6.081 Survey
September, 2006

Please fill out this survey form and bring it with you to the first lecture.
We will ask you to complete a similar survey at the end of this subject. The results will be used to help the EECS Department determine the overall effectiveness of the new subject and will contribute to the teaching and learning improvement process.

Your responses will be collected and summarized by an assessment specialist and reported anonymously to the subject instructors. Survey results will have no effect on your grades. Because we would like to track pre-and-post subject responses, we need to match the forms. Your identity will be not known to the 6.081 instructors.

Please create a 4-character code made up of letters, and/or symbols, and/or numerals. Write it here

_____

and in a place where you will find it in December!

If you have questions or concerns about this survey, please contact Diane H. Soderholm, 37-375, dhsoder@mit.edu, 253-5575

By continuing, I agree to participate voluntarily in this survey about the knowledge, skills, and attitudes related to Introduction to EECS 6.081. I understand that any information provided by me will remain confidential with regard to my identity.

Background Information

1. How old were you on your last birthday? _____

2. What is your sex/gender? Female Male

3. What subjects, if any, have you taken at MIT or elsewhere, before this one that involved electrical engineering, computer science or programming? Please list below.

4. Please describe any experience you may have in programming, electronics, and robots.

5. What do you hope to gain from taking this subject?

I. CURRENT KNOWLEDGE

For each statement, check the box that describes your **current** level of knowledge and understanding. Check only one box for each statement.

How would you state your <u>current</u> ability to . . .	**Poor**	**Not Very Good**	**Adequate**	**Good**	**Very Good**	**Excellent**
1. Create short computer programs.						
2. Write programs that use data structures.						
3. Express abstractions using procedures and data.						
4. Express common patterns of use with the aid of higher-order procedures.						
5. Write programs that use classes and objects.						
6. Estimate the order of time growth for a simple algorithm.						
7. Implement an interpreter for a simple computer language.						
8. Describe systems by means of block diagrams.						
9. Solve linear difference equations with the aid of Z-transforms.						
10. Determine the stability of linear feedback systems.						
11. Analyze a resistive electrical network.						
12. Analyze a circuit using two-port models.						
13. Design a circuit that uses op-amps.						
14. Design a simple linear control system.						
15. Compute probabilities using Bayes' rule.						
16. Write a program that uses probability to estimate state in the presence of uncertainty.						
17. Program a mobile robot to search for something in a room.						
18. Program a mobile robot to create a map of a room.						

II. CONFIDENCE IN YOUR ABILITIES

For each statement, circle a number from 0% to 100% to indicate how confident you are that you could perform that task or skill now. Circle one response for each statement.

How confident are you in your <u>current</u> skill and ability to . . .	**Not at all confident 0%**										**Completely confident 100%**
1. Design something novel and innovative	0	1	2	3	4	5	6	7	8	9	10
2. Solve an unstructured problem (a problem for which no single correct answer exists)	0	1	2	3	4	5	6	7	8	9	10
3. Evaluate arguments and evidence so that the strengths and weaknesses of competing alternatives can be judged	0	1	2	3	4	5	6	7	8	9	10
4. Apply an abstract concept or idea to a real problem or situation	0	1	2	3	4	5	6	7	8	9	10
5. Clearly describe a problem orally	0	1	2	3	4	5	6	7	8	9	10
6. Clearly describe a problem in writing	0	1	2	3	4	5	6	7	8	9	10
7. Develop several methods that might be used to solve an unstructured problem	0	1	2	3	4	5	6	7	8	9	10
8. Develop ways to resolve conflict and reach agreement in a group	0	1	2	3	4	5	6	7	8	9	10
9. Pay attention to the feelings of all group members	0	1	2	3	4	5	6	7	8	9	10
10. Listen to the ideas of others with an open mind	0	1	2	3	4	5	6	7	8	9	10
11. Work on collaborative projects as a member of a team	0	1	2	3	4	5	6	7	8	9	10
12. Reach outside your group or organization to identify and network with new people to find help and advice	0	1	2	3	4	5	6	7	8	9	10
13. Ask probing questions that clarify facts, concepts, or relationships	0	1	2	3	4	5	6	7	8	9	10
14. Evaluate several courses of action and then select and combine the best ideas into an even better approach	0	1	2	3	4	5	6	7	8	9	10
15. Motivate others to work together	0	1	2	3	4	5	6	7	8	9	10
16. Lead a group with members who strongly disagree with each other	0	1	2	3	4	5	6	7	8	9	10
17. Put a detailed plan into action	0	1	2	3	4	5	6	7	8	9	10
18. Deliver on a job project you agreed to do	0	1	2	3	4	5	6	7	8	9	10
19. Develop your own original hypothesis and a method to test it	0	1	2	3	4	5	6	7	8	9	10
20. Translate user needs into requirements for a design so well that users will like the outcome	0	1	2	3	4	5	6	7	8	9	10
21. Grasp the concept and limits of a technology well enough to see the best ways to use it.	0	1	2	3	4	5	6	7	8	9	10
22. Conduct tests to establish values of a property or parameter under specified conditions	0	1	2	3	4	5	6	7	8	9	10
23. Design and build something new that performs very close to your design specifications	0	1	2	3	4	5	6	7	8	9	10

Thank you very much! Please bring the completed survey with you to the lab on September 7.