GENERAL THOUGHTS ON SUCCESS IN GRAD SCHOOL
Plagiarized from Coley, Feener, Dearing, Thompson (see web), Huey (see web)

1. Being in grad school is a privilege. Extraordinary freedom to focus on your own interests. Never really again.
2. Professional transformation. You will change from being someone who reads the literature to someone who writes it. It can be an intimidating prospect, but you don’t arrive overnight. And it is possible. Grad school is designed to get you there, as long as you do the work and the intellectual growing. Push yourself. It is exciting.
3. Many career options. A PhD in Biology can open many doors, including being at a research U, a teaching college, conservation NGOs, government positions… Keep your mind open to the various options, and don’t feel that you are stuck in a rut, eg this training is only for academics
4. Don’t worry. you are smart enough and you can do it.
5. Be positive. Seize opportunities. (Huey)
6. Be nice. Competitive interactions are not that productive.
7. Become a professional. Be a biologist for the rest of your life. There is no such thing as pulling an all-nighter for the final and forgetting about it all. (e.g. start a reprint collection, think of your projects as publishable, develop contacts). There are mentors, but not teachers; there are “goals,” but not exams.
8. Work hard. This means long hours, working during vacations etc. There are no time clocks, but there is lots to do.
10. Surround yourself with good people. Interactions encourage rewarding exchanges. You will learn more from your fellow grad students and from unexpected places than from your classes and even your advisor. So interact!
11. Communicate with your advisor. Keep them updated (be organized), ask their advice (be appreciative), give lead time for reading grants, writing letters of recommendation etc.

SPECIFIC SKILLS
1) Excellent communication skills.
1) You need to be able to write clearly and concisely. If you can’t do this, you will need to take a course in technical writing or find some other way to improve your writing ability. You cannot succeed without this skill. (see ‘writing tips’ on web).
2) You need to be able to comfortably give oral presentations that are articulate, engaging and informative. The best way to improve your skills here is by giving plenty of talks in both formal and informal contexts.
3) You need to be able to teach students that know far less than you do. Acting as a Teaching Assistant, and taking the job seriously, is an excellent way to improve your teaching skills. The university also has a variety of yearly workshops to help in this task.
4) You need to be able to interact informally and comfortably with other professionals. If you are excessively shy, take steps to draw yourself out. If you are excessively dominant, take steps to tone yourself down. The best way to improve your smoozing skills is by chatting with your colleagues and with visiting seminar speakers. Go to all seminars and meet with those in your field, either alone or as a group with other students.
2) Excellent analytical skills.
You will need to develop a set of analytical skills that allow you to evaluate the logic of
scientific arguments; develop a research project that is tightly reasoned, realistic, feasible and
fundable; and collect and analyze data and/or develop theoretical models, often under less than
ideal conditions. The specifics of these skills will depend on your interests and the details of your
dissertation project. Your skills will be developed over the course of your graduate career, not all
at once. Acquisition of such skills is a life long process. Here are some of the more basic skills
that are helpful for students in any lab:
1) Reading the literature. You should develop the ability to critically evaluate the scientific
papers that you read (i.e., why are they good and/or what are their shortcomings). This is a skill
you will develop in a mostly informal fashion, rather than in a classroom.
2) Skills in statistical analysis and experimental design. A basic understanding of theory
behind statistics and knowledge of common tests used (e.g., T-test, ANOVA, ANCOVA,
contingency table analysis and log linear models, and various non-parametric statistical tests).
3) Theory. You should have a deep appreciation for the “big” ideas in ecology and evolution
and a basic understanding of the major theoretical constructs in these fields (e.g., ESS models,
frequency dependent models, optimality models, etc.).

SUGGESTED SCHEDULE
Year 1:
1) boot camp (fall)
2) apply for all appropriate grants (NSF fellowship, Sigma Xi, specialties in your field, STAR
http://epa.gov/ncer/rfa)
3) read papers from your lab
4) read papers in areas of interest to help define a thesis topic
5) Ecology and evolution course (spring)
6) Prelim review paper (spring)
7) Thesis research (start field work if appropriate – summer) or specialty course (e.g. OTS)

Year 2:
1) take R statistics class (if appropriate – fall)
2) apply for all appropriate grants (always)
3) If possible, get a small paper published
4) Thesis proposal (spring)

Years 3-4:
1) do thesis research
2) write papers
3) attend a national meeting, make contacts

Year 5:
1) Finish writing thesis papers
2) apply for postdocs/jobs
3) present at a national meeting