) Fundamental Principles of systems Neuroscience
- NROS 308 (3) Methods in Neuroscience
- NROS 330 (3) Principles of Neuroanatomy: Cells to Systems
- NROS 430 (3) Neurogenetics
- NROS 440 (3) How to build a Brain: Mechanisms of Neural Development
- (*recommended courses)

Cognitive Science

- CGSC 320 (3) Issues and Themes in Cognitive Science
- CGSC 344 (3) Modeling the Mind: Computational Models of Cognition
- CGSC 310 (3) Multisensory Perception
- PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain (note: students may count this course toward one grouping only)

Law elective

Complete one course from any of those listed below:

Trial Science

- LAW 458: Introduction to Criminal Law (3)
- LAW 472: Criminal Procedure: Investigation & Arrest (3)
- LAW 408: Evidence (3)

Environmental Law and Policy

- LAW 454: Environmental Law and Policy (3)
- LAW 461: Legislative Analysis (3)
- LAW 459: Public International Environmental Law (3)

Intellectual Property

- LAW 455: Intellectual Property (3)



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.

	<p>-LAW 480: Introduction to Information Privacy (3) -LAW 442: Entertainment Law (3)</p> <p>Compliance</p> <p>-Law 411: Agriculture, Environmental and Legal Issues (3) (not currently online) -Law 416: Intro to Business Law (3) -Law 436: Risk, Management/Insurance (3) (not currently online) -Law 444B: Introduction to International Commercial Transactions (3) -Law 452: Health Law (3) (not currently online) -Law 454: Environmental Law and Policy (3) -Law 455: Intellectual Property (3) -Law 457: Employment Law (3) -Law 480: Introduction to Information Privacy (3) -Law 480B: Data Privacy and Cybersecurity in Healthcare (3)</p> <p>Regulatory Science</p> <p>-Law 476A: Drug Discovery, Development and Innovation to Reach the Marketplace (3) -Law 475D: Leadership and Equity in the Life Sciences (3) -Law 488A: Translational Pathways for Medical Devices (3)</p> <p>Health Law and Policy</p> <p>-Law 478A: Legal and Regulatory Aspects of Healthcare Delivery (3) -Law 479A: Legal and Regulatory Fundamentals for Healthcare Business (3) -Law 477: Introduction to Biomedical Informatics (3) -Law 480A: Liability and Regulation of Healthcare Professionals (3) -Law 452: Health Law (3) (not currently online)</p>
<p>Internship, practicum, applied course requirements (Yes/No). If yes, provide description.</p>	<p>The capstone course will contain projects where students work in groups to apply knowledge of science and law to practical problems.</p>
<p>Additional requirements (provide description)</p>	<p>No</p>
<p>Any double-dipping restrictions (Yes/No)? If yes, provide description.</p>	<p>Courses may not double dip with another minor</p>



ADDITIONAL INFORMATION FORM

To be used once preliminary proposal has been approved.



New Academic Program PEER COMPARISON

Program name, degree, and institution	Proposed UA Program BS in Science Law	University of Southern California BS in Legal Studies	Nova Southeastern University (NSU) BS in Law	University of Oregon Multidisciplinary Science Program
Current number of students enrolled		161	Awaiting confirmation from NSE	215
Program Description	The BS in Science Law meets a growing need for individuals with expertise in science and scientific principles who understand law and regulation to address legal and regulatory issues involving privacy, risk management, safety, bias, copyright, patent, and environmental impact stemming from the rapid rise of technology and new scientific applications. Students will take undergraduate courses in law offering an institutional, practical,	The Bachelor of Science in Legal Studies will provide students with an in-depth understanding of the legal system including the infrastructure, the reasoning process and the substantive commitments that the legal system has made. As future leaders, students in this major will become critical thinkers able to apply and understand various legal concepts in their interaction with real world issues	The goal of the B.S. in Law major is to prepare students for employment in a wide range of law-related careers. The major prepares students interested in attending law school or other graduate studies. [This degree, however, was up until recently called the BS in Paralegal Studies, and the actual curriculum still focuses largely on educating paralegals.]	The multidisciplinary science degree allows students to design academic programs that satisfy the requirements for a BS degree while providing more breadth than traditional science programs. Many exciting areas of scientific inquiry, such as bioinformatics, environmental science, and biophysical science, require broad science backgrounds and encompass several disciplines.

