

**Please answer the following questions in complete sentences in a typed manuscript and submit the solution on blackboard by Sunday August 27th at 23:59:59.** I have attached the L<sup>A</sup>T<sub>E</sub>X template I am using for this class. The files are `homework1.tex` and `preamble.tex`. You should put all the files in the same directory before running the main file (`homework1.tex`) on L<sup>A</sup>T<sub>E</sub>X. Please read the L<sup>A</sup>T<sub>E</sub>X installation guide (Page 2 of this document).

### **Yourself**

1. Please tell me about yourself: name, undergrad/MS/PhD objective, adviser (if you have one), year in program, research area or concentration, dissertation topic (if any), career objectives.
2. Why are you taking the class? What other classes are you enrolled in (course name and title)? Please list them all.
3. Is this your first semester at UTSA? The last?

### **The course**

1. The homeworks will be a mix of examples, applications, coding, and theory. For instance, I might have a few easy “practice” questions about solving problems related to the analysis and design of control systems. Then I might have a multi-step computational problem to design, for example, a controller design with MATLAB implementations. There will also be some coding work, such as “write a program to solve a multi-objective control problem”. Finally, there will be a theory component to the homeworks.

Do you find you learn better with any particular type of problems? If so, which ones (coding, theory, applications, algorithms, etc...)? Do you like theory and math more than coding and numerical examples?

2. How do you think the course will help you come closer to your educational/career goals?
3. What have other professors done that you’ve found helps you learn?

### **Numerical computing software**

1. Have you used MATLAB before? Simulink? Do you feel like learning new programming tools?
2. Have you used C++ before?
3. Any other numerical computing packages?

### **The course**

1. Which of the topics from the syllabus are you most excited about?
2. Anything missing from the syllabus you were hoping to learn about?

## **L<sup>A</sup>T<sub>E</sub>X installation guide**

To install L<sup>A</sup>T<sub>E</sub>X on your machine, follow the next steps:

1. Download the full-package from <https://miktex.org/download>. This is similar to downloading all the predefined toolboxes on MATLAB or predefined functions or classes in C++.
2. Install the downloaded file. Save it in an empty directory in your C: folder.
3. If asked whether you want to download packages on the fly, choose *yes!*
4. After that, you can download any L<sup>A</sup>T<sub>E</sub>X editor you want. I personally prefer TeXstudio. You can download it from <http://www.texstudio.org/>.
5. Install TeXstudio (TeXstudio is only the dummy editor that you use to run L<sup>A</sup>T<sub>E</sub>X).
6. If asked whether you want to download packages on the fly, choose *YES!* This basically means that whenever you don't have a class file that L<sup>A</sup>T<sub>E</sub>X is using, the editor will automatically look for it online and download it from an online server.
7. Open the .TeX file (homework1.tex) with TeXstudio and run it (the F1 button). You should be good to go!