
EEL3701: Digital Logic & Computer Systems
Welcome to
EEL 3701: Digital Logic & Computer Systems
• I am Dr. Schwartz. I'll be teaching both lecture sections of 3701 this semester.
> Tues 2nd-3rd (8:30-10:25am) in RNK 110 & Thur, 3rd (9:35-10:25am) in TUR L005
> Tues 8th-9th (3:00-4:55pm) & Thur 9th (4:05-4:55pm) in TUR L005
• This is the entry course for all courses in computer engineering in the ECE department.
Q: Do you need 3701?
A: Not if you are CSC or CSE!
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1

•1


EEL3701: Digital Logic & Computer Systems
Who am I?
• Here's a story, of a man named … Brady
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2

•2


EEL3701: Digital Logic & Computer Systems
Synchronous (and remote) Course
• Our lectures and labs will be entirely synchronous
>Attendance is required at the times specified when you registered
– Open Canvas prior to class and leave it open during class for probable attendance quizzes
– Pay attention, because these quizzes are often based on something that I just said!
• Both our lectures and our labs are face-to-face
• We will use Honorlock and Zoom for Exams and Practical exams (Practicals)
>Practicals are exams where you design, simulate, build, and demonstrate
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3

•3


EEL3701: Digital Logic & Computer Systems
Menu
Look into my ...
• Textbook, DAD, and other purchases
• 3701's Slack channel
• Course/Instructor's Philosophy
• Course Introduction and Procedures
>Syllabus (see main page on website)
>Course overview
• Our website: http://mil.ufl.edu/3701/
• 3701's Canvas pages
See web-site: syl_s26.pdf, schedule.pdf
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4

•4


EEL3701: Digital Logic & Computer Syste
Share, Borrow, Buy or Rent Textbook
(ISBN-13: E7th: 9780357381861, 9780357381830, 7th: 9781133628477, 6th: 9781111781392, 5th: 9780534378048)
(ISBN-10: E7th: 0357381866, 7th: 1133628478, 6th: 0495471690, 5th: 0534378048)
5th edition
7th Enhanced
Charles H. Roth Jr., Fundamentals of Logic Design, Enhanced Edition, 7th edition, Cengage Learning, Stamford, Connecticut, 2021. (NOT the international edition.)
Charles H. Roth Jr., Fundamentals of Logic Design, 7th edition, Cengage Learning, Stamford, Connecticut, 2014. (NOT the international edition.)
Charles H. Roth Jr., Fundamentals of Logic Design, 6th edition, Cengage Learning, Stamford, Connecticut, 2009. (NOT the international edition.)
Charles H. Roth Jr., Fundamentals of Logic Design, 5th edition, Thomson Brooks/Cole Publishing, Belmont, California, 2004.
6th edition
7th edition
Note: You do NOT need the CD
• CENAGE (https://www.cengage.com/)
> 7th or 7th ENHANCED: E-Rent: $59
https://tinyurl.com/Roth-7th-enh
• UF bookstore (bkstr.com/floridastore)
> 7th: E-Rent: $51
> 7th Rent used: $121
> 7th Buy used: $215; 7th Buy new: $287
• UF All access (7E)
> 7E: https://www.bsd.ufl.edu/allaccess: $47.75?
• Amazon (www.amazon.com)
> 7th: Used: 50; E-rent: $87
> 6th: Used: $37; Buy new: $66;
> 5th: Buy used: $4
• Ebay (www.ebay.com)
> 5th: Used: $9
> 6th: Used: $19; 7th: $31; E7th: $45
• AbeBooks (www.abebooks.com)
> 5th: Used: $9; 6th: Used: $8; 7th: $31
International edition is NOT recommended
As of
18 Dec 2025
5