	<p>theoretical, and doctrinal perspective, as well as introductory courses and labs in biology, chemistry, and physics. Upper division law courses will deepen students' understanding of the law through subject-specific content. In parallel, they will take upper division science electives in one of 7 areas of science including: 1) psychology, 2) earth systems & sustainability, 3) genetics, cell and molecular biology, 4) ecology, evolution, and behavior, 5) biochemistry, 6) neuroscience, and 7) cognitive science and cognitive neuroscience. Students will conclude their major with a capstone course SCI/LAW 498: Law and Science - Discovering and Explaining</p>	<p>locally, nationally and globally. This program is particularly appropriate for students interested in pursuing a career that integrates legal concepts with other disciplines or that requires familiarity with extensive aspects of the legal system. It is a major designed for students who are looking to become future leaders in the community, the city, the state, the nation and the world. It is also suitable for students wanting to pursue graduate education in various disciplines, such as economics, humanities, social science, political science, business, health care, public service and many more, and for anyone who wants to obtain a general understanding</p>		
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	Interdisciplinary Connections.	of the place of law in contemporary society.		
Target Careers	Compliance officers, policy analysts, administrative units in tech, environmental agency personnel, patent agents, future attorneys and lawmakers, clinical directors	General legal	General legal and Paralegal	Health sciences, science education, science-related business, science-related social service
Emphases? (Yes/No) List, if applicable	No, there will not be subplans for each of the tracks. Students' emphases will not display on the diploma	No (but generalized tracks available)	Paralegal, General, or Law, Science, and Technology	No
Minimum # of units required	70	48	54	182 (Quarter System)
Level of Math required (if applicable)	Moderate (M-Strand): College Algebra or higher	General (G-Strand): Quantitative Reasoning	Moderate (M-Strand): College Algebra or higher	S-Strand (substantial): Requires Calculus I and Calculus II, Introductory Computer Programming, or Statistics
Level of Second Language required	2 nd Semester	None	None	4 th Semester
Pre-Major? (Yes/No)	No	No	No	No
Special requirements to declare/gain admission?	No	None		No
Internship, practicum, or applied/experiential requirements?	No	Yes (internship)		No

If yes, describe.				
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Additional questions:

1. How does the proposed program align with peer programs? Briefly summarize the similarities between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

None of the peers align overall. The USC and NSU program offer similar, albeit more limited, law curriculum, and the University of Oregon offers similar, albeit more limited, science curriculum. None of the peers, however, combine the Law and Science curriculum and the specialized tracks (e.g., psychology, environmental law, intellectual property).

2. How does the proposed program stand out or differ from peer programs? Briefly summarize the differences between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

The proposed program stands out for having a relatively small number of required units and providing students with an array of upper division STEM and Law courses for maximum flexibility in pairing this degree with other degrees, majors, and minors. As none of the other programs provide online delivery (except NSU, which mostly focuses only on paralegal studies), this program provides opportunity for unmet student need.

3. How do these differences make this program more applicable to the target student population and/or a better fit for the University of Arizona?

No undergraduate program in the country serves as a fully interdisciplinary Law and Science degree. This proposal thus carves a unique and exciting niche for the University of Arizona. Moreover, to broaden access, we offer the courses online, and the vast majority of the courses are already up and running. Finally, the new degree will provide a strong foundation for those working, or wanting to work, in science administration, regulation, and [law-related careers](#).



