

I. **GENERAL EDUCATION** 44
(MAT 1025 taken for the major fulfills Quantitative Literacy. TEC 2029 partially fulfills Local to Global: Sustainability & Global Change. Or TEC 2601 partially fulfills Local to Global: Global Resources. Science requirement for major completes science sequence for Gen Ed.)

II. **MAJOR REQUIREMENTS** 88 - 92

An overall 2.0 GPA is required in the major. 18 semester hours must be completed at Appalachian.

Junior Writing in the Discipline (WID) _____ & Senior Capstone Experience (CAP) _____ must be met.

*MAT 1025 _____ (4) Algebra and Elementary Functions (or higher) (Prerequisite: must pass the math placement or MAT 0010)

*BIO 1201 _____, BIO 1202 _____ & BIO 1203 _____ or CHE 1101 _____ / 1110 _____ & CHE 1102 _____ / 1120 _____ or PHY 1103 _____ & PHY 1104 _____ (8)

Introductory Built Environment and Sustainable Technology Coursework (28 sh)

The following are required courses:

- TEC 1708 _____ (3) Construction Technology & Building Codes
- TEC 1728 _____ (3) Architectural Graphics & Computer Modeling (Pre/Coreq. TEC 1708)
- *TEC 2029 _____ (3) Society & Technology (Gen Ed: Local to Global Perspective; Sustainability & Global Change)
- *TEC 2601 _____ (3) Energy Issues & Technology (Gen Ed: Local to Global Perspective)
- TEC 2718 _____ (3) Building Mechanical Systems
- IND 2110 _____ (3) Intro to Fabrication
- TEC 3638 _____ (3) Foundations of Appropriate Technology (WID) (Prerequisites: ENG 2001 or its equivalent; TEC 2029 and TEC 2601 or permission of the instructor)
- TEC 3807 _____ (1) Construction Safety

And select two from the following:

- TEC 1023 _____ (3) Electronics
- IND 3004 _____ (3) Welding
- GRA 1022 _____ (3) Elect Doc Design I
- PHO 1022 _____ (3) Photographic Imaging I
- IND 2012 _____ (3) Product Design

Major requirements that may count in Gen Ed:	
MAT 1025 (4)	Quantitative Literacy
SCIENCE (8)	Science Requirement
TEC 2029 (3)	L to G Perspective: Sustainability
S D 2400 (3)	L to G Perspective: Sustainability
PHL 2015 (3)	L to G Perspective: Sustainability
TEC 2601 (3)	L to G Perspective: Global Resources
ECO 2620 (3)	L to G Perspective: Global Resources
Total Major Hrs: 89 - 93	
Gen Ed – up to: - 21	
Net Major Hrs: 68 - 72	

Interdisciplinary Coursework (12 - 14sh)

Choose 4 courses from the list of approved Interdisciplinary electives. These courses are from the Departments of Sustainable Development, Planning, Physics, Design, and Philosophy, the College of Business, and the Environmental Science program. See the Sustainable Technology Program Coordinator for the current list.

Recommended courses include:

- BIO 3312 _____ (3) Environmental Studies
- * ECO 2620 _____ (3) Environmental & Resource Economics (Gen Ed: Local to Global Perspective: Global Resources)
- GHY 2812 _____ (3) Geospatial Data & Technology
- GHY 3820 _____ (3) GIS for Environmental & Social Sciences
- MGT 3010 _____ (3) Survey of Management
- * PHL 2015 _____ (3) Environmental Ethics (Gen Ed: Local to Global Perspective; Sustainability & Global Change)
- PHY 1830 _____ (3) The Physical Principles of Energy & Sustainability (Gen Ed: Local to Global; Sustainability & Global Change)
- PHY 3140 _____ (3) Environmental Physics (Prerequisite: PHY 1104 or PHY 1151)
- PLN 2410 _____ (3) Town, City and Regional Planning
- * S D 2400 _____ (3) Principles of Sustainable Development (Gen Ed: Local to Global Perspective; Sustainability & Global Change)
- S D 3100 _____ (3) Principles of Agroecology
- S D 4100 _____ (4) Agroecology Practices, Systems & Philosophies (Prerequisite: S D 3100 or permission of the instructor)

Technical Specialization (27 sh)

Select 15 sh from the following:

- TEC 3604 _____ (3) Sustainable Transportation (Prerequisites: TEC 2601 & TEC 3638, or permission of the instructor)
- TEC 3605 _____ (3) Sustainable Resource Management (Prerequisites: TEC 2029, or permission of the instructor)
- TEC 3606 _____ (3) Sustainable Water and Wastewater Technology (Prerequisites: TEC 2029, or permission of the instructor)
- TEC 3748 _____ (3) Building Science (Prerequisites: TEC 1708 and 2718 & MAT 1020 or higher, or permission of the instructor)
- TEC 4618 _____ (3) Sustainable Building Design & Construction (Prerequisite: TEC 1708 or permission of the instructor)
- TEC 4700 _____ (3) Biofuels Technology (Prerequisites: TEC 2601 and TEC 3638 or permission of the instructor)

The following are required courses:

- TEC 4607 _____ (3) Wind and Hydro Power Technology (Prerequisite: TEC 1708, TEC 1728, TEC 2029, TEC 2601, TEC 2718, & TEC 3638 or permission of the instructor)
- TEC 4608 _____ (3) Photovoltaic System Design & Construction (Prerequisite: TEC 1708, TEC 1728, TEC 2029, TEC 2601, TEC 2718, & TEC 3638 or permission of the instructor)
- TEC 4628 _____ (3) Solar Thermal Energy Technology (Prerequisite: TEC 1708, TEC 1728, TEC 2029, TEC 2601, TEC 2718, & TEC 3638 or permission of the instructor)
- TEC 4711 _____ (3) Computer Modeling of Renewable Energy Systems (Prerequisites: TEC 2601 and TEC 3638 or permission of the instructor)

Capstone (3 sh)

- TEC 4638 _____ (3) Contemporary Problems in Appropriate Technology (CAP) (“C” minimum required) (Prerequisite: TEC 4608 or permission of the instructor)
- OR
- TEC 4900 _____ (3) Internship (CAP)

Technical Electives (7 -9 sh)

Any TEC courses, study abroad experience, instructional assistantships or Interdisciplinary courses listed above not already used elsewhere in the major. See the Sustainable Technology Program Coordinator for the current list of approved Technical Electives.

III. **MINOR NOT REQUIRED**

IV. **FREE ELECTIVES** (to total a minimum of 123 sh for this major) 6 - 10
2 sh of free electives outside the major discipline are required. 122