# **MAT 260 Transcript for MAT-260 MATLAB for Students**

[00:00:00.860] SPEAKER: Hello and welcome to this brief overview of how to use MATLAB in MAT 260 cryptology. So, in the first module, you’ll need to download and upload several files to the MATLAB online workspace. So, in order to get there, you wanna scroll into Module One. And below you’ll see that you need to create a MathWorks account.

[00:00:26.600] So that’ll be the first step. If you don’t have a MathWorks account through SNHU, you can do that. And MATLAB is something that we have an institutional license for, so you have access to it. And it is used in several other mathematics courses. There’s a document here for how to access MATLAB and set all of that up. Once you have that set up, each week, you’ll see that there are assignments where you have a template.

[00:00:53.240] So this first file is what you’re going to need to download. So, it’ll say “Module One,” “Module Two,” whichever module you’re in. “Problem Set Template,” you’ll need to just click on this and download it. And the type will say MLX file, that is for MATLAB live script, which is what you’ll be using here. So, once you have your account in MATLAB, you’ll want to “Open MATLAB Online” like this. Just clicking on that button.

[00:01:19.170] And once that loads, you’ll see, your files are over here. So, this is where all your files will be, that you’ll need. I just need to clear my workspace as those as that workspace was no longer valid. So, once you’ve downloaded, that MLX file, you’ll see that here, you’re just gonna click on it and from wherever it’s located and drag it into this space here, click, “OK.”

[00:01:46.020] And then you can double-click on that file, to open it in the window like this. Now you’ll be able to use MATLAB Online to do the exercises and computer problems. For the exercises, you can click right here and type any text you want. You can also go into “INSERT” and choose “Equation,” and you can insert a equation using this graphical interface here.

[00:02:14.100] If you’re comfortable with LaTeX, would like to use that instead, you can delete that “Equation,” and we can go “Insert LaTeX equation.” You can type in, your LaTeX equation here and see a preview right below it. Additionally, for any of the computer problems, you can type your code in these code boxes, these grey code boxes. And then, if you want to add, you can click to “INSERT” any “Text here.”

[00:02:41.480] Or if you have, comments that you need to make to explain your reasoning to help you understand your process. You can also add that as a comment using the percentage sign, as you’ll see right above there. The next thing you’ll need to do, is download the associate files. And you’ll only have to do this once, the first time, and then they’ll be saved in your MATLAB drive.

[00:03:08.660] And so, within any of the assignments, you’ll see a “guidelines and rubric” file here, which are important to read for all assignments. That will take you to this page where there’ll be a link to the textbook companion site right here. This page will open up and you’ll be instructed to download the Crypto.zip and then extract the files.

[00:03:30.890] And then the rest of the steps you can ignore, because this is for a local installation of MATLAB and not MATLAB Online. So, I’ve already done these steps. I’ve already had the zip file, right clicked to extract all. And now I have a folder called just “Crypto.” And I double click on it and all the associated files are in there.

[00:03:50.540] So I’m gonna do, is flip back to MATLAB and again do the same thing we did before. So, I’m just going to click on here, on the PC, “Control” “A,” to select all the files and “drag” them into the drive. So that’ll upload all 46 files. And now I have access to all of these files that are going to support the work that we do on these computer problems.

[00:04:11.780] And these will stay in your MATLAB drive space for the duration of the time until you delete them. So, helpful that you only have to do that one time. Within your textbook for the course, there’s a appendices including one “Appendix C” on “MATLAB Examples.” So, there’s a “Getting Started with MATLAB” section. And then there are “Examples.”

[00:04:32.980] So now, that we’ve loaded all these files, we can actually try some of these things. So, the first thing we’ll need to do, that you’re instructed to, in the companion site, is use this, is run the “ciphertext.” So, we’ll run that. I’ll just copy it. Oops. Okay. All right. So, we’ll just type it instead, I guess, “ciphertext,” and then return.

[00:04:59.410] And then the next thing we’ll do is we’ll try, to copy this here, this “allshift.” So, let’s try that and see if that worked. All right and then if we go into “LIVE EDITOR” and we click “Run,” that should run. And now we’re shifting. We’re showing all the shifts for this string. And again, this string is just shortened for a longer string that you’ll, that you have access to.

[00:05:23.800] And so, it’ll show you, actually in this case, it actually is a short string. But you’ll have access to some longer strings here that instead of having to type out that long string, you’ll just have to type out, like “h-d-s-f” here. Instead of typing out this whole long string that you can see here. And so, this will show you all the shifts here, and you can see them.

[00:05:43.600] And that should align to exactly what you see here, in the textbook. When you have finished all of your work, make sure that you click the “Run” button so that all of the, what’s generated by your code is, visible here. You’ll want to save this as a PDF so you can upload it into Brightspace. And go to the “Save” icon here, click on this down arrow.

[00:06:11.860] And then you can click “Export as PDF.” And then you can just click “Export”, and you’ll see this. Now, you’ll have a PDF. And of course, you’ll want to, before you export this PDF, you’ll wanna make sure that you change the name, put your name here and the date. And then, this document will show all of your work here.

[00:06:33.190] And then you can just click the “Download” button here and upload that PDF to Brightspace for grading by your instructor. If you have any questions about the grading of this assignment, please reach out to your instructor. Thank you.