

Ham Radio Class yields FCC licenses

Students in Rice University course Phys 401 “The Physics of Ham Radio” (spring 2005) got a special bonus when passing their midterm – an FCC license to “go on the air”. The class, which covered electronics, waves, antennas, the ionosphere and space weather, contained enough material to allow students to pass their lowest-level “Technician” amateur radio license. So, for their midterm exam, six Volunteer Examiners from the Northwest Amateur Radio Society (W5NC.org) came to administer their FCC-sponsored tests. Only the Technician level test was required by the course, but many of the students also studied Morse Code and other higher-level topics. Amateur radio has four licensing tests: Part 1: Morse code (listening at 5 words per minute); Part 2: Technician (theory and operations) – the part that was required of the class; Part 3: General (theory and operations) and Part 4: Extra (high level theory and operations). Students who pass only Part 2 are allowed to transmit on all amateur bands above 50 MHz, including satellite transmissions, model airplane control, and the wide 2-m and 70 cm network of repeaters. Students who in addition pass the code (Part 1) pick up a little slice of 10m HF (long distance) authorization, plus CW (Morse and other digital) on parts of other HF bands – opening up the world. Passing Part 3 opens up all legal bands to voice and data communication, and Part 4 gives free reign to all legal bands, including some slices reserved only for “Extras”.

At the beginning of the class, only two students had an FCC license: David Carr, who was a technician (KD5QGR) and Sean Bard who was a General (KC2DXF). One of the students enrolled was a graduate student; nine are undergrads and four are local teachers, with two auditors. After the midterm we now have 12 new licensees, and David, passing three tests, jumped all the way to Extra. Jeff Triffo also passed three tests and leaped to General class!

Here are the newest Rice “hams” and their FCC-assigned “call signs”.

Rob Smith (KE5EIJ)

Parker Redman (KE5EIK)

Mohammad Abid (KE5EIL) (teacher)

Jorge Campos (KE5EIM) (teacher)

Nancy Schultz (KE5EIN) (teacher)

Matthew Allen (KE5EIO)

Emrys Landivar (KE5EIP)

Susan Creager (KE5EIQ) (also passed Part 1) (teacher)

Roman Natoli (KE5EIR) (also passed Part 1)

Rui Liu (KE5EIS)

Jeff Triffo (KE5EIT) (also passed Part 1 and 3)

Jayce Dowell (KE5ETA)

David Carr (KD5QGR) passed Parts 1, 3 and 4 and is now EXTRA!

One class member (Jayce Dowell) passed his exam at the monthly test sponsored by the Red Cross, so his call sign is not "in order" with the rest.

MANY thanks to Norm Covey-K5OS, Madison Jones-W5MJ, Gregg Erlenbusch-W5IDX, Eddy Reynolds-K5WQG, Keith Dutson-NM5G and Paul Frantz-W5PF who served as Volunteer Examiners, and to George Pierce (W5GFP) and Colin Jenkins (KU5B) who have been helping with the class. Special kudos to George for his antenna installation work! The antenna installation costs were borne by the Physics and Astronomy Department; the radios, wiring, and other materials were paid for by the Center for Integrated Space Weather Modeling (<http://www.bu.edu/CISM>), an NSF-funded Center headed at Boston U but with participation around the country.



Rice students Emrys Landivar, Jorge Campos, Susan Creager, Mohammad Abid, Parker Redman, Jeff Triffo and Rui Liu show off their new Certificates.

The second half of the class covered solar and space weather topics, including solar storms, the ionosphere, and the magnetosphere. It also included a session on satellite contacts and digital modes including slowscan TV. With this terrific kickstart, it will become a regular on the Rice catalog of courses (offered every other year). And with the new hams, we may just get the Rice radio club (W5YG) back on the active register of clubs... who knows, we may even try for the vanity call WR1CE for our founder William Rice! Folks who are interested in meeting the new hams and/or restarting the Rice Ham Club, please drop a line to reiff@rice.edu.



Left to right: new “Extra” David Carr; course helper Colin Jenkins, VE’s Gregg Erlenbusch, Paul Frantz (seated), Keith Dutson, Madison Jones, Norm Covey (seated), new Tech-plus Susan Creager, and Eddy Reynolds, all smiling after a spectacular performance by the Rice students.