

EEL3744: Microprocessor Applications

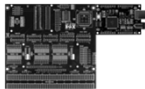
Welcome to

EEL-3744C: *Microprocessor Applications*

- I'm **Dr. Schwartz** and I'll be teaching the only section of 3744 (formerly 4744) this semester
 - > I'll also be the only one teaching 3744 for the foreseeable future
- If you want to continue learning from where you left off at the end of EEL 3701, you are in the right class!

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EEL3744: Microprocessor Applications

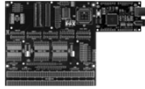
Who am I?

- Let me tell you about myself



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EEL3744: Microprocessor Applications Menu

(This is the format for the starting slide
for every class)

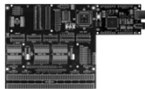
- Philosophy
- Syllabus
- Web-site



See examples on web:
[syl_sl8.pdf](#), [schedule.pdf](#)

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EEL3744: Microprocessor Applications Philosophy and Syllabus

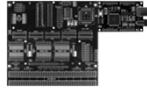
- Instructor's Philosophy
- Course Philosophy
- Course Introduction and Procedures
 - > Syllabus
 - Twitter
 - Class Organization: Lab times, TA office hours
- Our web-site: <http://mil.ufl.edu/3744/>
- Overview
- Class notes (and updates) available on web (for limited time)



[syl_sl8.pdf](#)

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EEL3744: Microprocessor Applications Teaching Assistants (TAs)

Wesley Piard Undergrad (experienced **3744** TA) [2]

Christopher Crary Undergrad (experienced **3744** TA) [3]

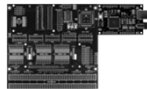
Milan Patel Undergrad (experienced **3744** TA) [1]

Brit Chesley Undergrad (experienced **3744** TA) [1]

Jose Bohorques Undergrad (experienced **3744** TA) [1]

Samantha Soto Undergrad (**in**experienced **3744** TA) [1]

See also our syllabus

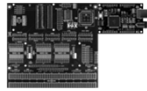


EEL3744: Microprocessor Applications Schedule, Website



[schedule.pdf](#)

- See **Schedule** on web for announcements
- **Our class website:** <https://mil.ufl.edu/3744/>



EEL3744: Microprocessor Applications Textbook (ISBN: 0195371615)

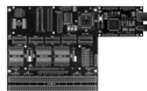
- **Textbook:** F. Cady, *Microcontrollers and Microcomputers Principles of Software and Hardware Engineering*, Second Edition, Oxford University Press, New York, NY, 2009, ISBN13: 9780195371611, ISBN10: 0195371615. This is a **paperback** book.
 - > See <http://tinyurl.com/3744-ufl>
 - > You can **share** this book
 - > I do **NOT** recommend the *international edition* since international editions are often different
 - > I recommend that you buy this book **USED** or **RENT** it
 - At chegg.com \$27 rent; \$71 used; \$108 new
 - At Amazon \$60 used; \$120 new; \$65 rent
 - At UF bookstore \$90 used; \$120 new; \$48 rent used
 - Campus Books (<http://www.campusbooks.com>)
 - Many choices

As of 9Aug17



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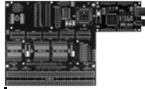
EEL3744: Microprocessor Applications

(DAD/NAD) Digilent/NI Analog Discovery Board

- The **NAD** can be purchased online for \$179 w/ free shipping
 - > www.tinyurl.com/NAD-UF-s18
 - > Select “Analog Discover 2 – Student Only”
- The **DAD** can be purchased online for \$179
 - > www.tinyurl.com/DAD-UF-s18
 - > Select “Get Academic Pricing” before selecting the item
- The UF bookstore has a few of the **NADs** (for \$199) for those that want to use financial aid or want it right away
- I also recommend **NI Multisim**
 - > This is electronic circuit simulation and analysis software
 - > You are likely to use LTSpice or PSpice in other courses, but NI Multisim is much easier to use with a very nice GUI
- I also recommend the **Analog Parts Kit**
 - > This might especially be useful for ECE Design 1 (EEL 3923), as well as those that just want to “play”

