SUSTAINABILITY AND THE BUILT ENVIRONMENT | GEODESIGN

The Bachelor of Science in Sustainability and the Built Environment (BSSBE) enables students to explore creative solutions for the planning, design and construction of human structures and settlements.

About this Program

- **College:** Design, Construction and Planning
- **Degree:** Bachelor of Science in Sustainability and the Built Environment
- **Credits for Degree:** 120
- **Specializations:** Interdisciplinary | Geodesign
- **Additional Information**
  - **Contact:** Email
  - **Related Sustainability and the Built Environment Programs**

To graduate with this major, students must complete all university, college, and major requirements.

Whether it is the redesign and rehabilitation of existing structures or innovative new design, students will be provided a theoretical foundation for seeking sustainable solutions to problems in the built environment. The degree program is supported by the globally recognized expertise in sustainability of the faculty in the College of Design, Construction and Planning and from across campus.

Graduates will have excellent opportunities for work in various green industries, for government agencies involved with regulation and management of the built environment and with nonprofit organizations promoting the principles of sustainability. Additionally students will be prepared to enter graduate school in architecture, building construction, historic preservation, interior design, landscape architecture and urban and regional planning.

Transfer students for either specialization must complete the A.A. degree, MAC 1147 or (MAC 1140 and MAC 1114), STA 2023, and ECO 2013 and ECO 2023 with minimum grades of C. Students must also have a 3.0 minimum overall GPA. Refer to the admissions website for transfer admission information, application deadlines and the online application.

Certain highly qualified students may have the option of pursuing a 4+1 or a 4+2 degree in urban and regional planning, landscape architecture or building construction.

Field trips to broaden and expand students’ educational experiences through study of planning, design, construction, and sustainability projects are required and will be paid for by students.

Coursework for the Major

All students, regardless of specialization, are required to take 53 hours of core courses to develop knowledge of the fundamental concepts for sustainability and the built environment.

Students should meet with an advisor as early as possible in their academic careers to choose their specialization and to plan their course of study.

**Core Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCN 1582</td>
<td>International Sustainable Development</td>
<td>3</td>
</tr>
<tr>
<td>IDS 2935</td>
<td>Special Topics (Facets of Sustainability)</td>
<td></td>
</tr>
<tr>
<td>ECO 2023</td>
<td>Principles of Microeconomics</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Macroeconomics</td>
<td>4</td>
</tr>
<tr>
<td>LAA 2330</td>
<td>Site Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STA 2023</td>
<td>Introduction to Statistics 1</td>
<td>3</td>
</tr>
<tr>
<td>DCP 3210</td>
<td>Sustainable Solutions for the Built Environment</td>
<td>3</td>
</tr>
<tr>
<td>DCP 3220</td>
<td>Social and Cultural Sustainability and the Built Environment</td>
<td>3</td>
</tr>
<tr>
<td>DCP 4941</td>
<td>Practicum in Sustainability and the Built Environment</td>
<td>6</td>
</tr>
<tr>
<td>or DCP 4942</td>
<td>Field Experience in Sustainability and the Built Environment</td>
<td></td>
</tr>
<tr>
<td>DCP 4290</td>
<td>Capstone Project in Sustainability and the Built Environment</td>
<td>6</td>
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</tbody>
</table>

Total Credits 38

**Related Sustainability and the Built Environment Programs**

- Sustainability and the Built Environment minor

**Geodesign**

The geodesign specialization is for students interested in the application of geographic information systems in the sustainable design of the built environment.

**Critical Tracking**

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites may be used for transfer students.

**Semester 1**

- Complete BCN 1582 with minimum grade of C+
- Complete DCP 1010, DCP 1003, and LAA 2330 with minimum grades of C
- Complete MAC 1147 or (MAC 1140 and MAC 1114)
- 2.00 UF GPA required

**Semester 2**

- Complete ARC 1701 or ARC 1720 or BCN 3012 or IND 2100 or IND 2130 or LAA 2710 or URP 4000 with minimum grade of C
• Complete ECO 2023 with minimum grade of C
• 2.50 UF GPA required

Semester 3
• Complete DCP 2001 with minimum grade of C
• Complete ECO 2013 with minimum grade of C
• Complete STA 2023
• 2.75 UF GPA required

Semester 4
• Complete DCP 2002 with minimum grade of C
• Complete ENC 3254 with minimum grade of C
• 3.0 UF GPA required

Semester 5
• Complete DCP 3210 with minimum grades of C+
• Complete one: AEB 4126, REL 2104, or REL 3492 with minimum grade of C
• Complete GEO 3162C with minimum grade of C
• 3.0 UF GPA required

Model Semester Plan
To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student’s academic record and scheduling availability of courses. Prerequisites still apply.