•5


EEL3701: Digital Logic & Computer Systems
Recommended – and FREE
H. Lam, and J. O'Malley, Fundamentals of Computer Engineering: Logic Design and Microprocessors, 1st edition, 1988, John Wiley and Sons, New York.
> ISBN: 0471610747
> Chapters 1-7 are NOW available on our website's (i.e., for FREE) Software/Docs (and at https://tinyurl.com/UF-Lam)
> I used a Google search and the best price I found was for $11 used.
FUNDAMENTALS OF COMPUTER ENGINEERING
LOGIC DESIGN AND MICROPROCESSORS
HERMAN LAM / JOHN O'MALLEY
As of
18 Dec 2025
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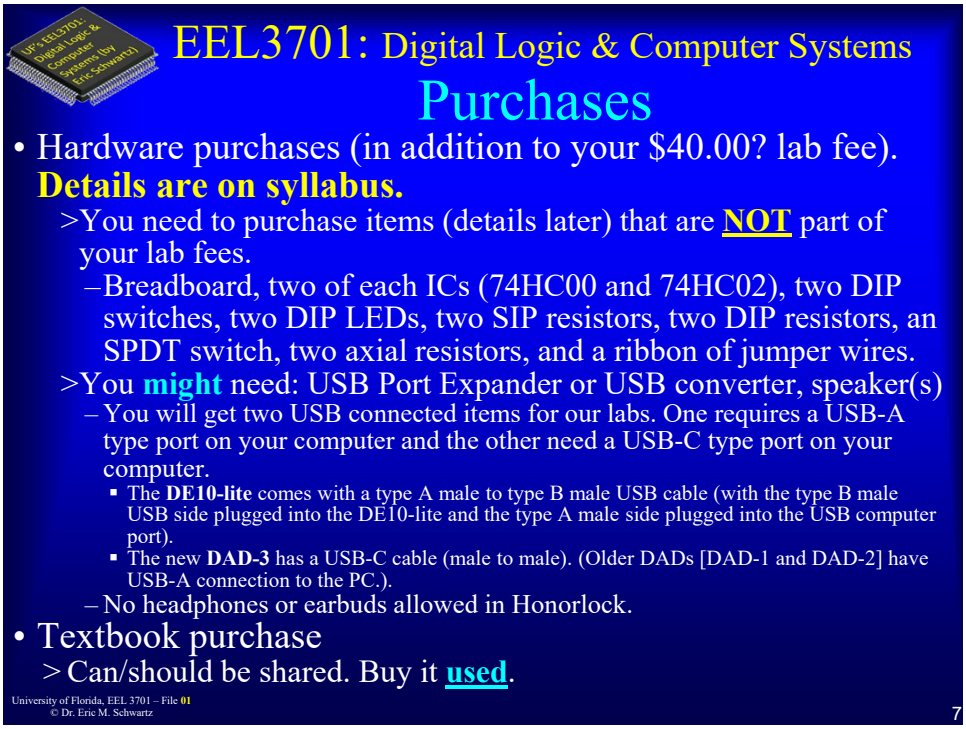
6

