2013 Scanning Sheet. Assignment Description:_____ Instructor:_____ Date:_____ Scanned File Name:_____

ABET Outcomes											Rubric or	Example		
A	B	C	D	E	F	G	H	I	J	K	student %	problem	Outcome #	**EE 481 VLSI Design Laboratory (1) – Outcomes Reviewed 2013**
	2	2	2			1		1		1			1	Understand and apply VLSI layout techniques including layout rules, creating standard cell structure, and chip floor plan.
	2	2	2			1		1		1			2	Understand and use of layout software for design and layout of CMOS integrated circuits.
	2	2	2			1		1		1			3	Design and layout of active deices and interconnection patterns.
	2	2	2			1		1		1			4	Use of layout software to create passive and active components.
	2	2	2			1		1		1			5	Design and layout small scale standard cells.
	2	2	2			1		1		1			6	Understand IC layouts and produce circuit schematics from them

1=supporting contribution
2=significant contribution

Rubric
5: Excellent Mastery of Outcome By Vast Majority of Students
4: Good Mastery of Outcome By Vast Majority of Students
3: Adequate Mastery of Outcome By Majority of Students
2: Marginal Mastery of Outcome By Most Students
1: Lack of Mastery of Concept By Most Students

Improvement Suggestions or Comments:

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 solution 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