BUDGET PROJECTION FORM

Name of Proposed Program or Unit: BS Science Law

Budget Contact Person: Kelly Grimm (grimmk@arizona.edu)	Projected		
	1st Year 2025 - 2026	2nd Year 2026 - 2027	3rd Year 2027 - 2028
METRICS			
Net increase in annual college enrollment UG	50	100	150
Net increase in college SCH UG	1,150	2,150	3,050
Net increase in annual college enrollment Grad			
Net increase in college SCH Grad			
Number of enrollments being charged a Program Fee			
New Sponsored Activity (MTDC)			
Number of Faculty FTE			
FUNDING SOURCES			
Continuing Sources			
UG Revenue	603,750	1,128,750	1,601,250
Grad Revenue			
Program Fee Revenue (net of revenue sharing)			
F and A Revenues			
Reallocation from existing College funds (attach description)			
Other Items (attach description)			
Total Continuing	\$ 603,750	\$ 1,128,750	\$ 1,601,250
One-time Sources			
College fund balances (split between COS and COL)		9,000	9,000
Institutional Strategic Investment			
Gift Funding			
Other Items (attach description)			
Total One-time	\$ -	\$ 9,000	\$ 9,000
TOTAL SOURCES	\$ 603,750	\$ 1,137,750	\$ 1,610,250
EXPENDITURE ITEMS			
Continuing Expenditures			
Faculty			
Other Personnel (advisors, program directors, etc.)	99,200	99,200	99,200
Employee Related Expense	31,744	31,744	31,744
Graduate Assistantships			
Other Graduate Aid			
Operations (materials, supplies, phones, etc.)			
Additional Space Cost			
Other Items (attach description)			
Total Continuing	\$ 130,944	\$ 130,944	\$ 130,944
One-time Expenditures			
Construction or Renovation			
Start-up Equipment			
Replace Equipment			
Library Resources			
Other Items (attach description)			
Total One-time	\$ -	\$ -	\$ -
TOTAL EXPENDITURES	\$ 130,944	\$ 130,944	\$ 130,944
Net Projected Fiscal Effect	\$ 472,806	\$ 1,006,806	\$ 1,479,306

New Academic Program Budget Projection Form Justification

The program funding projection for the BS in Science Law includes three years of budget projection information related to the new major.

Metrics

We calculated the total number of SCH we expect the program to generate each year for the college based on the amount/SCH AZ Online currently charges students in the college of science. This shows a net increase which we will divide between colleges. We also considered students transferring in from community colleges and SCH or enrollment within the college for students who might transfer to the new major. Our formulas per year reflect the amount/SCH Arizona Online charges students for courses associated with degree programs in the college of science.

All courses, but one, are already delivered online. We do not anticipate needing to hire additional Faculty FTE for the major given minimal impact on any one course given the flexibility for course choice and the many courses available to students.

Funding Sources

Funding sources related to SCH and enrollments stem from the net new activity described in the metrics section above. No one-time funds are needed or funds from Reallocation of existing sources or Other Items sources.

The college of science and the college of law will each contribute \$9,000 to developing and teaching the capstone course SCI/LAW 498 in years 2-3.

No Institutional Strategic Investment funds are needed.

Expenditure Items

We budget the cost of an advisor to provide support for students and a program manager to administer the program starting in Year 1 (plus ERE). We expect a significant advising load even in the first year based on the complexity needed in advising for the current BS in Science which contains similar complexity.

We also budget \$9,000 in each college to develop (Spring 2027) and teach the first semester of the capstone course in the Fall 2027 semester (SCI/LAW 498).

No other marginal costs, GA Assistantships or other expenditures related to the new program are expected (see information above).

COURSE USE/COLLABORATION/CONCERN FORM

Please use this form to notify other colleges that your proposed new program intends to use course(s) under their ownership; has identified potential avenues for interdisciplinary collaboration; and/or wants to hear their concerns about the creation of this program.

Note: Requesting college should provide this request to leadership in unit who owns courses. Responding unit should respond within 10 business days from receipt. Lack of response after the 10 business days is presumed approval.