•6


EEL3701: Digital Logic & Computer Systems
Purchases
• Hardware purchases (in addition to your $40.00? lab fee).
Details are on syllabus.
>You need to purchase items (details later) that are NOT part of your lab fees.
–Breadboard, two of each ICs (74HC00 and 74HC02), two DIP switches, two DIP LEDs, two SIP resistors, two DIP resistors, an SPDT switch, two axial resistors, and a ribbon of jumper wires.
>You might need: USB Port Expander or USB converter, speaker(s)
– You will get two USB connected items for our labs. One requires a USB-A type port on your computer and the other need a USB-C type port on your computer.
▪ The DE10-lite comes with a type A male to type B male USB cable (with the type B male USB side plugged into the DE10-lite and the type A male side plugged into the USB computer port).
▪ The new DAD-3 has a USB-C cable (male to male). (Older DADs [DAD-1 and DAD-2] have USB-A connection to the PC.).
– No headphones or earbuds allowed in Honorlock.
• Textbook purchase
> Can/should be shared. Buy it used.
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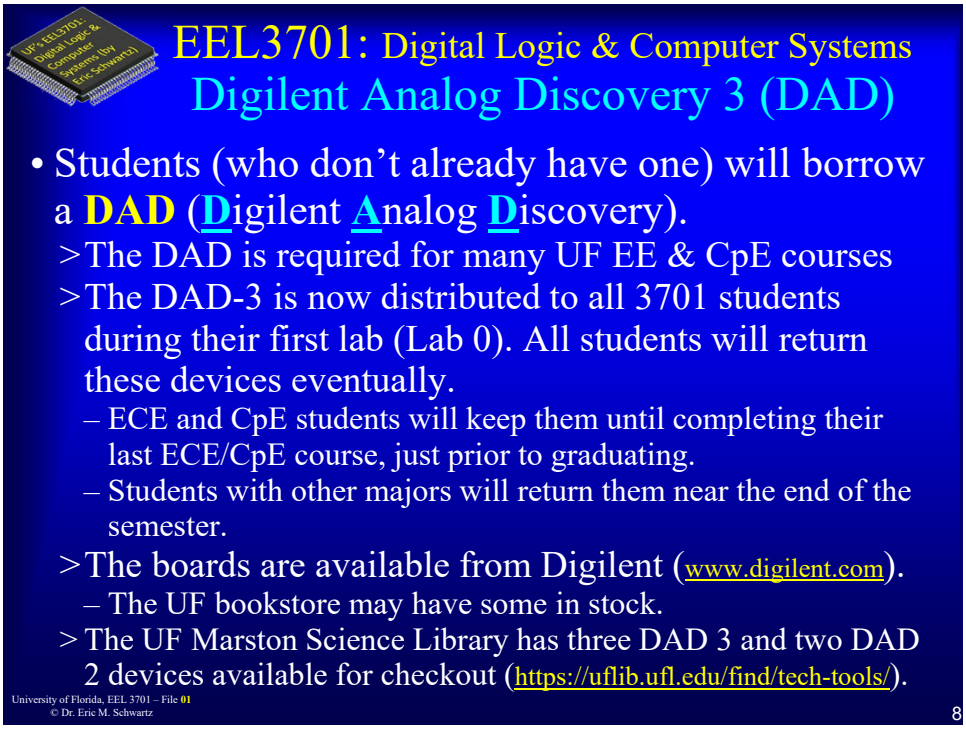
7

