Bachelor of Science (BS)  Program of Study for
Degree Code 577 *  Dept. of Sustainable Tech & The Built Env
Concentration 577D  Building Sciences
Non-Teaching Sustainable Building Systems

I. GENERAL EDUCATION .................................................. 44
   (PHY 1103 & 1104 for the major fulfills Science Inquiry. MAT 1020 fulfills Quantitative Literacy. TEC 2029, PHL 2015, PHY 1830 may count in Gen Ed: ILE; TEC 2601 and ECO 2620 may count toward Gen Ed: Liberal Studies Experience).

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 1020 __ (4) College Algebra with Applications (or higher) (Prerequisite: pass math placement or MAT 0010)
   TEC 2029 __ (3) Society & Technology (Gen Ed: Integrative Learning Experience: Sustainability & Global Resources; Social Sciences Designation)
   PHY 1103 __ (4) General Physics I (Corequisite: MAT 1020 or MAT 1025 (or equivalent) (Gen Ed: Science Perspective)
   PHY 1104 __ (4) General Physics II (Prerequisite: 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: Liberal Studies Experience)
   TEC 2718 __ (3) Building Mechanical Systems
   TEC 2758 __ (3) Surveying, Soils and Foundations (Prerequisite: MAT 1020)
   TEC 3038 __ (3) Commercial Construction Technology (Prerequisite: MAT 1020, 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 1020 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 1020, PHY 1103, TEC 1708, 1728, 2758, 3039)
   TEC 3748 __ (3) Building Science (WID) (Prerequisite: TEC 1708, 2718, MAT 1020 or higher, or permission of the instructor; RC 2001 or its equivalent)
   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: MAT 1020 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 Sustainable Technology (Prerequisites: TEC 2029 and TEC 2601, or permission of the instructor, and RC 2001 or its equivalent.)
   TEC 3807 __ (1) Construction Safety
   TEC 4608 __ (3) Photovoltaic System Design & Construction (Preq: TEC 1708, TEC 1728, TEC 2601, TEC 2718, TEC 3638 or permission of the instructor.)
   TEC 4628 __ (3) Solar Thermal Energy Technology (Prerequisites: TEC 1708, TEC 1728, TEC 2601, TEC 2718, TEC 3638 or permission of the instructor.)
   TEC 4711 __ (3) Computer Modeling of Renewable Energy (Prerequisites: 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 STBE related to sustainability or environmental topics approved by the program coordinator

   Interdisciplinary Course (9 sh)
   ECO 2620 __ (3) Environmental Resource Economics (Gen Ed: Liberal Studies Experience; SSD)
   PHL 2015 __ (3) Environmental Ethics (Gen Ed: ILE: Sustainability & Global Resources)
   PHY 1830 __ (3) Physical Principles of Energy & Sustainability (Gen Ed: ILE: Sustainability & Global Resources)

   Major requirements that may count toward Gen Ed: MAT 1020 (4) Quantitative Literacy (fulfills)
   PHY 1103 (4) Science Perspective
   TEC 2029 (3) ILE: Sustainability; SSD
   TEC 2601 (3) Liberal Studies Experience
   PHL 2015 (3) ILE: Sustainability
   PHY 1830 (3) ILE: Sustainability
   ECO 2620 (3) Liberal Studies Experience; SSD
   Total Major Hrs: 87
   Gen Ed: up to 22
   Net Major Hrs: 65

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

IV. FREE ELECTIVES ............................................................ 2 - 15
   2 sh of free electives outside the major discipline are required.