FOR REQUESTING COLLEGE:

- I. **Initiating College:** college of science and college of law
- II. **Representative(s) making the request:** Rebecca Gomez and Keith Swisher
- III. **Planned proposed program:** BS Science Law
- IV. **Planned program start date:** August 2025
- V. **Courses planned to be included, belonging to college / departments:**

FOR REVIEWING COLLEGE:

1. BASV 314 Yes ☒ No ☐ Conditionally ☐: Under what conditions?
2. Course #2 Yes ☐ No ☐ Conditionally ☐: Under what conditions?
3. Course #3 Yes ☐ No ☐ Conditionally ☐: Under what conditions?
4. Course #4 Yes ☐ No ☐ Conditionally ☐: Under what conditions?
5. Course #5 Yes ☐ No ☐ Conditionally ☐: Under what conditions?

VI. Parameters of Use (add rows as necessary):

Undergraduate/Graduate

Course #	Units	Description of use (i.e., gen ed, major core, emphasis, elective/selective)
BASV 314	3	Core

VII. Expected Yearly Enrollment (add rows as necessary):

Course #	Units	Exp Enrollment for Yr 1	Exp Enrollment for Yr 2	Exp Enrollment for Yr 3
BASV 314	3	20	20	20



COURSE USE/COLLABORATION/CONCERN FORM

VIII. Opportunities for Interdisciplinary Collaboration (leave blank if none):

We always welcome opportunities to collaborate with the College of Science and fully support this collaboration.

IX. Concerns about Proposed Program (leave blank if none):

X. Representative(s) reviewing request: Who is representative reviewing the request? (Should be Associate Dean / Dean)

Linda Denno, Associate Dean of Academic Affairs & Administration

Signature:  Date: September 30, 2024

Course use approvals from the College of Science

Below find email documentation for courses to be used in the BS in Science Law for all college of science courses to be included in the BS in Science Law by department. See departmental order below:

1. Neuroscience
2. Hydrology and Atmospheric Sciences
3. Chemistry and Biochemistry
4. Cognitive Science
5. Math
6. Psychology
7. EEB

Neuroscience

Hi Rebecca,

I approve the use of all the highlighted NROS courses and the NSCS 200 course for the BS in Science and Law.

Konrad

On Sep 30, 2024, at 7:11 AM, Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu> wrote:

We plan to first gain approval for the online campus and add the main campus later. We are intentionally limiting courses to those offered online as it frustrates students in the online campus to have access only to a limited set of courses. For the BS in Science, with a somewhat similar structure, we allow substitutions for students from main campus.

We actually expect a fairly large number of science majors to add the BS in Science Law. We plan to allow a generous double dipping policy to make this easier for students. As such, we expect that many of the main campus students in the neuroscience emphasis might already have taken many of the requirements on the science side. We would not think of those students as necessarily adding to the teaching load in neuroscience.

Please let me know if you have additional questions.

From: Zinsmaier, Konrad E - (kez4) <kez4@arizona.edu>

Date: Sunday, September 29, 2024 at 4:00 PM

To: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>

Subject: Re: BS Science Law: Course use request

Hi Rebecca,

Are these main or online campus courses?

Konrad

From: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>

Date: Sunday, September 29, 2024 at 3:17 PM

To: Zinsmaier, Konrad E - (kez4) <kez4@arizona.edu>

Cc: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>

Subject: BS Science Law: Course use request

Dear Konrad,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following NSCS courses from your department. We expect the program to go live in Fall 2025 and to add approximately 10-15 new students per year to your course in the core category, and a handful students per year to your courses in the emphases below. We expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

Core Courses

Additional Science Requirement (7 units). Complete 2 of the following:

-NSCS 200 (3) Fundamentals of Neuroscience & Cognitive Science

-PSY 101 (4) Introduction to Psychology

-CHEM 241A (3) Organic Chemistry Lecture I

-CHEM 241B (3) Organic Chemistry Lecture 2

Upper division science electives (5 courses, 15 units)

Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.

