

**I. GENERAL EDUCATION** ..... 44  
(MAT 1020 taken for the major fulfills Quantitative Literacy. Science sequence required for major fulfills Science Inquiry. Up to 15 hours of required/optional courses in the major count in Gen Ed as noted on this POS.)

**II. MAJOR REQUIREMENTS** ..... 89 - 93  
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.

**General Education courses also "required" for the major**

MAT 1020 \_\_\_\_ (4) College Algebra with Applications (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 Technology & Environmental Design Coursework (28 sh)**

IND 2110 \_\_\_\_ (3) Introduction to Fabrication  
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: ILE: Sustainability and Global Resources and Social Science designation)  
TEC 2601 \_\_\_\_ (3) Energy Issues & Technology (Gen Ed: Liberal Studies Experience)  
TEC 2718 \_\_\_\_ (3) Building Mechanical Systems  
TEC 3807 \_\_\_\_ (1) Construction Safety  
TEC 3638 \_\_\_\_ (3) Foundations of Sustainable Technology (WID) (Prerequisites: RC 2001 or its equivalent; TEC 2029 and TEC 2601 or permission of the instructor)

**And select two courses from the following:**

GRA 1022 \_\_\_\_ (3) Electronic Document Design I  
IND 2012 \_\_\_\_ (3) Product Design (Gen Ed: Liberal Studies Experience and Fine Arts designation)  
IND 3004 \_\_\_\_ (3) Welding (Prerequisite: IND 2004)  
TEC 1023 \_\_\_\_ (3) Introduction to Electronics (Prerequisite: passing the math placement test or completion of MAT 0010)  
PHO 1022 \_\_\_\_ (3) Photographic Imaging I (Prerequisite: passing the math placement test or completion of MAT 0010)

**Interdisciplinary Coursework (12 - 14sh from any 4 courses. See the Sustainable Technology Program Coordinator for complete list)**

Recommended courses include:

BIO 3312 \_\_\_\_ (3) Environmental Studies  
ECO 2620 \_\_\_\_ (3) Environmental & Resource Economics (Gen Ed: LSE; Social Science Designation)  
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: ILE: Sustainability and Global Resources)  
PHY 1830 \_\_\_\_ (3) The Physical Principles of Energy & Sustainability  
(Gen Ed: ILE: Sustainability & Global Resources)  
PHY 3140 \_\_\_\_ (3) Environmental Physics (Prerequisite: PHY 1104 or PHY 1151)  
PLN 2410 \_\_\_\_ (3) Town, City and Regional Planning (Liberal Studies Experience and Social Science Designation)  
S D 2400 \_\_\_\_ (3) Principles of Sustainable Development  
(ILE: Sustainability and Global Resources)  
S D 3100 \_\_\_\_ (3) Principles of Agroecology  
S D 4100 \_\_\_\_ (4) Agroecology Practices, Systems & Philosophies  
(Prerequisite: S D 3100)

Major requirements that may count in Gen Ed:	
MAT 1020 (4)	Quantitative Literacy
SCIENCE (8)	Science Inquiry
Up to 15 hours of ILE and LSE courses chosen from:	
ECO 2620 (3)	LSE
IND 2012 (3)	LSE; Fine Arts Designation
PLN 2410 (3)	LSE; ssd
TEC 2601 (3)	LSE
PHL 2015 (3)	ILE: Sustainability
S D 2400 (3)	ILE: Sustainability
TEC 2029 (3)	ILE: Sustainability; Social Science Designation
PHY 1830 (3)	ILE: Sustainability
Total Major Hrs: 89 - 93	
Gen Ed - up to: - 27	
Net Major Hrs: 62 - 66	

**Technical Specialization (27 sh)**

The following are required courses:

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

And 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 (Prerequisite: TEC 3638 or permission of the instructor)

**Capstone (3 sh)**

TEC 4638 \_\_\_\_ (3) Contemporary Problems in Sustainable Technology (CAP) ("C" minimum required) (Prerequisite: TEC 4608 or permission of instructor)  
OR  
TEC 4900 \_\_\_\_ (3) Internship (CAP)

**Technical Electives (7-9 sh)**

Any TEC courses, study abroad experience, Instructional Assistantships (TEC 3520) or Interdisciplinary courses listed above not already used elsewhere in the major. See the Sustainable Technology Program Coordinator for complete list of approved electives)

\_\_\_\_\_ (3) \_\_\_\_\_ (3) \_\_\_\_\_  
\_\_\_\_\_ (3) \_\_\_\_\_ (3) \_\_\_\_\_

**III. MINOR NOT REQUIRED**

**IV. FREE ELECTIVES (to total a minimum of 122 sh for this major)** ..... 2-16  
2 sh of free electives outside the major discipline are required. 122