

Bachelor of Science (BS)
Degree Code 578 A
Non-Teaching

Program of Study for
Technology & Environmental Design Majors
Appropriate Technology

I. GENERAL EDUCATION **44**
 (MAT 1025 taken for the major fulfills Quantitative Literacy. TEC 2029, S D 2400, & PHL 2015 or PHY 1830 fulfill Local to Global: Sustainability & Global Change for a 9 sh theme, Or TEC 2601 and ECO 2620 fulfill Local to Global: Global Resources for a 6 sh theme). Science requirement for major completes science sequence for Gen Ed).

II. MAJOR REQUIREMENTS **90 - 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 Technology & Environmental Design Coursework (21 sh)

- 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 2120 _____ (3) Materials and Processes I
 GRA 1022 _____ (3) Digital Prepress (Prerequisites: ART 1011, ART 1013 or permission of the instructor)

Interdisciplinary Coursework (12 - 14sh from any 4 courses)

- ANT/SD 4570 _____ (3) Sustainable Development in the Modern World System
 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)
 _____ (3) Other courses in Sustainability, geography & planning, business or environmental topics approved by an advisor

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:	90 - 92	
Gen Ed - up to:	- 21	
Net Major Hrs:	69 - 71	

Technical Specialization (30 sh)

The following are required courses:

- 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 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)

And select 18 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 2601 and TEC 3638 or permission of the instructor)
 TEC 4711 _____ (3) Computer Modeling of Renewable Energy Systems (Prerequisite: 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)

Electives (12 sh)

Any TEC courses, study abroad experience, or Interdisciplinary courses listed above not already used elsewhere in the major
 _____ (3) _____ (3)
 _____ (3) _____ (3)

III. MINOR NOT REQUIRED

IV. FREE ELECTIVES (to total a minimum of 122 sh for this major) **7 - 9**
 2 sh of free electives outside the major discipline are required. **122**