Bachelor of Science (BS) Program of Study for Technology & Environmental Design Majors
Degree Code 577 * Building Sciences
Concentration 577D Sustainable Building Systems
Non-Teaching

I. GENERAL EDUCATION ........................................................................................................ 44
   (PHY 1103 & 1104 for the major fulfills Science Perspective. MAT 1025 fulfills Quantitative Literacy. TEC 2029, TEC 2601, PHL 2015, ECO 2630 or PHY 1830 may count toward Gen Ed if completing a theme).

II. MAJOR REQUIREMENTS ................................................................................................... 87
   (An overall 2.0 GPA is required in the major. 18 semester hours must be completed at Appalachian. Laptop computers are required).

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

   Foundation Coursework (15 sh) Minimum grade of “C-” in each course is required
   MAT 1025 ____ (4) Algebra & Elementary Functions (or higher) (Prerequisite: pass math placement or MAT 0010)
   TEC 2029 ____ (3) Society & Technology (Gen Ed: Local to Global Perspective)
   PHY 1103 ____ (4) General Physics I (Corequisite: MAT 1025 or equivalent) (Gen Ed: Science Perspective)
   PHY 1104 ____ (4) General Physics II (Corequisite: PHY 1103 or equivalent) (Gen Ed: Science Perspective)

   Introductory Coursework (21 sh) Minimum grade of “C” in each course is required
   TEC 1708 ____ (3) Construction Technology & Building Codes
   TEC 1728 ____ (3) Architectural Graphics & Computer Modeling (Pre/Corequisite: TEC 1708)
   TEC 2601 ____ (3) Energy Issues & Technology (Gen Ed: Local to Global Perspective)
   TEC 2718 ____ (3) Building Mechanical Systems
   TEC 2758 ____ (3) Surveying, Soils and Foundations (Prerequisite: MAT 1025)
   TEC 3038 ____ (3) Commercial Construction Technology (WID) (Prerequisite: MAT 1025, TEC 1708, TEC 2758)
   TEC 3039 ____ (3) Materials Science

   Advanced Coursework (30 sh) Minimum grade of “C” in each course is required
   TEC 3718 ____ (3) Construction Estimating (Prerequisite: MAT 1025 or higher, TEC 1708, 3038, knowledge of word processing & spreadsheets)
   TEC 3728 ____ (3) Architectural Design Studio I (Prerequisites: TEC 1708, 1728 or permission of the instructor)
   TEC 3738 ____ (3) Statics & Strength of Structures (Prerequisite: MAT 1025, PHY 1103, TEC 1708, 1728, 2758, 3039)
   TEC 3748 ____ (3) Building Science (Prerequisite: TEC 1708, 2718, MAT 1025 or higher, or permission of the instructor)
   TEC 4103 ____ (3) Leadership in Technical Settings
   TEC 4618 ____ (3) Sustainable Building Design & Construction (Prerequisite: TEC 1708 or permission of the instructor)
   TEC 4758 ____ (3) Planning and Scheduling (Prerequisite: TEC 1025 or higher, TEC 1708, 2718, 3038, 3718)
   TEC 4788 ____ (3) Integration of Energy and Building Systems (Prerequisite: TEC 3718, 3728, 3748, 4618 or permission of the instructor)
   TEC 4900 ____ (6) Internship (CAP)

   Major Electives (12 sh from the following)
   TEC 3035 ____ (1-3) Architectural Field Study (Prerequisite: TEC 3728 or permission of the instructor)
   TEC 3036 ____ (1-3) Construction Management Field Study (Prerequisite: TEC 3728 or permission of the instructor)
   TEC 3037 ____ (1-3) Sustainable Building Systems Field Study (Prerequisite: TEC 3728 or permission of the instructor)
   TEC 3520 ____ (1-3) Instructional Assistant
   TEC 3638 ____ (3) Foundations of Appropriate Technology (Prerequisites: TEC 2029 and TEC 2601, or permission of the instructor, and ENG 2001 or its equivalent.)
   TEC 3807 ____ (1) Construction Safety
   TEC 4608 ____ (3) Photovoltaic System Design & Construction (Prereq: TEC 1708, TEC 1728, TEC 2029, TEC 2601, TEC 2718, TEC 3638 or permission of the instructor.)
   TEC 4628 ____ (3) Solar Thermal Energy Technology (Prerequisites: TEC 1708, TEC 1728, TEC 2029, TEC 2601, TEC 2718, and TEC 3638 or permission of the instructor.)
   TEC 4711 ____ (3) Computer Modeling of Renewable Energy (Prerequisites: TEC 2601 and TEC 3638 or permission of the instructor.)
   ACC 1050 ____ (3) Survey of Accounting
   LAW 2150 ____ (3) Legal Environment of Business
   PHY 3140 ____ (3) Environmental Physics (Prerequisite: PHY 1104 or 1154)
   ____ ____ (3) Other courses in the Dept. of Tech. & Env. Design related to sustainability or environmental topics approved by the program coordinator

   Interdisciplinary Course (9 sh)
   ECO 2620 ____ (3) Environmental Resource Economics (Gen Ed: Local to Global Persp.)
   PHL 2015 ____ (3) Environmental Ethics (Gen Ed: Local to Global Perspective)
   PHY 1830 ____ (3) Physical Principles of Energy & Sustainability (Gen Ed: Local to Global Persp.)

   Major requirements that may count toward Gen Ed:
   TEC 2029 (4) Quantitative Literacy (fulfills)
   PHY 1103 (4) Science Perspective
   PHY 1104 (4) Science Perspective
   TEC 2029 (3) Local to Global Perspective
   TEC 2601 (3) Local to Global Perspective
   PHL 2015 (3) Local to Global Perspective
   PHY 1830 (3) Local to Global Perspective
   ECO 2620 (3) Local to Global Perspective
   Total Major Hrs: 87
   Gen Ed: up to 21
   Net Major Hrs: 66

III. MINOR NOT REQUIRED – Recommended minors are General Business or Community and Regional Planning

IV. FREE ELECTIVES .................................................................................................................. 2 - 12
   2 sh of free electives outside the major discipline are required.