Students will not be required to take more credit hours than required in semesters with less than 3 credit hours in electives. DCP advisors have a list of 1 and 2 credit hour electives in which students may enroll.

Course Title Credits
Semester One
BCN 1582 International Sustainable Development (Critical Tracking; Gen Ed Social and Behavioral Sciences and International) 3
DCP 1003 Creating Our Built Environment 1
DCP 1010 Geodesign Colloquium 1
IUF 1000 What is the Good Life (Gen Ed Humanities) 3
LAA 2330 Site Analysis (Critical Tracking) 3
Select one: 3-4
MAC 1147 Precalculus Algebra and Trigonometry (Critical Tracking; State Core Gen Ed Mathematics) 3
MAC 1140 Precalculus Algebra (Critical Tracking; Gen Ed Mathematics) 3
Semester Two
Select one history of a built environment course: 3
ARC 1701 Architectural History 1 (Critical Tracking; Gen Ed Humanities and International) 3
ARC 1720 Survey of Architecture History (Critical Tracking; Gen Ed Humanities and International)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BCN 3012</td>
<td>History of Construction (Critical Tracking; Gen Ed Humanities and International)</td>
<td></td>
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<tr>
<td>IND 2100</td>
<td>History of Interior Design 1 (Critical Tracking; Gen Ed Humanities)</td>
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<tr>
<td>IND 2130</td>
<td>History of Interior Design 2 (Critical Tracking; Gen Ed Humanities)</td>
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<tr>
<td>LAA 2710</td>
<td>History of Landscape Architecture (Critical Tracking; Gen Ed Humanities and International)</td>
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<tr>
<td>URP 4000</td>
<td>Preview of Urban and Regional Planning (Critical Tracking; Gen Ed Humanities)</td>
<td></td>
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<tr>
<td>DCP 1241</td>
<td>Introduction to Spatial Thinking</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2023</td>
<td>Principles of Microeconomics (Critical Tracking; Gen Ed Social and Behavioral Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>ENC 1101</td>
<td>Expository and Argumentative Writing (Gen Ed Composition)</td>
<td>3</td>
</tr>
<tr>
<td>Elective (lower-division)</td>
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<td>2</td>
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Semester Three
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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCP 2001</td>
<td>Introduction to GIS I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Macroeconomics (Critical Tracking; State Core Gen Ed Social and Behavioral Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>GEO 2200</td>
<td>Physical Geography (Gen Ed Physical Sciences)</td>
<td>3</td>
</tr>
<tr>
<td>STA 2023</td>
<td>Introduction to Statistics 1 (Critical Tracking; Gen Ed Mathematics)</td>
<td>3</td>
</tr>
<tr>
<td>Elective (1000/2000 level)</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Semester Four
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DCP 2002</td>
<td>Introduction to GIS II</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3254</td>
<td>Professional Writing in the Discipline (State Core Gen Ed Composition)</td>
<td>3</td>
</tr>
<tr>
<td>IDS 4930</td>
<td>Special Topics in Interdisciplinary Studies (Gen Ed Physical Science)</td>
<td>3</td>
</tr>
<tr>
<td>State Core Gen Ed Biological or Physical Sciences</td>
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<td>3</td>
</tr>
<tr>
<td>State Core Gen Ed Humanities</td>
<td></td>
<td>3</td>
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</tbody>
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Semester Five
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCP 3210</td>
<td>Sustainable Solutions for the Built Environment (Critical Tracking)</td>
<td>3</td>
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<tr>
<td>AEB 4126</td>
<td>Agricultural and Natural Resource Ethics (Critical Tracking)</td>
<td></td>
</tr>
<tr>
<td>REL 2104</td>
<td>Environmental Ethics (Critical Tracking)</td>
<td></td>
</tr>
<tr>
<td>REL 3492</td>
<td>Religion Ethics and Nature (Critical Tracking)</td>
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<tr>
<td>GEO 3162C</td>
<td>Introduction to Quantitative Analysis for Geographers</td>
<td>4</td>
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<tr>
<td>State Core one resource economics course: 3</td>
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<tr>
<td>AEB 2451</td>
<td>Economics of Resource Use (Critical Tracking)</td>
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<tr>
<td>AEB 3450</td>
<td>Introduction to Natural Resource and Environmental Economics (Critical Tracking)</td>
<td></td>
</tr>
<tr>
<td>AEB 4283</td>
<td>International Development Policy (Critical Tracking)</td>
<td></td>
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<tr>
<td>FOR 4664</td>
<td>Sustainable Ecotourism Development (Critical Tracking)</td>
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<tr>
<td>GEO 2500</td>
<td>Global and Regional Economies (Critical Tracking)</td>
<td></td>
</tr>
<tr>
<td>URP 4XXX Automation for Geospatial Modeling and Analysis</td>
<td></td>
<td>3</td>
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</table>
**Semester Six**

