Targeted Tasks in Contributing Courses
Overview / Assessment

Instructors: Please complete one form for each highlighted outcome at the end of every semester for each course taught.

Course Name: **Green Architectural Engineering**	Course Number: **EGR353**
Number of students enrolled: **16 students**	Course Date: **Fall 2018**

Targeted outcome: *(e.g. 1 – 7)*
ABET-6: Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions (**LAB's**).

BS ENGINEERING Targeted Tasks Rubric by Engineering Department

Yellow / Highlighted = Graded student works collected in Binders for internal & external-ABET review

H = High Emphasis in Course
M = Medium Emphasis in Course
L = Low or no Emphasis in Course

	Solve Problems	Design	Communication	Ethics & Impacts	Teamwork	Labs	How to learn
2018/19 New ABET Learning Outcomes:	1	2	3	4	5	6	7
Pre-2018/19 ABET Learning Outcomes:	ae	ck	g	fhj	d	bk	i
EGR 191 Introduction to Engineering I	M	M	H	M	M	H	H
EGR 192 Introduction to Engineering II	H	H	M	H	H	L	H
EGR 210 Circuit Analysis	H	H	M	L	L	H	L
EGR 255 Sustainable Resource Engineering & Design	H	H	M	H	M	L	M
EGR 260 Statics	H	M	L	L	L	L	M
EGR 291 Sophomore Project	H	H	M	H	H	L	L
EGR 310 Signals and Systems	H	M	M	L	L	H	L
EGR 360 Dynamics	H	H	L	L	M	L	M
EGR 391 Engineering Design and Junior Project	H	H	H	M	H	L	M
EGR 395 Fall Seminar	M	M	L	M	M	L	M
EGR 396 Spring Seminar	M	L	L	H	L	L	M
EGR 491 Senior Project in Engineering I	H	H	H	H	H	H	M
EGR 492 Senior Project in Engineering II	H	H	H	H	H	H	M
Civil Concentration							
EGR 251 Introduction to Environmental Engineering	H	L	L	H	L	L	M
EGR 256 Environmental Site Engineering & Design	H	H	M	H	H	H	M
EGR 264 Strength of Materials	H	H	H	M	M	H	L
EGR 353 Green Architectural Engineering	H	H	M	M	L	M	M
EGR 364 Structural Engineering	H	H	M	M	M	M	L
EGR 366 Civil Engineering Materials	H	M	M	L	M	H	L
Environmental Concentration							
EGR 251 Introduction to Environmental Engineering	H	L	L	H	L	L	M
EGR 256 Environmental Site Engineering & Design	H	H	M	H	H	H	M
EGR 351 Water and Wastewater Engineering	H	L	L	M	M	L	L
EGR 353 Green Architectural Engineering	H	H	M	M	L	M	M
EGR 368 Fluid Mechanics and Hydrology	H	M	L	L	L	M	L
EGR 467 Thermodynamics	H	L	L	M	L	L	M

2018/19 New ABET Learning Outcomes An ability to:
(ABET-1) Identify, formulate, and **solve** complex engineering problems by applying principles of engineering, science, and mathematics.
(ABET-2) Apply engineering **design** to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
(ABET-3) Communicate effectively with a range of audiences.
(ABET-4) Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the **impact** of engineering solutions in global, economic,
(ABET-5) Function effectively on a **team** whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
(ABET-6) Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions (**LAB's**).
(ABET-7) Acquire and apply new knowledge as needed, using appropriate **learning** strategies.
Pre-2018/19 ABET Learning Outcomes
(ABET-a): An ability to apply knowledge of mathematics, science, and engineering.
(ABET-b): An ability to design and construct experiments, as well as to analyze and interpret data.
(ABET-c): An ability to design a system, component, or process to meet desired needs.
(ABET-d): An ability to function on multi-disciplinary teams *if possible, or to draw on the talents of others*
(ABET-e): Identify, formulate, and solve engineering problems.
(ABET-f): An understanding of professional and ethical responsibility.
(ABET-g): Communicate effectively orally and in writing.
(ABET-h): A broad education necessary to understand the impact of engineering solutions in a global and societal context
(ABET-i): Recognition of the need for, and an ability to engage in life-long learning
(ABET-j): Knowledge of contemporary issues
(ABET-k): An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Brief Description of Outcome Targeted Task:
- TASK 1: Revit 3D (and **BIM** – **B**uilding **I**nfo **M**anagement) Software Assignment 1
- TASK 2: Revit 3D (and **BIM** – **B**uilding **I**nfo **M**anagement) Software Assignment 2

Rationale for Choice of Task:
- TASK 1 and 2: 3D modeling software with correlated **BIM** (**B**uilding **I**nfo **M**anagement) database for professional-level writing of specifications.

Results (Assessment):
- TASK 1 and 2: Most students performed better than average 2012,14,&16 students

EVALUATION / RECOMMENDATION:

Course is only three credits and only meets for two ~90 minute lectures per week. Although course is very successful as is, if students wish more hands-on Lab time, a Lab section could be added in the future since course covers a 500 page textbook, plus LEED documentation, plus two field trips (see 1 & 2), plus two guest lectures , in addition to the two Revit CAD software Lab-type assignments (see 1 & 2) & Tutorials.