Quick tips

Quick and/or doable interventions for success in getting undergraduate students to be successful in applied mathematics

Tips for research

== (3P's by Ami Radunskaya)

Pitfalls

- Wishing that students were different or better prepared
- Wishing that students were more independentPossibilities

- Instead of a final paper, have a sketch for a final paper
- Expect to work a couple of summers on the same topic to publish a paper.
- Write up a MOE = Memorandum of Expectations. Have students keep a log and a lab book with all notes that YOU own.
- Invest up front.
- ReST = give Resources, Samples, and Templates.
- Group assignments and accountability.
- Weekly discussion of results. Organize speaking seminars with other faculty/student teams.
- Try to facilitate peer mentoring.
- Believe in the students.Prayers

- Find 2-3 students who work well together (have complimentary skills).
- Have a project that a small question can be well-articulated and you know how to answer that question.
- Students have some programming/scientific computing skills.
- Students know how to navigate research database, LaTaX, Beamer, and Jabref.
- Students know how to critically read papers, how to cite properly, and how to synthesize information from multiple sources. ==

Summer research tips

(Tips 1-14 courtesy of Chad Topaz)

1. Remember it is more like teaching than research
2. Set expectations with students (# hours, deliverables, setbacks, etc.)
3. Give students a realistic experience
4. Getting a paper out is secondary

5. Have a long time horizon
6. Continue in later summers, or via senior thesis, or course projects, or…
7. Student work in teams of 2-3 (if resources allow)
8. Meeting with students every single day
9. Code together with students
10. Teach a lit review
11. Teach organization (folders, commenting, [BibTex](#), etc.)
12. Teach/practice giving a talk
13. Incorporate other professional development activities
14. Incorporate social activities