

**Sterling Park Amateur Radio Club (SPARC)
General License Preparation Class: 01-02 February 2020**

1. The Sterling Park Amateur Radio Club (SPARC) will conduct a General License preparation class.
2. **Date/Time:** Saturday and Sunday, 01-02 February 2020
Class: Saturday, 01 February 2020, 0800 hrs. – 1700 hrs.
Sunday, 02 February 2020, 0800 hrs. – 1700 hrs.
Exam: Sunday, 23 February 2020
Separate instructions will be issued for the licensing examination on February 23, 2020.
3. **Venue:** Office of the Sheriff, Eastern Loudoun Station, 46620 E. Frederick Drive, Sterling, VA 20164
4. **Attendees:** All interested persons are invited to participate in the General License preparation class. Classroom space is limited, so prior registration is required.
5. **Fees:** There is no fee for participation in the General License preparation class.
6. **Coordinator:** The General License Preparation Class Coordinator is Amitabha “Amit” Mukherjee, WY2Z, amit5201@gmail.com.

7. General Class Question Pool and Pre-class Study Materials:

2019-2023 General Class Question Pool:

<http://www.arrl.org/files/file/VES/2019-2023%20General%20Class%20Pool%20Final%20with%20errata.pdf>

Students are advised to read a General License class study guides such as:

ARRL at <http://www.arrl.org/shop/ARRL-General-Class-License-Manual-9th-Edition/>

W5YI Group General Class Study Manual: https://www.w5yi.org/catalog_details.php?pid=87&sort=6

David Casler (KE0OG): <https://dcasler.com/ham-radio/general/>

David Casler has uploaded numerous videos on YouTube

<https://www.hamstudy.org/general2019>

https://www.w5yi.org/catalog_details.php?pid=89&sort=6 (audio course)

ARRL General Class License Manual (used):

https://www.thriftbooks.com/w/general-class-license-manual-with-cdrom_american-radio-relay-league/803146/item/7211812/?mkwid=zsr0BR3r%7cdc&pcriid=70112885352&product=7211812&plc=&pgrid=21326561472&ptaid=pla-294813787156&utm_source=google_shopping&utm_content=zsr0BR3r%7cdc%7cpcrid%7c70112885352%7cpcpw%7c%7cpmt%7c%7cproduct%7c7211812%7cslid%7c%7cpgid%7c21326561472%7cptaid%7cpla-294813787156%7c&gclid=Cj0KCQiAtrnuBRDXARIsABiN-7B_iaHNQh6SH5iZgKiXOg4CNd_caYI1B6_q16jKaTXIrPqriX0twxoA6mEALw_wcB#isbn=087259811X&idq=7211812

Students are not required to bring any study guides to the class.

Online Practice Exams are available and may be used by students. Several sites are available, such as:

<http://arrlexamreview.appspot.com/>

<https://www.hamstudy.org/general2019>

<http://copaseticflows.appspot.com/hamtest>

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<https://www.qrz.com/hamtest/>
<https://hamexam.org/exam/16-General>
https://hamexam.org/flash_cards/16-General
<http://www.eham.net/exams/>
https://app.aa9pw.com/users/sign_in

8. Refreshments (Coordinators: Gordon NQ4K and Amit WY2Z):

- a. Donuts and coffee prior to beginning of class each day
 - Donuts - 2 dozen /10 people for each day
 - Coffee – 1 30-cup pot of regular coffee per day
- b. Soft drinks: 1 case water, 2 cases (24 each) soda placed in cooler with ice
- c. Disposables: Roll of paper towels, disposable cups, trash bags

10. Lunch: Participants should provide for their own lunch each day (i.e. bring a bag lunch or go out).

11. Instructor-Guided Classes:

Sixteen hours of classes will cover all sub-elements of the General Class licensing examination.

