The main purpose of undergraduate research is to learn how to do research, not necessarily to get results.
- The learning process is important.
- Give value to failure by treating it as a result.
- Take the time to thoroughly train undergraduates to avoid mistakes later. Set up Standard Operating Procedures.
- Failure is both an opportunity to teach undergraduates disciplinary norms and a chance for the mentor to reflect on his/her/their own teaching skills.
- Help students connect their research to their career goals.
- Think about this analogy: research is like a brick and a theory is like a wall. We each contribute to the wall with bricks, and if a brick breaks—or if a study does not work—we can still build that wall, or contribute to that theory.

Effective and consistent communication is critical.
- Establish an open and honest working relationship from the start.
- Establish clear boundaries, expectations, and a chain of command.
- Behavior and productivity changes may indicate underlying issues of concern. Be proactive in addressing problems with students directly.
- Create opportunities for communication, and a safe and comfortable research environment, for optimum productivity.
- Document your interactions/issues to track and act on potential problems down the road.

Preparation is essential.
- Encourage undergraduates to participate in university conferences for presentation practice and feedback.
- Consider preparing projects for your undergraduates ahead of time. Plan out the semester to preemptively address areas of concern.
- Develop a "crash course" for training, especially for the summer.
- Be clear about why your undergraduate is working on the project.

Help undergraduates develop independence and creativity.
- Let undergraduates take some responsibility in an area of particular interest but keep the parameters clear.
- Scaffold projects: Find the balance between openly answering questions and fostering independence.
- Keep regular benchmarks and check up on them to build independence.
- Use positive reinforcement and encouragement.
- Ask students to keep progress logs, write out procedures, and submit project reports to increase understanding and accuracy of the research process.

Research is a team effort.
- Utilize different personalities and accept various perspectives/ethics if possible for the good of the team.
- Regularly get together as a team to assess status of entire project, but encourage undergraduates' self-assessment.
- Clearly explain individual roles and use positive reinforcement.
- Motivate your undergraduates by helping them understand how they fit into the larger goals of the project and giving them opportunities to present their ideas.
- Take time to identify your own expectations and the undergraduates' goals.

You are a role model.
- Think about how you can adjust your interactions to accommodate different personalities and learning styles.
- Set the example in work ethic, communication, professionalism and teamwork. Develop positive relationships with undergraduates.
- Having a good relationship with your own advisor is important for your relationship with your undergraduates.
- Find common ground with your undergraduates and share your own vulnerabilities to build trust.
- Be open and honest about failures.