

Course Syllabus [\(printable copy\)](#)

Course:

Technician Class License Course

Location:

Science Center, fourth floor, room 416
Montgomery College
51 Mannakee Street
Rockville, MD 20850

Dates and time:

Saturdays, March 28, 2015 to May 2, 2015, 9 AM to 12 Noon

Course objectives:

- prepare you for the Technician Class license test
- learn some radio science
- learn some electronics
- foster group learning and self study - "a license to learn"
- foster [public service and community service](#)
- foster community - belonging to the ham radio fraternity and sorority
- encourage technical experimentation
- have fun

Purpose of the Technician Class license test:

- to test you on concepts and procedures on how to operate amateur radio equipment **safely** and **legally**

Instructors:

- March 28 - Ben Acton, K3RYR
- April 4 - John O'Brien, K3LO
- April 11 - Tom Horne, W3TDH
- April 18 - Al Taylor, KN3U
- April 25 - Glenn Simons, N3COB
- May 2 - Joe Signorelli, AB3CR

- host – David Bern, W2LNX

Course email address:

education@marcclub.org

Study resources:

- [The ARRL Ham Radio License Manual \(HRLM\)](#), 3rd Edition, ISBN: 978-1-62595-013-0
- [ARRL HRLM Exam Review software](#)
- [Element 2 Technician Class Question Pool](#)
- [more study resources](#)

Sponsors:

- The [Montgomery College Chapter of the IEEE](#)
- The [Montgomery Amateur Radio Club \(MARC\)](#)

Course Schedule

Session 1: Saturday, March 28, 2015, 9 AM to 12 Noon

- [agenda](#)
- obtaining the FCC Federal Registration Number
- strategies for preparing for the test
- [module 1](#) – Welcome to Amateur Radio: HRLM pages 1-1 to 1-22
- [module 2](#) – Radio Waves and Signals: HRLM pages 2-1 through 2-6
- [module 3](#) – Modulation & Bandwidth: HRLM pages 2-6 through 2-11
- demonstration – operating an hand held radio over an FM repeater

Session 2: Saturday, April 4, 2015, 9 AM to 12 Noon

- [agenda](#)
- [module 4](#) – Electricity: HRLM pages 3-1 through 3-6
 - [notes](#) from John, K3LO

- [module 5](#) – Ohm’s Law, Power and the Metric System: HRLM pages 3-4, 3-5 and 2-2
 - [notes](#) from John, K3LO
- [module 6](#) – Electronic Components: HRLM pages 3-6 through 3-15
 - [notes](#) from John, K3LO
- [module 7](#) – Types of Radio Circuits: HRLM 2-11 and 2-12, and pages 3-16 through 3-19
 - [notes](#) from John, K3LO
 - [Technician Class question pool graphics](#)
- demonstration – transmitting a form between small laptop computers connected to two radios

Session 3: Saturday, April 11, 2015, 9 AM to 12 Noon

- [agenda](#)
- [module 18](#) – Safety and Amateur Radio: HRLM pages 9-1 through 9-14
 - Table 1 of [FCC RF-Exposure Regulations -- the Station Evaluation](#)
- [module 13](#) – Communicating with Other Hams – Part 1: HRLM pages 6-1 through 6-20
- [module 14](#) – Communicating with Other Hams – Part 2: HRLM pages 6-21 through 6-33
- demonstration – sending email to the Internet using Winlink over packet radio

Session 4: Saturday, April 18, 2015, 9 AM to 12 Noon

- [agenda](#)
- [module 11](#) – Basic Amateur Radio Station Equipment: HRLM pages 5-1 through 5-13
- [module 12](#) – Power Supplies and RF Interference: HRLM pages 5-14 to 5-24
 - [module 12 improved](#)
- demonstration – operating digital voice radio on the D-STAR system

Session 5: Saturday, April 25, 2015, 9 AM to 12 Noon

- [agenda](#)
- [module 8](#) – Propagation: HRLM pages 4-1 to 4-5 on propagation
- [module 9](#) – Antennas and Feed Lines: HRLM pages 4-5 through 4-10, page 5-4
- [module 10](#) – Practical Antenna Systems: HRLM pages 4-11 through 4-19
 - [What is a decibel?](#)
- demonstration – Automatic Packet Reporting System (APRS)

Session 6: Saturday, May 2, 2015, 9 AM to 12 Noon

- [agenda](#)
- [module 15](#) – License Regulations and License Privileges: pages 7-1 through 7-10, and pages 7-12 through 7-17
 - CFR – [Part 97 – Amateur Radio Service](#)
 - the [ARRL band plan](#)
- [module 16](#) – Call Signs and Operating Regulations – Part 1: HRLM pages 7-19 through 7-22, pages 8-1 through 8-6, and pages 8-9, 8-10
- [module 17](#) – Call Signs and Operating Regulations – Part 2: HRLM pages 8-7 and 8-8, and pages 8-10 through 8-13
- demonstration – high-speed wireless networking

Volunteer Examiner test session: Saturday, May 9, 2015, 9 AM to 12 Noon

- [registering for the exam session](#)
- [study resources](#)

updated: May 1, 2015 07:55:56 AM