Senior Design, Spring 2014, Class Project

Each Team shall develop and demonstrate a prototype electronic duck call the models the operation of a Duck Commander duck call. Each team shall receive one Duck Commander duck call and evaluate it in the Auburn University acoustics testing facility. Each team will then analyze their data and construct a circuit to mimic the audio response of their duck call. Each team will test their electronic duck call in the acoustics testing facility to compare it with their actual duck call. Additionally, we, as a class, plan to field test the electronic duck call at a local lake.

Some Implementation Options
1) Playback a digital recording(s) of the duck call
2) Reconstruct a compressed duck call recording
3) Mathematically model the duck call and implement in a microcontroller
4) Analog circuit model of the duck call

Useful Skills for a Team
1) Analog electronics
2) Digital electronics
3) Audio electronics
4) Embedded programming
5) Packaging
6) Circuit board design
7) Assembly
8) System integration
9) Signal processing
10) Battery and power electronics
11) Organizational skills
12) Money management
13) Team management
14) Use of duck or other bird calls