



# W6RFU Amateur Radio Club at UCSB

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## What is the Amateur Radio Club?

The Amateur Radio Club at UCSB's goal is to help its members discover and explore amateur radio communications. Older than UCSB itself, the club was founded in 1939 at the Santa Barbara State College. The club holds regular meetings and offers advice and guidance to its members and the community. The club is open to all students, staff, faculty, and alumni.

## What is amateur, or ham, radio?

From Heinrich Hertz's discovery of radio waves, there has been a need to experiment with radio communications. Recognizing this, the Amateur Radio Service was created in 1913. A wide range of frequencies are allocated for the use of hams, from 1.8 MHz to 250 GHz. There are numerous ways to communicate with these frequencies and a huge variety of things to do on the air!

## What are some of the things I can do with ham radio?

There are countless activities one can do on the air. A small selection of them are:

- **HF or Shortwave** radio can travel all over the world. It is not uncommon to talk to countries such as Japan, Spain, Russia, Cuba, Brazil, among others. Hams can use voice, Morse code, text and images. Some hams challenge themselves with contacting every single country in the world, an activity called **DX**. Hams clamor for the opportunity to contact rare locations such as the Nicobar Islands, in order to collect all 337 countries. The club has a very well equipped HF station and antenna located in Harold Frank Hall which is open to all members at any time.
- **Contests** are a very fast-paced and competitive part of ham radio. Combining knowledge of radio propagation, station design, and mental endurance, hams try to contact as many stations as possible in a period of time. The focal point is the **Collegiate Championship**. In 2006, we beat schools like the University of Michigan, USC, and Harvard, and won a first-place award in our division.
- **Satellite** communication is made possible by spacecraft designed and launched by amateur radio operators. In fact, more than 50 amateur satellites have been flown and one is being built for Mars! The club and its members have the equipment necessary to do this. A project of the club is to design and build a permanent station.
- **Repeaters** are used to allow long-distance communication from handheld radios. The club operates two repeaters, including one on Storke Tower. Several members in the club purchase surplus radios for pennies on the dollar and modify them for ham radio use. Often, we hold **nets** on our repeaters so that our members gain experience.
- **And more!** These include portable and very low power radios, **experimental digital communication**, GPS and telemetry, assisting the Red Cross, law enforcement and sporting events in **event and emergency communications**, designing and constructing equipment, **microwave communications**, restoring vintage radios and **radio astronomy**. The local ham radio club is among the leaders in **radio direction finding**.

## What is required to get started?

Membership in the club is open to all students, faculty, and staff of UCSB. There is no membership fee. In order to transmit on the air, a license is required from the FCC. The only fee is \$14 to take the test, and you do not need to be a US citizen. There are three classes of license, each with more frequencies and privileges. All that is required is a multiple-choice written test. In fact, all of the test questions are public and online. There is no longer a Morse code test. The club will assist you in studying for the test, answer questions, and can arrange for a test on campus.

For more information, meeting times and locations contact Jon Suen, [jsuen@ece.ucsb.edu](mailto:jsuen@ece.ucsb.edu), or the club advisor, Prof. Steve Long, [long@ece.ucsb.edu](mailto:long@ece.ucsb.edu).

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