Neuroscience

*NROS 307 (3) Cellular Neurophysiology

*NROS 310 (3) Molecular and Cellular Biology of Neurons

*NROS 418 (3) Fundamental Principles of systems Neuroscience

-NROS 308 (3) Methods in Neuroscience

-NROS 330 (3) Principles of Neuroanatomy: Cells to Systems

-NROS 430 (3) Neurogenetics

-NROS 440 (3) How to build a Brain: Mechanisms of Neural Development

(*recommended courses)

Cognitive Science

- CGSC320 (3) Issues and Themes in Cognitive Science
 - CGSC 344 (3) Modeling the Mind: Computational Models of Cognition
 - CGSC 310 (3) Multisensory Perception
 - PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain (note: students may count this course toward one grouping only)
- Hi Rebecca and Brittany,

Hydrology and Atmospheric Sciences

~~~~~

Thanks for reaching out and discussing this. I think it is really exciting to be part of this BS Science Law degree.

Peter

---

**From:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>

**Date:** Sunday, September 29, 2024 at 3:20 PM

**To:** Troch, Peter A - (patroch) <[patroch@arizona.edu](mailto:patroch@arizona.edu)>

**Cc:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>, Ciancarelli, Brittany L - (bciance) <[bciance@arizona.edu](mailto:bciance@arizona.edu)>

**Subject:** BS Science Law

Dear Peter,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add a handful students per year to your courses in the emphasis below. We expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

I am also copying Brittany Cianciarelli because I worked closely with her to develop this emphasis that we also use in the BS in Science degree that went live in spring 2024. Brittany will be helpful if you have questions pertaining to your courses.

### **Upper division science electives (5 courses, 15 units)**

**Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.**

### Earth Systems and Sustainability

- ATMO 336 (3) Weather, Climate, and Society
- HWRs 349A (3) Principals of Hydrology
- HWRs 349B (3) Principals of Hydrology Lab
- ATMO 436A (3) Weather Fundamentals
- ENVS 305 (3) Pollution Science
- ENVS 462 (3) Environmental Soil and Water Chemistry
- ENVS 425 (3) Environmental Microbiology
- ENVS 420 (3) Environmental Physics
- RNR 384 (3) Natural Resources Management Practices
- WFSC 385 (3) Zoo and Aquarium Conservation
- RNR/GEOG/GIST 417 (3) GIS for Natural and Social Sciences
- RNR/GEOG/GIST 422 (3) Resource Mapping using Aerial systems
- RNR/LAR 448 (3) Conservation Planning and Wildland Recreation

### Chemistry and Biochemistry

~~~~~

Hi Rebecca, you have my permission to add those courses.

Best,
Craig

Craig A. Aspinwall, Ph.D
Professor and Department Head
Department of Chemistry and Biochemistry
University of Arizona

Sent from a mobile device, thus subject to typos, autocorrect and other unfortunate errors.

From: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>
Sent: Sunday, September 29, 2024 3:10 PM
To: Aspinwall, Craig A - (aspinwal) <aspinwal@arizona.edu>
Cc: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>
Subject: BS Science Law: Course use request

Dear Craig,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add approximately 15 new students per year to CHEM 141 & 145 in the core category (we expect a smaller

number will take CHEM 142 & 146), and a handful of students per year to your courses in the emphasis below. We expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

Core Science Requirement. (16 units) Complete 4 of the following (complete at least one course from each of biology, chemistry, and physics):

- MCB 181 R/L (4) Introductory Biology I with lab
- ECOL 182 R/L (4) Introductory Biology 2 with lab
- CHEM 141 & 145 (4) General Chemistry 1: Quantitative Approach with lab
- CHEM 142 & 146 (4) General Chemistry 2: Quantitative Approach with lab

Upper division science electives (5 courses, 15 units)

Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.