DCP 3220  Social and Cultural Sustainability and the Built Environment  3

Select one ecology for the built environment course:  3

EES 4316  Industrial Ecology
FOR 4090C  Urban Forestry
SWS 2007  The World of Water
SWS 2008  Land and Life
WIS 4203C  Landscape Ecology and Conservation
WIS 4427C  Wildlife Habitat Management
WIS 4523  Human Dimensions of Natural Resource Conservation

URP 4230  3D Modeling, Visualization, and Simulation  3

Approved electives  6

**Semester Seven**

DCP 3200  Methods of Inquiry for Sustainability and the Built Environment  3

DCP 4945  Geodesign Practicum I  6

Approved elective  3

Elective (3000/4000 level)  3

**Semester Eight**

DCP 4290  Capstone Project in Sustainability and the Built Environment  6

Approved electives  6

Elective (3000/4000 level)  3

Credits  15

Total Credits  120

**Approved Electives**

Any 3000/4000-level course in the College of Design, Construction and Planning not otherwise required.

Additional courses that also fulfill this requirement:

- AEB 2451  Economics of Resource Use  3
- AEB 4126  Agricultural and Natural Resource Ethics  3
- AEB 4283  International Development Policy  3
- AGG 3501  Environment, Food and Society  3
- ANT 4403  Environment and Cultural Behavior  3
- AOM 2520  Global Sustainable Energy: Past, Present and Future  3
- ARC 2304  Architectural Design 4  5
- EES 4050  Environmental Planning and Design  3
- EES 4316  Industrial Ecology  3
- FNR 4660  Natural Resource Policy and Economics  3
- FOR 3004  Forests, Conservation and People  3
- FOR 3153C  Forest Ecology  3
- FOR 4060  Global Forests  3
- FOR 4090C  Urban Forestry  3
- GEO 2500  Global and Regional Economies  3
- GEO 3372  Conservation of Resources  3
- IND 2214  Introduction to Architectural Interiors  4
- LAA 2360C  Principles of Landscape Architecture  5
- REL 3492  Religion Ethics and Nature  3
- SWS 2007  The World of Water  3
- SWS 2008  Land and Life  3
- WIS 4203C  Landscape Ecology and Conservation  3
- WIS 4427C  Wildlife Habitat Management  3

**Wisconsin Courses**

WIS 4523  Human Dimensions of Natural Resource Conservation  3

**Academic Learning Compact**

The Bachelor of Science in Sustainability and the Built Environment requires students to demonstrate an understanding of the relationship between the goals of sustainability and the activities of the built environment disciplines, including architecture, building construction, historic preservation, interior design, landscape architecture and urban and regional planning.

**Before Graduating Students Must**

- Complete a capstone or independent research project, present your results to a committee of the program’s faculty and receive acceptable assessment.
- Complete requirements for the baccalaureate degree, as determined by faculty.

**Students in the Major Will Learn to**

**Student Learning Outcomes (SLOs)**

**Content**

1. Explain sustainability principles.
2. Integrate knowledge and principles from sustainability-related disciplines.
3. Describe the role of the built environment in sustainability.
4. Combine information from multiple sources to solve problems.

**Critical Thinking**

5. Frame sustainable problems and potential solutions within a global context.
6. Collect and analyze data to solve problems.
7. Produce sustainable solutions for problems of the built environment.
8. Integrate multiple disciplinary, cultural and stakeholder perspectives for sustainable problem solving.

**Communication**

9. Produce an effective oral presentation.
10. Produce effective written communications.
11. Present a variety of visual techniques to enhance the communication of ideas and solutions.
12. Solve a built environment sustainability problem in a multidisciplinary team.

**Curriculum Map**

I = Introduced; R = Reinforced; A = Assessed
<table>
<thead>
<tr>
<th>Approc Elective</th>
<th>R</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology for the Built Environment (one course)</td>
<td>I, R</td>
<td></td>
</tr>
<tr>
<td>Energy and/or Climate Change (one course)</td>
<td>I, R</td>
<td></td>
</tr>
<tr>
<td>Ethics and Environmental Justice (one course)</td>
<td>I, R</td>
<td></td>
</tr>
<tr>
<td>Resource Economics (one course)</td>
<td>I, R</td>
<td></td>
</tr>
</tbody>
</table>

1 Student chooses from courses listed in semesters 5-7 of the major’s semester plan.

**Assessment Types**
- Capstone evaluation
- Final project evaluation