•7


EEL3701: Digital Logic & Computer Systems
Digilent Analog Discovery 3 (DAD)
• Students (who don't already have one) will borrow a DAD (Digilent Analog Discovery).
>The DAD is required for many UF EE & CpE courses
>The DAD-3 is now distributed to all 3701 students during their first lab (Lab 0). All students will return these devices eventually.
– ECE and CpE students will keep them until completing their last ECE/CpE course, just prior to graduating.
– Students with other majors will return them near the end of the semester.
>The boards are available from Digilent (www.digilent.com).
– The UF bookstore may have some in stock.
>The UF Marston Science Library has three DAD 3 and two DAD 2 devices available for checkout (https://uflib.ufl.edu/find/tech-tools/).
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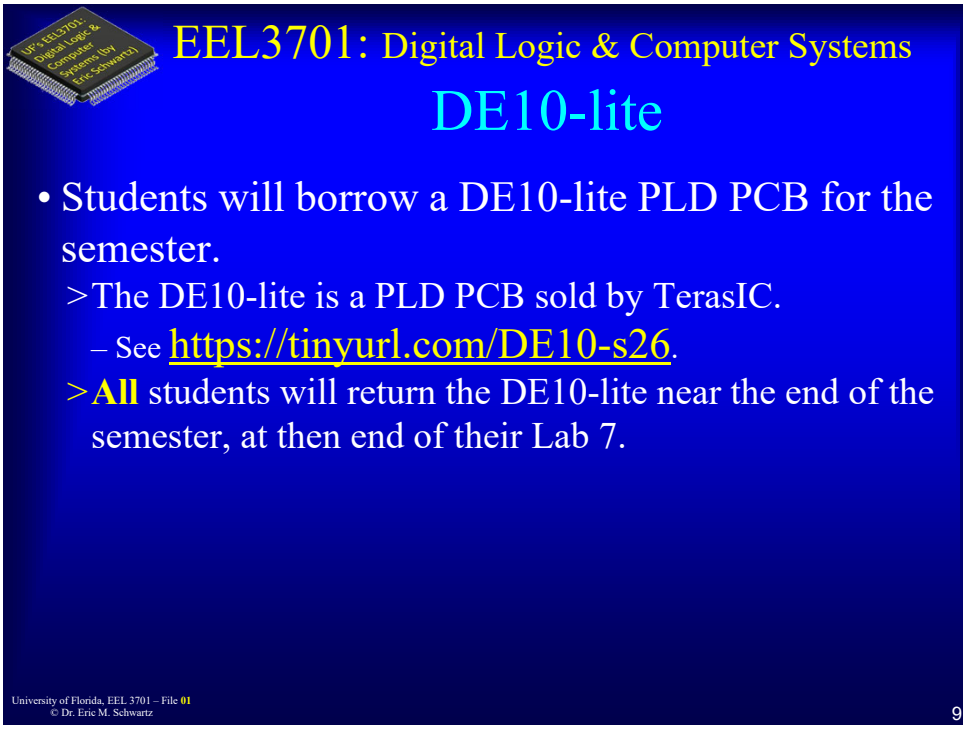
8

•8


EEL3701: Digital Logic & Computer Systems
DE10-lite
• Students will borrow a DE10-lite PLD PCB for the semester.
>The DE10-lite is a PLD PCB sold by TerasIC.
– See https://tinyurl.com/DE10-s26.
>All students will return the DE10-lite near the end of the semester, at then end of their Lab 7.
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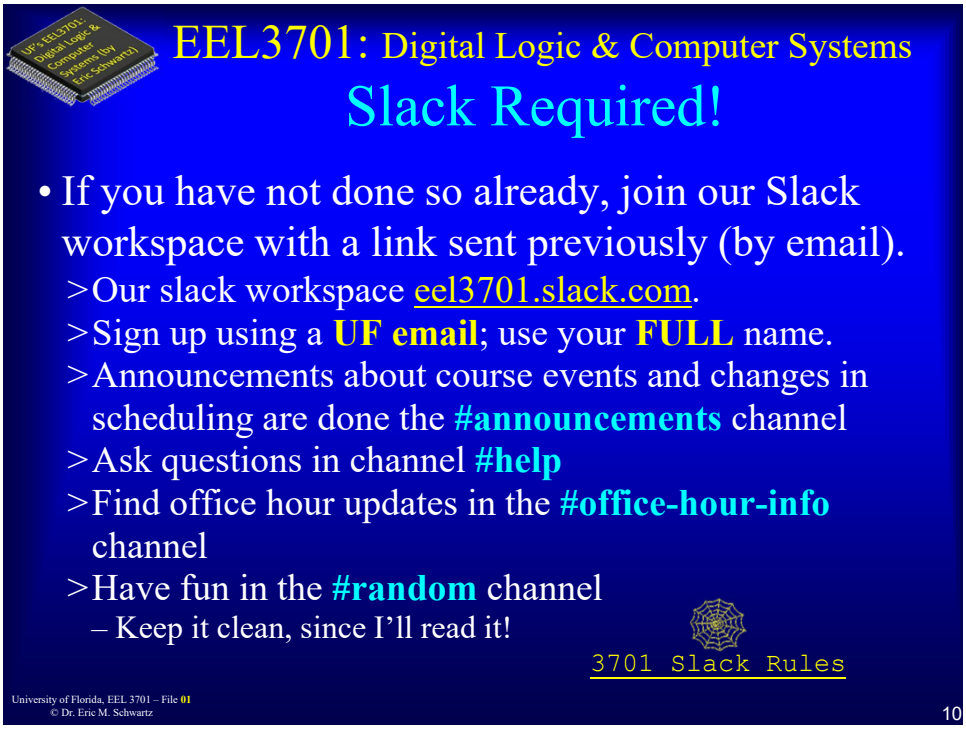
9

