Berrien Springs Partnership Syllabus and Instructor Qualifications

# **CLASS TITLE: Amateur Radio Technician Class License****GRADE OR AGE LEVELS: Grades 6-12****START DATE: September 2023 END DATE: Dec/Jan 2023# WEEKS TOTAL: 11 WEEKS OFF: DAY/TIME REQUIRED: Monday ADD’L DAYS/WK AVAILABLE:** # **HOURS (REQUIRED):** 2 hours/week # **HOURS (POSSIBLE): TOTAL SEMESTER HOURS POSSIBLE: 22, additional hours available if needed, remainder of time spent after completion of objective will be to work on the next level of license.****LOCATION/ADDRESS: Lakeside Family Church, 6999 Red Arrow Highway, Stevensville, MI 49127 (tentative pending OK from them)DIRECTIONS TO LOCATION (if needed):****MAIN INSTRUCTOR: Earl Morse****ADDITIONAL PRIMARY INSTRUCTORS (background checked):**

# **CONTACT INFORMATION:**

Earl Morse

**phone: 734.740.8665**

**email: n8ss2014@gmail.com**

ADDITIONAL REGISTRATION AT SITE REQUIRED? YES NO
IF YES, INSTRUCTIONS FOR REGISTRATION:

# MAIN INSTRUCTOR QUALIFICATIONS: BSEE, Amateur Radio Extra Class License N8SS

COURSE DESCRIPTION (complete overview shown on website): The class will provide all the training to allow the student to pass the Technician Class Level Amateur Radio License exam allowing them to obtain the Technician Class Amateur Radio License. This is the entry level license for Amateur Radio.

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# SYLLABUS/OUTLINE: weekly breakdown of Project-Based Learning activities

1. Introduction to Amateur Radio
	1. What is Amateur Radio
	2. The FCC and Licensing
	3. Amateur Radio Activities
	4. Getting your Ham License
2. Radios and Signals Fundamentals
	1. Radio Signals and Waves
	2. Radio Equipment Basics
3. Electricity, Components, and Circuits
	1. Electricity
	2. Component and Units
	3. Radio Circuits
4. Propagation, Antennas, and Feed Lines
	1. Propagation
	2. Antennas and Radio Wave Basics
	3. Feed Lines and SWR
	4. Practical Antenna Systems
5. Amateur Radio Equipment
	1. Modulation
	2. Transmitters and Receivers
	3. Digital Communications
	4. Power Supplies and Batteries
6. Communication With Other Hams
	1. Band Plans
	2. Making Contacts
	3. Using Repeaters
	4. Nets
	5. Communications for Public Service
	6. Satellite Operations
7. Licensing Regulations
	1. Licensing Terms
	2. Bands and Privileges
	3. International Rules
	4. Call Signs
8. Operating Regulations
	1. Control Operators
	2. Identification
	3. Interference
	4. Third-Party Communications
	5. Remote and Automatic Operation
	6. Prohibited Transmissions
9. Safety
	1. Electrical Safety
	2. Managing RF in Your Station
	3. RF Interference (RFI)
	4. RF Exposure
	5. Mechanical Safety
10. Technician Class Question Pool
	1. Syllabus
	2. Subelement T1—Commission’s Rules
	3. Subelement T2—Operating Procedures
	4. Subelement T3—Radio Wave Propagation
	5. Subelement T4—Amateur Radio Practices
	6. Subelement T5—Electrical Principles
	7. Subelement T6— Electronic and Electrical Principles
	8. Subelement T7—Practical Circuits
	9. Subelement T8—Signals and Emissions
	10. Subelement T9—Antennas and Feed Lines
	11. Subelement T10—Safety

*Class room activities will be tailored to meet the objectives of the weekly topics. Each class will cover one chapter of the study guide. Some of the chapters may be extended over two class periods if needed.*

# COURSE OBJECTIVES AND APPROXIMATE TARGET DATES:

*Weekly quiz on topics covered to date with questions from the FCC question pool.*

*Final Test is successful completion of the FCC Technician Class License Exam which will be offered as part of the class in class.*

STUDENT ASSESSMENT - what will be used to evaluate student progress and/or end of semester pass/fail status?
Pass criteria is successful completion of the FCC Technician Class License Exam by the end of the semester resulting in issuance of the Technician Class license and callsign.

All classes abide by the following:

1. Student agrees to attend at least 80% of class sessions/lessons offered. Attendance is kept online and tracked by Partnership staff. Failure to meet 80% or be on track to meet 80% may result in program discontinuation.
2. The Partnership Student Assessment or Performance Form is filled out by the teacher and turned in to Partnership staff. The link to this form is found on the web page for this class. Failing marks for lack of participation, behavior issues, practice time, etc. may result in program discontinuation.

**Class-specific assessment:** discuss and include the form or a link to the form that you use.

# ADDITIONAL RESOURCES: (online, books, video, etc.):

In addition to the text mentioned above these are some of the more common resources available online:

FCC Part 97

https://www.ecfr.gov/current/title-47/chapter-I/subchapter-D/part-97

General Class License Question Pool

http://www.ncvec.org/page.php?id=373

General Amateur Radio Information

www.arrl.org

# CLASS POLICIES: ATTENDANCE, BEHAVIOR, WEATHER, ETC.

**Attendance:**

**Behavior:**

**Weather: Same as Bridgman Public Schools**

**Other:**