Biochemistry

- BIOC 384 (3) Foundations in Biochemistry
- BIOC 385 (3) Metabolic Biochemistry
- NSC 308 (3) Nutrition and Metabolism
- NSC 408 (3) Nutritional Biology

Cognitive Science

~~~~~  
Absolutely. This sounds like such a cool degree partnership! I actually give a little lecture on relevance of cognitive neuroscience for the law for NSCS200 and PSY300 and students are especially interested in this topic.

All the best,  
Jess

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Jessica Andrews-Hanna, PhD (she, her, hers)  
Associate Professor, Department of Psychology; Cognitive Science Program  
Director, Cognitive Science Program  
Director, Diversity, Equity and Inclusion, Department of Psychology  
University of Arizona (Tohono O'odham & Pascua Yaqui Lands)  
[Neuroscience of Emotion & Thought \(NET\) Lab](#)

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**From:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>  
**Sent:** Sunday, September 29, 2024 3:24 PM  
**To:** Andrews-Hanna, Jessica - (jandrewshanna) <[jandrewshanna@arizona.edu](mailto:jandrewshanna@arizona.edu)>  
**Cc:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>  
**Subject:** BS Science Law

Dear Jess,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add a handful students per year to your courses in the emphasis below. We expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses. p.s. I reached out to Konrad and Arne already about usage of the other two courses below.

**Upper division science electives (5 courses, 15 units)**

**Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.**

**Cognitive Science**

- CGSC320 (3) Issues and Themes in Cognitive Science
- CGSC 344 (3) Modeling the Mind: Computational Models of Cognition
- CGSC 310 (3) Multisensory Perception
- PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain (note: students may count this course toward one grouping only)

**Math**

~~~~~  
Hi Rebecca,

Sure. That sounds fine.
One thing.

Basic Statistics is 163
Intro to Stats and Biostats is 263

Best,

Bob

From: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>

Sent: Sunday, September 29, 2024 2:32 PM

To: Sims, Robert J - (rsims) <rsims@arizona.edu>

Cc: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>

Subject: BS Science Law: Course use request

Dear Bob,

I am writing to request that the new joint degree program proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the degree program to add approximately 20 new students per year to this course.

- Math 113 (3) Elements of Calculus
- Math 122A (1) Functions of Calculus & Math 122B (4) First semester Calculus
- Math 125 (3) Calculus
- Math 263 (3) Basic Statistics or Intro to Statistics and Biostatistics

Physics

~~~~~  
Of course. :)

Nice weekend!

--Shufang

On Sep 29, 2024, at 3:13 PM, Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)> wrote:

Dear Shufang,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add approximately 15 new students per year to PHYS 141 in the core category (we expect a smaller number will take PHYS 241). I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

**Core Science Requirement. (16 units) Complete 4 of the following (complete at least one course from each of biology, chemistry, and physics):**

- MCB 181 R/L (4) Introductory Biology I with lab
- ECOL 182 R/L (4) Introductory Biology 2 with lab

-CHEM 141 & 145 (4) General Chemistry 1: Quantitative Approach with lab  
-CHEM 142 & 146 (4) General Chemistry 2: Quantitative Approach with lab  
-PHYS 102 & 181 (4) Introductory Physics 1 with lab  
-PHYS 103 & 182 (4) Introductory Physics 2 with lab

Or

-PHYS 141 (4) Introductory Mechanics  
-PHYS 241 (4) Introductory Electricity and Magnetism  
-PHYS 242 (4) Introductory Relativity and Quantum Mechanics

## Psychology

~~~~~  
Hello Rebecca,

Provided that COS continues to support our teaching budget and allows for increases if the BS Science Law program results in increases in our enrollment, I approve of this program,

Best
Arne

Arne Ekstrom, Ph.D.
Professor of Psychology
Interim Chair of Psychology
<https://sites.arizona.edu/hscl-lab/>

From: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>
Date: Wednesday, October 2, 2024 at 6:07 AM
To: Ekstrom, Arne David - (adekstrom) <adekstrom@arizona.edu>
Cc: Gomez, Rebecca L - (rgomez) <rgomez@arizona.edu>
Subject: FW: BS Science Law: Course use request (second try)
Dear Arne,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add approximately 15 new students per year to your course in the core and additional requirements categories, and a handful students per year to your courses in the emphasis below. We expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

Core Courses

Statistics Requirement. (3 units) Complete 1 of the following:

