Spring 2020 Book List

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


My programming Lab is not required.


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


**Required Course Materials:**

List modified on Monday, February 24, 2020
The Lab-in-A-Box kit, previously used in 1004 and 2024.

*2274 ECE Department, **ECE 2274 Lab Manual.** Available on-line.


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).


*2534 **No textbook required.**


*2564 **No textbook required.**


Mathworks, **The Student Edition of Matlab.** Distributed in TORG.


List modified on Monday, February 24, 2020
*2804 No textbook required.


*3074 All required materials will be made available electronically

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

Free Electronic Book for students: [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.**

**Recommended:**

Free Electronic Book for students: [https://doi.org/10.21061/electromagnetics-vol-2](https://doi.org/10.21061/electromagnetics-vol-2). CC BY-SA 4.0

**Author offers free access to this book.**

**Recommended:**


*3154 No textbook required. The supervising instructor will create and furnish user-guides for the students prior to each laboratory exercise to ensure that equipment can be operated safely and effectively.

*3174 No textbook required. This is a newly developed laboratory course and no existing textbooks are available on the market.


List modified on Monday, February 24, 2020

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

Students can opt to purchase:
- Book + Modified Mastering access card: 0134680618
- *SVE + Modified Mastering access card: 0134680626
- 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**


Students should have from taking 2704.


List modified on Monday, February 24, 2020


*4284  ECE Department, *ECE 4284 Lab Manual*


*4364/5374G  No textbook required


(Cross-listed with CS )

CS teaches during SP2020.

*4514  (No textbook required.)  
For SP 2020 Dr. Dong Ha will use:  

Updated by Dr. Lynn Abbott on 5/23/19

*4534  No textbook required.

Same room as 5550G


*4564  (Full-text available thru VT Library Safari service)


List modified on Monday, February 24, 2020


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


*4644  TBD. Waiting for the publisher to release the newest edition of the book. Consult with instructor.

*4704  TBD. Consult with instructor.

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

*4944  Required reference materials will be made available electronically.

*4984 & 5984 (Electronic Packaging-Special Study-Christina DiMarino)  
No textbook required. Notes and other study materials will be supplied by the instructor.

*4984 & 5984 (Scott England) Taught with AOE.  

*5106  (Zoom course – originates Blacksburg)


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


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

*5374G/4364* No textbook required

*5424/5824* cross-listed with CS
ECE teaches these sections for SP 2020.


*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)
*5504/CS5504  
No textbook required.

*5514  No textbook required.


*Recommended:*  

*5550G/4550  

*5560/CS5560  

*5564 No textbook required

*5566/CS5566  
*Free for students, instructor will provide the link.*


*5590/CS5590 CS teaches  
No textbook required


List modified on Monday, February 24, 2020


*5704* Cross-listed with ME. No required text. Exam notes will be provided.


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

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

*5944* **No textbook required.**

*5984 & 4984* (Special Study-Electronic Packaging-Special Study-Christina DiMarino) Notes and other study materials will be supplied by the instructor.


Paper and Lecture Notes
Cadence Virtuoso Custom IC Design Tools


*5984* (Special Study-Innv Pthwys AI & Mach Lrng-VT-MIT-K. Giles)

**5984** *(Special Study-Cyber-Physical Systems Security-R. Gerdes)*
None. Papers and excerpts of books will be provided by the instructor.

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

**5984** *(Special study-Quantum engineering-V. Kovanis)*


**5984** *Special Study (Adv HV & Elect Insulation Eng. Mona Ghassemi)*

**6174/AOE6174. Taught by AOE.**

**6204** Adv Topic: Power Electronics for Motor Drives. (Jason Lai)
*No textbook required.*

**6304** Adv Topic: HVDC, FACTS, and Renewables. (Ali Mehrizi-Sani)
*No textbook required.*

**6524/CS6524**
*No textbook required.*

**6564** *No textbook required.*. Course materials provided by instructor.

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

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

List modified on Monday, February 24, 2020