Applied Biological Sciences (Natural Resource Ecology), BS

Do you have a passion for wildlife, for exploring nature, and for seeing how our world's natural resources and lands can be managed sustainably? Gain an excellent foundation in science that enables you to build expertise for a career that connects with conservation and restoration of biodiversity and habitats.

Program Description

The concentration program in natural resource ecology in the BS in applied biological sciences offers students the broad base of knowledge they need to sustainably manage natural resources in a variety of ecosystems.

Students learn about fundamental components of natural systems such as soils and water and the plant and wildlife communities they support. Students also learn to measure and assess plant and animal populations through a variety of field techniques and computer tools, including geographic information systems and remote sensing. Knowledge and techniques are applied to case studies in the classroom and laboratory projects.

Students in this program will contextualize knowledge through experience-based learning activities, including:

- case studies
- faculty-guided research and service-learning projects
- field trips
- internships
- laboratories and field experiences

This major is eligible for the Western Undergraduate Exchange program at the following location: Polytechnic campus. Students from Western states who select this major and campus may be eligible for
reduced nonresident tuition at a rate of 150% of Arizona resident tuition plus all applicable fees. Students should click the link for more information and eligibility requirements of the WUE program.

At a Glance

- **College/School:** College of Integrative Sciences and Arts
- **Location:** Polytechnic WUE
- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 251 - Calculus for Life Sciences
- **Math Intensity:** Moderate

Required Courses (Major Map)

2022 - 2023 Major Map
Major Map (Archives)

Concurrent Program Options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Accelerated Program Options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's and master's degree with:

- **Applied Biological Sciences, MS**

Acceptance to the graduate program requires a separate application. During their junior year, eligible students are advised by their academic departments to apply.

Admission Requirements

**General University Admission Requirements:**
All students are required to meet general university admission requirements.
First-year | Transfer | International | Readmission

Change of Major Requirements
A current ASU student has no additional requirements for changing majors.

Students should refer to https://changemajor.apps.asu.edu for information about how to change a major to this program.

**Transfer Options**

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use MyPath2ASU™ to outline a list of recommended courses to take prior to transfer.

ASU has transfer partnerships in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey. Students may learn more about these programs by visiting the admission site: https://admission.asu.edu/transfer/MyPath2ASU.

**Global Opportunities**

**Global Experience**
The natural world is complex and diverse, providing different resources from one biome to the next. Not only are natural resources varied across the globe, so are their uses. Students who study abroad gain a deeper understanding of global resources, how different cultures use the resources, and how best to communicate sustainable use to a diverse audience. https://goglobal.asu.edu/

**Career Opportunities**

Career opportunities include employment with public agencies and private consulting firms and in positions such as:

- environmental consultant
- environmental researcher and educator
- natural resource manager
- park manager
- watershed manager
- wildlife biologist or ecologist

Career examples include but are not limited to those shown in the following list. Advanced degrees or certifications may be required for academic or clinical positions.

<table>
<thead>
<tr>
<th>Career</th>
<th>*Growth</th>
<th>*Median Salary</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Occupation</th>
<th>Growth Rate</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Analyst</td>
<td>5.1%</td>
<td>$64,020</td>
</tr>
<tr>
<td>Environmental Restoration Planner</td>
<td>7.8%</td>
<td>$73,230</td>
</tr>
<tr>
<td>Environmental Sciences Professor</td>
<td>3.7%</td>
<td>$84,740</td>
</tr>
<tr>
<td>Farm Manager</td>
<td>5.1%</td>
<td>$64,020</td>
</tr>
<tr>
<td>Fish and Game Warden</td>
<td>1.2%</td>
<td>$58,040</td>
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<tr>
<td>Fish and Wildlife Biologist</td>
<td>3.9%</td>
<td>$66,350</td>
</tr>
<tr>
<td>Park Ranger</td>
<td>5.1%</td>
<td>$64,020</td>
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<tr>
<td>Soil Scientist</td>
<td>6.8%</td>
<td>$66,120</td>
</tr>
</tbody>
</table>

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

🌞 **Bright Outlook**   🍃 **Green Occupation**

**Contact Information**

[College of Integrative Sciences and Arts](mailto:CISA@asu.edu) | SANCA 233
CISA@asu.edu | 480-727-1526