•9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Slack Required!
• If you have not done so already, join our Slack workspace with a link sent previously (by email).
>Our slack workspace eel3701.slack.com.
>Sign up using a UF email; use your FULL name.
>Announcements about course events and changes in scheduling are done the #announcements channel
>Ask questions in channel #help
>Find office hour updates in the #office-hour-info channel
>Have fun in the #random channel
– Keep it clean, since I'll read it!
3701 Slack Rules
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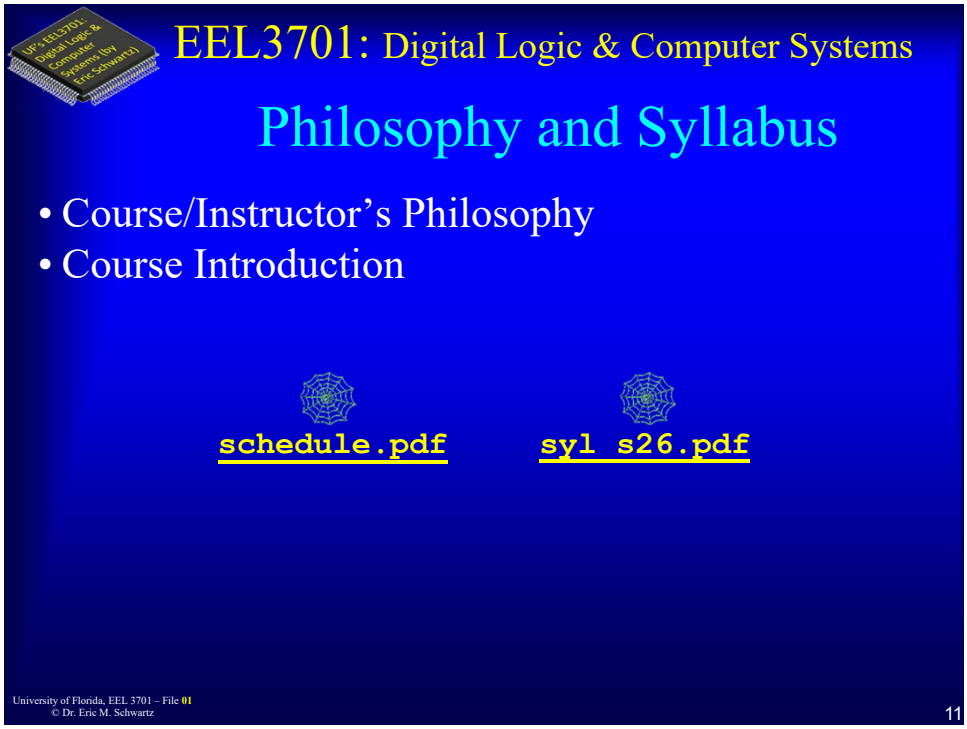
10

