

Team Design Skills Growth Survey

Instructions: This survey is intended to measure personal growth within each of the elements of the TIDEE engineering design process. The survey is to be taken twice during an introductory design course, once at mid-term and the other at the end of the term. All responses should be given relative to what has been learned during each half of the term. Thus, the second survey should reflect only what has been accomplished during the second half of the design course. A score of 5 indicates a strong class emphasis and/or personal growth.

Class Emphasis		Personal Growth during this Half of the Term	
Major emphasis	5	I experienced a tremendous growth and added many new skills	5
Significant emphasis	4	I experienced a significant growth and added several skills	4
Some emphasis	3	I grew some and gained a few new skills	3
Minor emphasis	2	I used previous skills and had little growth	2
Did not discuss	1	I did not use this skill within this class	1

TEAMWORK	Class Emphasis	Personal Growth
Individuals participate effectively in groups or teams	1 2 3 4 5	1 2 3 4 5
Individuals understand their own and other member's styles of thinking and how they affect teamwork	1 2 3 4 5	1 2 3 4 5
Individuals understand the different roles included in effective teamwork and responsibilities of each role	1 2 3 4 5	1 2 3 4 5
Individuals use effective group communication skills: listening, speaking, visual communication	1 2 3 4 5	1 2 3 4 5
Individuals cooperate to support effective teamwork	1 2 3 4 5	1 2 3 4 5

INFORMATION GATHERING	Class Emphasis	Personal Growth
Individuals gather information, use various sources and techniques, analyze validity and appropriateness	1 2 3 4 5	1 2 3 4 5
Individuals use important visual and oral techniques (questioning, observing) for information gathering	1 2 3 4 5	1 2 3 4 5
Individuals use library resources effectively in accessing relevant information	1 2 3 4 5	1 2 3 4 5

PROBLEM DEFINITION	Class Emphasis	Personal Growth
Individuals define problems, which includes specific goal statement, criteria and constraints	1 2 3 4 5	1 2 3 4 5
Individuals understand the open-ended nature of problems	1 2 3 4 5	1 2 3 4 5
Individuals develop specific goal statements after gathering information about a problem (need)	1 2 3 4 5	1 2 3 4 5
Individuals recognize the importance of problem definition for development of an appropriate design	1 2 3 4 5	1 2 3 4 5
Individuals develop problem definitions with specific criteria and constraints	1 2 3 4 5	1 2 3 4 5

IDEA GENERATION	Class Emphasis	Personal Growth
Teams and individuals utilize effective techniques for idea generation	1 2 3 4 5	1 2 3 4 5
Teams and individuals identify and utilize environments that support idea generation	1 2 3 4 5	1 2 3 4 5
Teams brainstorm effectively	1 2 3 4 5	1 2 3 4 5
Individuals apply effective techniques in their own idea generation	1 2 3 4 5	1 2 3 4 5
Teams use techniques that synthesize ideas to increase overall idea generation	1 2 3 4 5	1 2 3 4 5

EVALUATION AND DECISION MAKING	Class Emphasis	Personal Growth
Teams and individuals utilize critical evaluation and decision making skills and techniques, including testing	1 2 3 4 5	1 2 3 4 5
Teams follow an iterative approach that employs evaluation repeatedly in their design process	1 2 3 4 5	1 2 3 4 5
Teams and individuals apply simple matrix techniques for evaluating proposed solutions	1 2 3 4 5	1 2 3 4 5

IMPLEMENTATION	Class Emphasis	Personal Growth
Teams implement the design to a state of usefulness to prospective clientele	1 2 3 4 5	1 2 3 4 5
Teams manage time and other resources as required to complete their project	1 2 3 4 5	1 2 3 4 5
Team members follow instructions provided by others in implementation	1 2 3 4 5	1 2 3 4 5

COMMUNICATION	Class Emphasis	Personal Growth
Individuals communicate with team members at all stages of development and implementation of design solutions	1 2 3 4 5	1 2 3 4 5
Individuals practice effective listening skills for receiving information accurately	1 2 3 4 5	1 2 3 4 5
Individuals exhibit appropriate nonverbal mannerisms (e.g., eye contact) in interpersonal communication	1 2 3 4 5	1 2 3 4 5
Individuals give and receive constructive criticism and suggestions	1 2 3 4 5	1 2 3 4 5
Individuals record group activities and outcomes, ideas, date, etc. in personal design journals	1 2 3 4 5	1 2 3 4 5
Individuals produce technical papers and memos in acceptable style and format	1 2 3 4 5	1 2 3 4 5
Teams present design information in group oral presentations	1 2 3 4 5	1 2 3 4 5
Individuals communicate geometric relationships using drawings and sketches	1 2 3 4 5	1 2 3 4 5