-Math 263 (3) Basic Statistics or Intro to Statistics and Biostatistics

- BASV 314 (3) Mathematics for Applied Sciences
- PSY 230 (3) Psychological Measurement and Statistics

Additional Science Requirement (7 units). Complete 2 of the following:

- NSCS 200 (3) Fundamentals of Neuroscience & Cognitive Science
- PSY 101 (4) Introduction to Psychology
- CHEM 241A (3) Organic Chemistry Lecture I
- CHEM 241B (3) Organic Chemistry Lecture 2

Upper division science electives (5 courses, 15 units)

Students take at least 3 courses in one area and the remaining 2 courses from any of those listed below for a total of 5 upper division electives. Example areas are listed below. An area may also be a grouping of upper division classes from a single STEM department.

Psychology

- PSY 300 (3) Cognitive Neuroscience: A Guide to Mind and Brain
- PSY 340 (3) Introduction to Cognitive Development
- PSY 352 (3) Personality
- PSY 360 (3) Social Psychology
- PSY 381 (3) Abnormal Psychology
- PSY 383 (3) Health Psychology
- PSY 324 (3) Fundamentals of Aging
- PSY 412 (3) Animal Learning
- PSY 480 (3) Forensic Psychology

EEB

~~~~~  
**From:** Worobey, Michael - (worobey) <[worobey@arizona.edu](mailto:worobey@arizona.edu)>

**Date:** Monday, December 9, 2024 at 2:10 PM

**To:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>

**Cc:** Garziona, Carmala N - (garziona) <[garziona@arizona.edu](mailto:garziona@arizona.edu)>, Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>

**Subject:** Re: EEB: BS Science Law: Course use request

Oh, absolutely I support and approve ECOL 182 R/L for this degree for AZ Online. It would be great if we could hold off on the main campus until the budget issues are able to be addressed. Thanks for this! That's a huge relief.

Best,

Mike

**From:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>

**Date:** Sunday, December 8, 2024 at 4:23 PM

**To:** Worobey, Michael - (worobey) <[worobey@arizona.edu](mailto:worobey@arizona.edu)>

**Cc:** Gomez, Rebecca L - (rgomez) <[rgomez@arizona.edu](mailto:rgomez@arizona.edu)>

**Subject:** EEB: BS Science Law: Course use request

Dear Mike,

I am writing to request that the new joint degree program BS Science Law proposed by the college of science and the college of law have permission to use the following courses from your department. We expect the program to go live in Fall 2025 and to add approximately 15 new students per year to your course in the core category, and a handful of students per year to your courses in the emphases below as we expect to recruit 50 new students/year and students select from among 6 emphases in the major. I am attaching a draft of the degree structure for your review. Please let me know if we have your permission to use these courses.

**Core Science Requirement. (16 units) Complete 4 of the following (complete at least one course from each of biology, chemistry, and physics):**

- MCB 181 R/L (4) Introductory Biology I with lab
- ECOL 182 R/L (4) Introductory Biology 2 with lab



## COURSE USE/COLLABORATION/CONCERN FORM

Please use this form to notify other colleges that your proposed new program intends to use course(s) under their ownership; has identified potential avenues for interdisciplinary collaboration; and/or wants to hear their concerns about the creation of this program.

*Note: Requesting college should provide this request to leadership in unit who owns courses. Responding unit should respond within 10 business days from receipt. Lack of response after the 10 business days is presumed approval.*

### FOR REQUESTING COLLEGE:

- I. **Initiating College:** college of science and college of law
- II. **Representative(s) making the request:** Rebecca Gomez and Keith Swisher
- III. **Planned proposed program:** BS Science Law
- IV. **Planned program start date:** August 2025
- V. **Courses planned to be included, belonging to college / departments:** Note: These courses will be offered as part of an emphasis on earth systems and sustainability for which students must take a minimum of 3 courses. We are offering 4 other courses from the college of science in this emphasis. Given that we expect to recruit 50 new students/year and students select from 6 emphases in the major, we expect just a handful of students from the BS in Science Law will take these courses annually.

### FOR REVIEWING COLLEGE:

- |                      |                                                                     |                                                                 |