Schedule: General License Classes

Element & Description	No. of Sub-Elements	Questions ¹	Start Time	Duration	Instructor
Saturday 01 February 2020					
<u>G1 – COMMISSION'S RULES</u>					
G1A – General class control operator frequency privileges; primary and secondary allocations G1B – Antenna structure limitations; good engineering and good amateur practice; beacon operation; prohibited transmissions; retransmitting radio signals G1C – Transmitter power regulations; data emission standards; 60-meter operation requirements G1D – Volunteer Examiners & Volunteer Examiner Coordinators; temporary identification; element credit G1E – Control categories; repeater regulations; third-party rules; ITU regions; automatically controlled digital station	5	5/61	0800	2:00	To be announced
<u>G2 – OPERATING PROCEDURES</u>	5	5/60	1000	2:00	To be announced

¹ Indicates number of questions in the test/total number of questions in this Element's question pool

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G2A – Phone operating procedures; USB/LSB conventions; breaking into a contact; VOX operation G2B – Operating courtesy; band plans; emergencies, including drills and emergency communications G2C – CW operating procedures & procedural signals; Q signals & common abbreviations; full break-in G2D – Volunteer Monitoring Program; HF operation G2E – Digital operating procedures					
<u>G3 – RADIO WAVE PROPAGATION</u> G3A – Sunspots and solar radiation; ionospheric disturbances; propagation forecasting and indices G3B – Maximum Usable Frequency; Lowest Usable Frequency; propagation G3C – Ionospheric layers; critical angle & frequency; HF scatter; Near Vertical Incidence Skywave	3	3/36	1200	1:00	To be announced
<i>Lunch</i>			1300	0:45	
<u>G4 – AMATEUR RADIO PRACTICES</u> G4A – Station operation and setup G4B – Test & monitoring equipment; 2-tone test G4C – Interference to consumer electronics; grounding; DSP G4D – Speech processors; S meters; sideband operation near band edges G4E – HF mobile radio installations; alternative energy source operation	5	5/67	1345	2:00	To be announced
<u>G6 – CIRCUIT COMPONENTS</u> G6A – Resistors; capacitors; inductors; rectifiers; solid-state diodes & transistors; vacuum tubes; batteries G6B – Analog and digital integrated circuits (ICs); microprocessors; memory; I/O devices; microwave ICs (MMICs); display devices; connectors; ferrite cores	2	2/28	1545	1:15	To be announced
End of Saturday Class			1700		
Sunday 02 February 2019					
<u>G5 – ELECTRICAL PRINCIPLES</u>	3	3/43	0800	1:30	To be announced

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G5A – Reactance; inductance; capacitance; impedance; impedance matching G5B – The decibel; current and voltage dividers; electrical power calculations; sine wave root-mean-square (RMS) values; PEP calculations G5C – Resistors, capacitors, and inductors in series and parallel; transformers					
<u>G0 – ELECTRICAL AND RF SAFETY</u> G0A – RF safety principles, rules and guidelines; routine station evaluation G0B – Station safety: electrical shock, safety grounding, fusing, interlocks, wiring, antenna and tower safety	2	2/25	0930	1:00	To be announced
<u>G7 – PRACTICAL CIRCUITS</u> G7A – Power supplies; schematic symbols G7B – Digital circuits; amplifiers and oscillators G7C – Receivers and transmitters; filters; oscillators	3	3/40	1030	1:30	To be announced
<i>Lunch</i>			1200	1:00	
<u>G8 – SIGNALS AND EMISSIONS</u> G8A – Carriers and modulation: AM; FM; single sideband; modulation envelope; digital modulation; overmodulation G8B – Frequency mixing; multiplication; bandwidths of various modes; deviation; duty cycle; intermodulation G8C – Digital emission modes	3	3/38	1300	1:30	To be announced
<u>G9 – ANTENNAS AND FEED LINES</u> G9A – Antenna feed lines: characteristic impedance and attenuation; SWR calculation, measurement, and effects; matching networks G9B – Basic antennas G9C – Directional antennas G9D – Specialized antennas	4	4/54	1430	2:00	To be announced
Practice Tests (time permitting)			1630	0:30	TBC
End of Sunday Class			1700		