•10


EEL3701: Digital Logic & Computer Systems
Philosophy and Syllabus
• Course/Instructor's Philosophy
• Course Introduction
schedule.pdf
syl_s26.pdf
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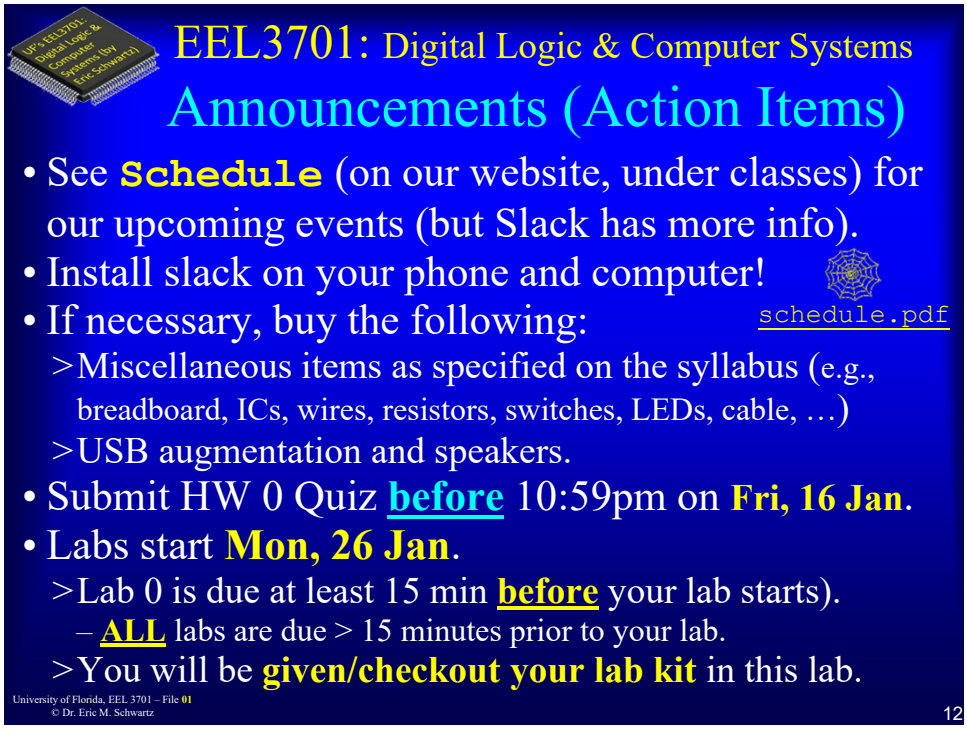
11

•11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Announcements (Action Items)
• See Schedule (on our website, under classes) for our upcoming events (but Slack has more info).
• Install slack on your phone and computer!
• If necessary, buy the following:
schedule.pdf
>Miscellaneous items as specified on the syllabus (e.g., breadboard, ICs, wires, resistors, switches, LEDs, cable, …)
>USB augmentation and speakers.
• Submit HW 0 Quiz before 10:59pm on Fri, 16 Jan.
• Labs start Mon, 26 Jan.
>Lab 0 is due at least 15 min before your lab starts).
– ALL labs are due > 15 minutes prior to your lab.
>You will be given/checkout your lab kit in this lab.
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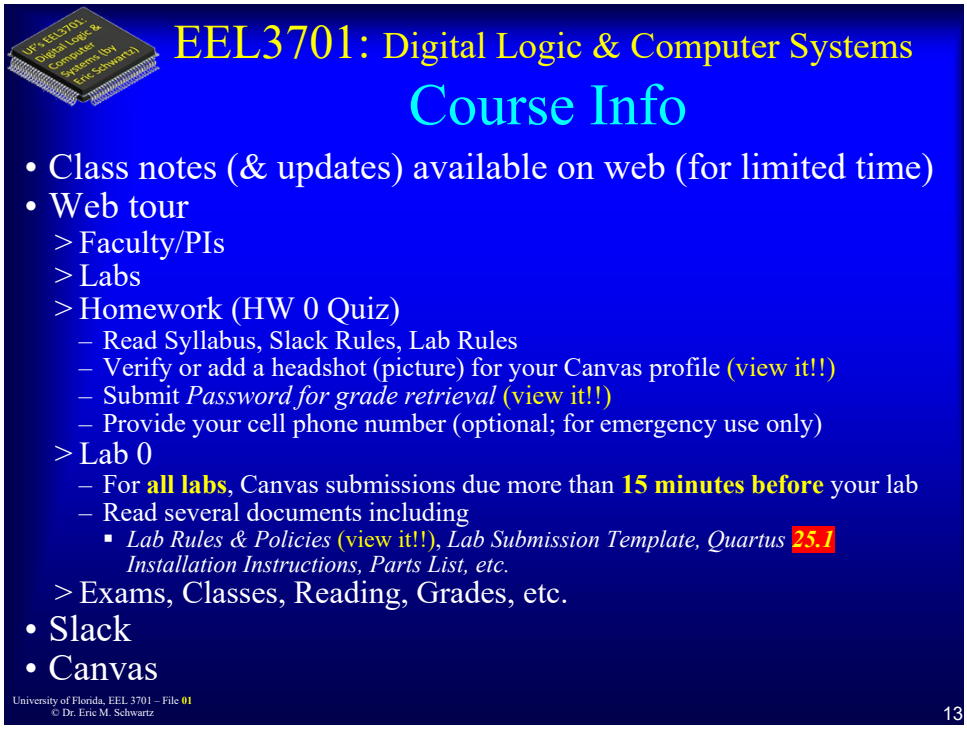
12