|----------------------|---------------------------------------------------------------------|-----------------------------------------------------------------|
| 1. ENVS 305          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 2. ENVS 462          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 3. ENVS 425          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 4. ENVS 420          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 5. RNR 384           | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 6. WFSC 385          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 7. RNR/GEOG/GIST 417 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 8. RNR/GEOG/GIST 422 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |
| 9. RNR/LAR 448       | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Conditionally <input type="checkbox"/> : Under what conditions? |

### VI. Parameters of Use (add rows as necessary):

#### Undergraduate/Graduate

| Course # | Units | Description of use (i.e., gen ed, major core, emphasis, elective/selective) |
|----------|-------|-----------------------------------------------------------------------------|
| ENVS 305 | 3     | <i>emphasis</i>                                                             |

## COURSE USE/COLLABORATION/CONCERN FORM

|                   |   |                 |
|-------------------|---|-----------------|
| ENVS 462          | 3 | <i>Emphasis</i> |
| ENVS 425          | 3 | <i>Emphasis</i> |
| ENVS 420          | 3 | <i>Emphasis</i> |
| RNR 384           | 3 | <i>Emphasis</i> |
| WFSC 385          | 3 | <i>Emphasis</i> |
| RNR/GEOG/GIST 417 | 3 | <i>Emphasis</i> |
| RNR/GEOG/GIST 422 | 3 | <i>Emphasis</i> |
| RNR/LAR 448       | 3 | <i>emphasis</i> |

**VII. Expected Yearly Enrollment (add rows as necessary):**

| Course #             | Units | Exp Enrollment for<br>Yr 1 | Exp Enrollment for<br>Yr 2 | Exp Enrollment for<br>Yr 3 |
|----------------------|-------|----------------------------|----------------------------|----------------------------|
| ENVS 305             | 3     | 0                          | 2                          | 4                          |
| ENVS 462             | 3     | 0                          | 2                          | 4                          |
| ENVS 425             | 3     | 0                          | 2                          | 4                          |
| ENVS 420             | 3     | 0                          | 2                          | 4                          |
| RNR 384              | 3     | 0                          | 2                          | 4                          |
| WFSC 385             | 3     | 0                          | 2                          | 4                          |
| RNR/GEOG/GIST<br>417 | 3     | 0                          | 2                          | 4                          |
| RNR/GEOG/GIST 422    | 3     | 0                          | 2                          | 4                          |
| RNR/LAR 448          | 3     | 0                          | 2                          | 4                          |

**VIII. Opportunities for Interdisciplinary Collaboration (leave blank if none):** The emphasis in earth systems and sustainability is a collaboration between the COS, COL, and CALES insofar as students can take any of the courses listed in the emphasis.

**IX. Concerns about Proposed Program (leave blank if none):**

**X. Representative(s) reviewing request:** James E. Hunt Interim Associate Dean

Signature: \_\_\_\_\_



Date: \_\_\_\_\_10/9/2024



THE UNIVERSITY OF ARIZONA

College of Architecture, Planning  
& Landscape Architecture

SCHOOL OF LANDSCAPE  
ARCHITECTURE AND  
PLANNING

Architecture East – 75A  
1040 N Olive Rd.  
PO Box 210075  
Tucson, AZ 85712-0075

Ofc: 520-621-1004  
Fax: 520-621-8700

[capla.arizona.edu](http://capla.arizona.edu)

November 25, 2024

*Delivered electronically*

**Re: Letter of Support for New BS in Science Law**

Dear Curricular Affairs:

We approve of the use of Red/Law 409: Due Diligence and Entitlements and Red/Law 460: Land Use Planning as elective options in the curriculum of the proposed College of Science and College of Law BS in Science Law major and will work to ensure that seats will be available for those students. Additionally, we support the creation of this degree program.

Please let me know if you could use any additional information.

Sincerely,

Lauri Johnson  
Director, School of Landscape Architecture and Planning  
Professor of Landscape Architecture

