

## How to Succeed in Your First Programming Course

These quotes are from students who were nearing the end of their first programming course. They were asked to provide advice to future students (such as you!) about how to be successful in this course.

Their advice falls into three categories: general advice, programming-specific advice, and attitudinal advice. It is important for beginning programming students (like you!) to recognize all three of these areas as part of good practices that, when employed regularly and thoughtfully, can contribute to success in computing classes. Do your practice, habits, and behaviors regarding your programming course include aspects from all three of these categories? If not, these students would say it should.

These students are similar to you. They may not have had any programming experience before this course. They might feel that everyone else knows more than they do. They might have struggled with and been frustrated by the course material. Their advice is based on this relevant experience.

### General Advice

*Make the most of class:* “attend the class regularly since that this course is not an easy course and needs lots of patience. Clear your doubts immediately. Pay attention to the lecture. Don’t hesitate to ask the instructor if you don’t understand any of the presented item.”

“I think the most important thing is to get help when you need it. In high school I didn’t really need to get help with anything because it wasn’t that hard and I felt that if I had to get help then I wasn’t smart”

“Firstly, they have to stay on top of the topic, if you fall behind in programming, it’s very hard to catch up. As well if you fall behind, it’s not like you can forget that certain topic, the whole class is a cumulative topic, you need to know how to do something first before you can move on to the next topic. Secondly, you have to do more than just listen in class”

*Learn from mistakes:* “The key to understand is using each error as a stepping stone and using each error to learn. Figuring out WHY the error is present will force you to understand the reasoning”

“Everybody makes mistakes – learn from them”

*Learn from others:* “Working with other people also helps because what one person doesn’t understand, another person might know how to do.”

“it is important that you take advantage of your professor’s office hours to ask questions and seek assistance”

### Programming Specific Advice

*You have to program to learn:* “After solving a problem, ask yourself how you could change it and play around with it. Experimenting with code is the best way to learn.”

“Experiment by yourself. By playing around you figure out and remember how to do things.”

“Make deliberate mistakes to see output”

“Do some research if a program doesn’t run. Use the debugger.”

“My advice would be to pay attention to details and study examples. Make sure you understand why each character (the brackets [ ], the semicolon, the triangular brackets <>) are there. You could try to remember what each error message means, so you could know what you do wrong the next time you see the same error message.”

*Have a plan:* “1. read through the descriptions of the program you are going to do, make sure you know what you are suppose to do. 2. make a flow chart to help you get clear about the program. 3. write the program step by step. 4. don’t be frustrated if you cannot compile the program, check each line carefully and think of what kind of mistake will be made. 5. if you cannot find out your mistakes, go and find someone to help you, or discuss with your friends.”

“Also, when writing the program test each block of code at a time. If errors are to occur then the programmer would know which block to look in for the errors.”

*It’s not over ‘til it’s over:* “Test your programme with different inputs in order to make sure it produces the correct output. Sometime the programme might run correctly for a few inputs only.”

### Attitudinal Advice

*It’s OK, you are just a beginner:* “The main thing I would suggest is to make sure you ask questions in lectures and not to worry about looking stupid for not knowing. Everyone is at different levels, there are bound to be other people that know less or the same as you.”

“If ever you feel frustrated, just know that everyone else has been there too.”

*Hang in there:* “Don’t give up! Ask tutors for advice, read books on the topics. Re-read parts you don’t understand. Don’t panic! Panicking is the worse thing you can do.”

“As long as one has the desire to learn, they will eventually understand, slowly but surely”

*Mistakes are good:* “they should not get upset or feel inferior but try to do another new program. the more programs they do and the more mistakes they do, the more they learn.”

*Don’t be intimidated:* “do not be afraid to ask questions in class as other students in the class may be wondering about the same thing.”

“make sure you ask questions in lectures and not to worry about looking stupid for not knowing.”

*Programming can be fun:* “Learning something new is a challenge, but it is also an opportunity. Programming is fun when you start to know it, especially when you can run your program successfully.”