•12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Course Info
• Class notes (& updates) available on web (for limited time)
• Web tour
> Faculty/PIs
> Labs
> Homework (HW 0 Quiz)
– Read Syllabus, Slack Rules, Lab Rules
– Verify or add a headshot (picture) for your Canvas profile (view it!!)
– Submit *Password for grade retrieval* (view it!!)
– Provide your cell phone number (optional; for emergency use only)
> Lab 0
– For **all labs**, Canvas submissions due more than **15 minutes before** your lab
– Read several documents including
▪ *Lab Rules & Policies* (view it!!), *Lab Submission Template, Quartus 25.1 Installation Instructions, Parts List, etc.*
> Exams, Classes, Reading, Grades, etc.
• Slack
• Canvas
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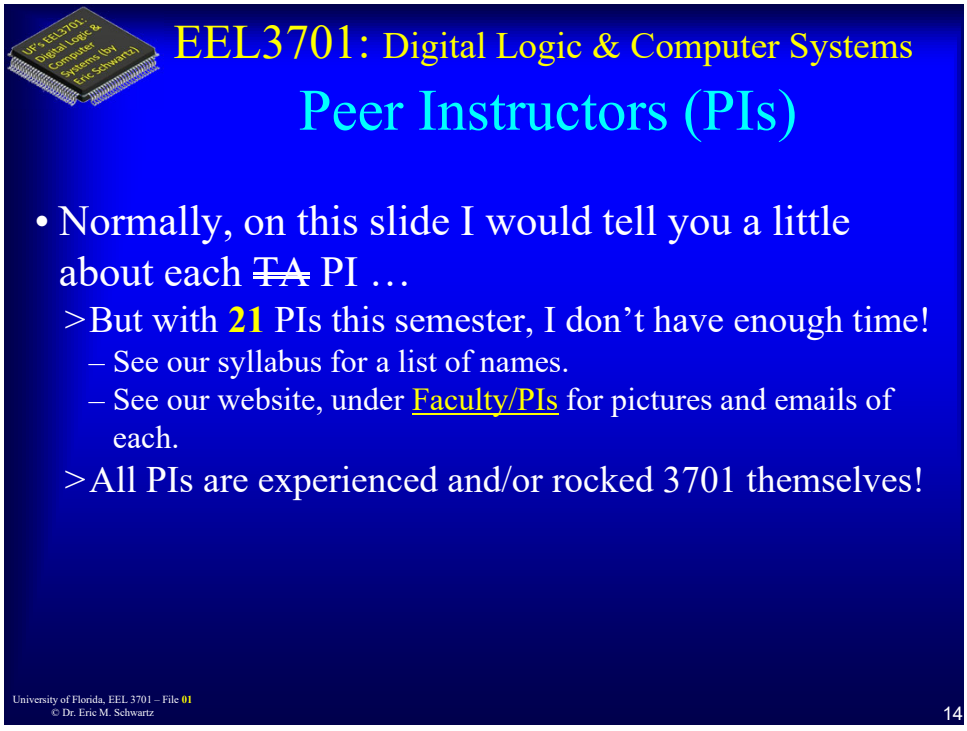
13

