**Spring 2022 Book List**

*Recommendation: please consult with the course instructor before purchasing any material.*


**Required Hardware:**
The Lab-in-A-Box kit previously used in ECE 1004.

2054  *(Applied Electrical Theory – ME students only)*

**Students can opt to purchase:**
Book + Modified Mastering access card: 0134680618

or

*SVE + Modified Mastering access card: 0134680626

or

Modified Mastering access card: 0134487001

*SVE= Student Value Edition which is the loose leaf/ three-hole punched version of the text.

CROSS LISTED WITH AOE 2664

2214  Ellingson, Steven W. **ELECTROMAGNETICS** (I). Blacksburg, VA: VT Publishing, 2018, 225. (Available at: [https://doi.org/10.21061/electromagnetics-vol-1 CC BY-SA 4.0.](https://doi.org/10.21061/electromagnetics-vol-1)) **Author offers free access to this book.**


**Required Course Materials:**
The Lab-in-A-Box kit that was previously used in 1004 and 2024.

Available on the VT online library:

**Required Software:**
1. Modeling and simulation software, such as MATLAB and Simulink.
2. Linux virtual machine and software development environment (open source).
3. Unmanned aircraft simulation and ground station software (open source).

Required Field Equipment:
A technology platform suitable for project-based learning, such as a ready-to-fly quadcopter (provided by the department).


2564 No textbook required.


2804 No textbook required.


3074 No textbook required. All required materials will be made available electronically.

3104 No textbook required. Will use notes and public domain information.


3254 *(Applied Electrical Theory – ME students only)*

**Students can opt to purchase:**
Book + Modified Mastering access card: 0134680618

or

*SVE + Modified Mastering access card: 0134680626

or

Modified Mastering access card: 0134487001

*SVE= Student Value Edition which is the loose leaf/ three-hole punched version of the text.

**STUDENTS SHOULD HAVE FROM TAKING ECE 2054**


Required Software:
Architecture simulator as specified by the instructor. There are several simulators available in the public domain at no cost.


Spring 2022


4254 No textbook required. Co-located with ECE 5224

4284 No textbook required. ECE Department, *ECE 4284 Lab Manual*


Spring 2022
4364/5374G
No textbook required. Instructor provides a free online textbook.

*4424/CS4824
No textbook required.


4514 No textbook required.


4534 No textbook required.

4550/5550G
Same room as 5550G


4564 No cost to students (Full-text available thru VT Library Safari service)


Other resources will be available from on-line sites including the Virginia Tech Library’s e-book and full-text database offerings.

Each student will receive the following hardware for use during the semester:
Raspberry Pi 3 - Model B
32 GB MicroSD Card
Power Supply with micro-USB Cable

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4704 **No textbook required.** Consult with the instructor.

4805 & 4806 (Senior Design Project)
**Required Text:**

4944 Required reference materials will be made available electronically.

4984 Interdisciplinary Design 2. Queen, R. **No textbook required**


*Recommended:*

5224 **No textbook required. Co-located with ECE 4254.**

5264 The instructor will provide a collection of relevant conference and journal papers and reference documents in this field.


5274 Lecture notes provided by the instructor via website, “Modeling and Control of Three-Phase PWM Converters.”
A list of publications related to the subject.

5334 **No textbook required.**
5374G/4364  No textbook required

5424/5824 cross-listed with CS

*(Cross-listed with CS)*  
This book is for sections taught by ECE. SP 2022.

Sections taught by CS will use:


The book is available for free and online from the VT library.

5454  **No textbook required**. Handouts and publication readings provided by the instructor.


5486  Selected journal papers, magazine articles, and conference papers to be provided online.(On-Line MIT only)


5514  **No textbook required**.


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*Recommended:*


5560/CS5560 *No textbook required*. CS teaches for SP 2022.

5566/CS5566 *No textbook required*


5590/CS5590 CS teaches
*No textbook required*


5660 *No textbook required.*


5714 *(Zoom course – originates Northern VA) Class notes and papers will be provided. *No textbook required.*

Spring 2022
5764/AOE5764/ME5564
No textbook required. All course materials will be provided by the instructor through course notes.

5805&5806

5944 No textbook required.

5984 (Special Study-Applications of Machine Learning. Creed Jones) SP22.

5984 (Special Study-HVDC, FACTS, and Renewables. Ali Merihizi-Sani) SP22.
No textbook required

5984 (Special Study-Intro to Quantum Lab-Dr. Wayne Scales). SP22.
No textbook required

5984 (Special Study-Advanced Analog IC Design, Cindy Yi) SP22.

5984 (Special Study-Trustworthy ML. Ruoxi Jia)SP22
No textbook required. Notes and other study materials will be supplied by the instructor.

5984 (Special Study-Deep Reinforcement Learning- Dr. Jason Xuan). SP22.
No textbook required


6154 No textbook required

6174/AOE6174. Taught by AOE.

No textbook required.

6334 No textbook required.

Spring 2022
6524/CS6524
No textbook required.

6744  No textbook required.
(CROSS-LISTED with AOE6744/ME6544)

6774  State-of-the-art written notes will be provided by the instructor. – ME teaches.
(CROSS-LISTED AOE6774/ME6574)