Challenges of Undergraduate Research

1. Lack of time for students and faculty
2. Motivating and focusing students
3. Choosing accessible and interesting topics
4. Balance of praise and honesty to give a student
5. Handling student frustration
6. Exposition skills of the student
7. Defining undergraduate research
8. Students do not have tools necessary to begin research
9. Reconciling faculty vs. student interest
10. Lack of institutional support

Suggestions for Faculty Credit for Undergraduate Research

1. Credit for colloquium, rotating this around between all the faculty
2. Begin teaching a “research methods” course before doing research
3. Look at other departments, like psychology and biology, for ideas and to be able to follow a precedent
4. Must educate Deans regarding these issues
5. Remind deans that mathematics research with undergrads, however, can be different than other disciplines, because the professor must learn new math, may not be able to use it to progress his or her own research, etc.
6. The more faculty that are involved the more Deans and decision makers will understand the need
7. Tenure evaluators must value writing papers with students above writing papers alone
8. “Mentoring” should count even when papers are not produced
9. Publicize achievements in undergraduate research
10. Student symposium day to get student research work recorded
11. Cooperation between between institutions
12. Important for Deans or presidents to keep in mind are the retention of faculty and the recruitment of students

Models

1. Summer REU
2. Undergrad thesis requirement
3. Thesis requirement only for honors students
4. No formal program -- Professors encouraged to do it on their own
5. Tack on requirements for student research for scholarship
6. Use research to fulfill internship requirements