•13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Peer Instructors (PIs)
• Normally, on this slide I would tell you a little about each ~~TA~~ PI …
>But with **21** PIs this semester, I don't have enough time!
– See our syllabus for a list of names.
– See our website, under Faculty/PIs for pictures and emails of each.
>All PIs are experienced and/or rocked 3701 themselves!
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14

•14


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Free Microsoft® Software for UF Students
• UF Students can obtain a copy of Windows 10 (and maybe 11) for free on UF's OnTheHub portal:
https://portal.helpdesk.ufl.edu/.
• UF Students can obtain a copy of Microsoft Office for free from the following location:
https://it.ufl.edu/services/gatorcloud-microsoft-office-online.
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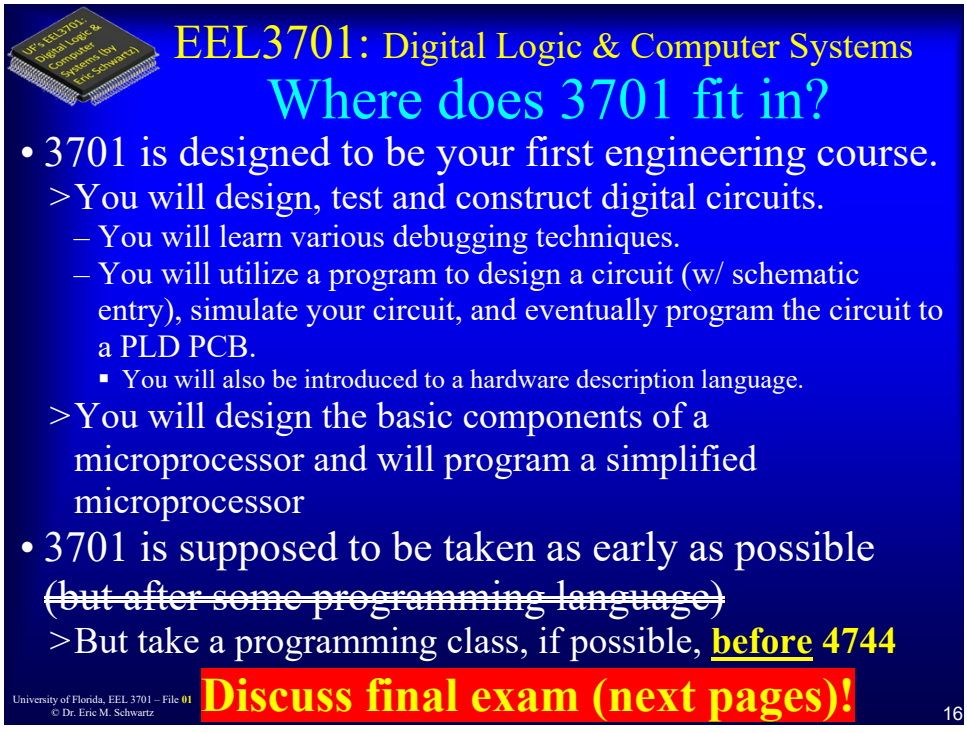
15

•15


EEL3701: Digital Logic & Computer Systems
Where does 3701 fit in?
• 3701 is designed to be your first engineering course.
>You will design, test and construct digital circuits.
– You will learn various debugging techniques.
– You will utilize a program to design a circuit (w/ schematic entry), simulate your circuit, and eventually program the circuit to a PLD PCB.
▪ You will also be introduced to a hardware description language.
>You will design the basic components of a microprocessor and will program a simplified microprocessor
• 3701 is supposed to be taken as early as possible
(but after some programming language)
>But take a programming class, if possible, before 4744
Discuss final exam (next pages)!
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16

•16


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The End!
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20

•20