TARLETON STATE UNIVERSITY
120 – Degree Program Review

Date Completed: 1/18/08

Degree Program B.S. in Environmental Engineering | Department Math, Physics & Engineering | College | Science and Technology

A. Review Results

Review of the Course requirements for this program resulted in the following conclusion (check only 1)

_____ This program can be reduced to 120 hours and a Revised Degree Program Proposal has been submitted in the curriculum management system. (Skip section B, but complete section C)

_____ X This program cannot be reduced to 120 hours for academically compelling reasons (complete section B)

B. Academically Compelling Reasons

Review of this degree program found that this program cannot be reduced to 120 hours but can be reduced to ___ 129 ___ hours and a Revised Degree Program Proposal has been submitted in the electronic curriculum system. The following academically compelling reason(s) is/are cited for the inability to reduce the 120 hours.

_____ Teacher Certification Program – revised program submitted to THECB for approval.

_____ X Program Accreditation External Agency: ABET

a brief 1 page narrative must be attached that references specific curriculum requirements for accreditation.

Programs claiming the exception must submit an update during each reaccreditation cycle.

_____ Normative Practice in the Discipline. A brief 1 page report providing list of similar programs at other Texas Institutions and the program hours must be attached. Programs claiming this exception must conduct an annual review of similar programs and submit an update.

C. Committee Review and Approval

Dean, College Curriculum Committee: ____________________________

Chair, University Curriculum Committee: ____________________________

AVPAA, Curriculum and Assessment: ____________________________

Copies to be kept at Academic Department, Dean’s Office and Provost’s Office
ADDENDUM

120 - Hour Program Review

B.S. in Environmental Engineering

Academically Compelling Reasons – PROGRAM ACCREDITATION EXTERNAL AGENCY (ABET)

ABET specifies the following program outcomes for all engineering programs:

Engineering programs must demonstrate that their students attain:

(a) an ability to apply knowledge of mathematics, science, and engineering
(b) an ability to design and conduct experiments, as well as to analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(d) an ability to function on multi-disciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i) a recognition of the need for, and an ability to engage in life-long learning
(j) a knowledge of contemporary issues
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

In addition, an engineering program must demonstrate that its students attain any additional outcomes articulated by the program to foster achievement of its education objectives.

Additionally, the following is the ABET program criteria statement addressing curriculum standards for Environmental Engineering programs:

The program must demonstrate the graduates have: proficiency in mathematics through differential equations, probability and statistics, calculus-based physics, general chemistry, an earth science, e.g., geology, meteorology, soil science, relevant to the program of study, a biological science, e.g., microbiology, aquatic biology, toxicology, relevant to the program of study, and fluid mechanics relevant to the program of study; introductory level knowledge of environmental issues associated with air, land, and water systems and associated environmental health impacts; an ability to conduct laboratory experiments and to critically analyze and interpret data in more than one major environmental engineering focus areas, e.g., air, water, land, environmental health; an ability to perform engineering design by means of design experiences integrated throughout the professional component of the curriculum; proficiency in advanced principles and practice relevant to the program objectives; understanding of concepts of professional practice and the roles and responsibilities of public institutions and private organizations pertaining to environmental engineering.
The only similar Bachelor’s degree program in Environmental Engineering is at SMU. Information is provided below.

ENVIRONMENTAL ENGINEERING
**SMU (B.S. in Environmental Engineering)
http://smu.edu/catalogs/undergrad/engr/ence.asp
129 minimum hours required