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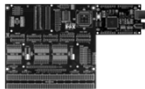


EEL3744: Microprocessor Applications (DAD/NAD) Digilent/NI Analog Discovery Board

- **DAD/NAD** is now required in most ECE courses
 - > The DAD has the following functions:
 - 2-Channel O'scope (1M Ω , \pm 25V diff, 5MHz bandwidth, 100Msample/sec)
 - 2-Channel Waveform Generator (22 Ω , \pm 5V, 14 bit, and last 2 above specs)
 - 16-Channel Logic Analyzer and Digital Pattern Generator
 - \pm 5VDC Power Supplies (+5V at 50mA, -5V at 50mA)
 - Spectrum Analyzer (3.3V CMOS, 100Msample/sec)
 - Network Analyzer (Bode, Nyquist, Nichols; 1Hz-10MHz)
 - Voltmeter (AC, DC, \pm 25V), Digital I/O
 - Digital Bus Analyzers (SPI, I2C, UART, Parallel)
- We will use it in most of our labs and DURING Exam 3a

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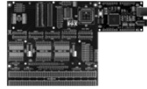


EEL3744: Microprocessor Applications Manuals and Software

- Atmel manuals (from our website and/or Atmel website)
 - >The below **FREE** manuals will be used regularly in the course. A few others will also be used. Get them **ASAP**.
 - https://mil.ufl.edu/3744/docs/XMEGA/doc8331_%20XMEGA_AU_Manual.pdf
 - https://mil.ufl.edu/3744/docs/XMEGA/doc8385_ATxmega128A1U_Manual.pdf
 - https://mil.ufl.edu/3744/docs/XMEGA/doc0856_AVR_Instruction_Set.pdf
- Software
 - >Atmel Studio 7.0 (also **FREE**)
 - An integrated development environment (IDE) for developing and debugging Atmel ARM® Cortex™-M processor-based and Atmel AVR® microcontroller applications (including our XMEGA)
 - See the Atmel Studio 7.0 sp1 Installation Tutorial at
 - https://mil.ufl.edu/3744/docs/Install_Atmel_Studio_7.0.pdf

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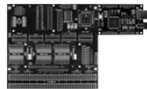


EEL3744: Microprocessor Applications Announcements (Action Items)

- Hardware purchases
 - > Parts paid for with your lab fee (\$200.24)
 - The UF-specified boards designed by *Out of the Box Robotics*, <http://ootbrobotics.com/>
 - > DAD/NAD (Analog Discovery Board) [Required]
 - > **Could buy:** Soldering iron
- Textbook purchase
 - > Can/should be shared
 - > Buy it **used**
- Get twitter account ([@EEL3744](https://twitter.com/EEL3744)) or set up text messages or email from Twitter
- Submit HW 0 **before** 8am on Wed, 10 Jan
- Labs start **Wed, 10 Jan**

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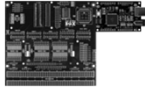


EEL3744: Microprocessor Applications Final Exam

- We have a scheduled final exam on Friday, May 4th at 10am; this is not enough time to grade our exams
- Who has a conflict with any of the following:
 - > Saturday, April 28 - Group 28A (7:30am-9:30am)
 - > **Saturday, April 28 - Group 28B (10am-12pm)**
 - > Saturday, April 28 - Group 28C (12:30pm-2:30pm)
 - > **Saturday, April 28 - Group 28D (3pm-5pm)**
 - > Saturday, April 28 - Group 28E (5:30pm-7:30pm)
 - > Saturday, April 28 - Group 28F (8pm-10pm)
- How about Monday, April 30th?

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EEL3744: Microprocessor Applications More Announcements

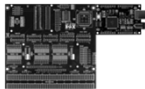
- Class notes (& updates) available on web (for **limited** time)
- Web tour
- Don't blow it up! Exploding Parts
- Doggone it! 


[syl_sl8.pdf](#)

Doggone it!

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EEL3744: Microprocessor Applications

The End!

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