Bachelor of Science (BS)  
Degree Code  577 *  
Concentration  577D  
Non-Teaching  

Program of Study for  
Dept. of Sustainable Tech & The Built Env Building Sciences 
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 3036 _____ (4) 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 (Prerequisites: TEC 1708, 1728, TEC 2029, TEC 2601, TEC 2718, 3638 or permission of the instructor.)
   TEC 4628 _____ (3) Solar Thermal Energy Technology (Prerequisites: TEC 1708, 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 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 3029 (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. MIONR 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.