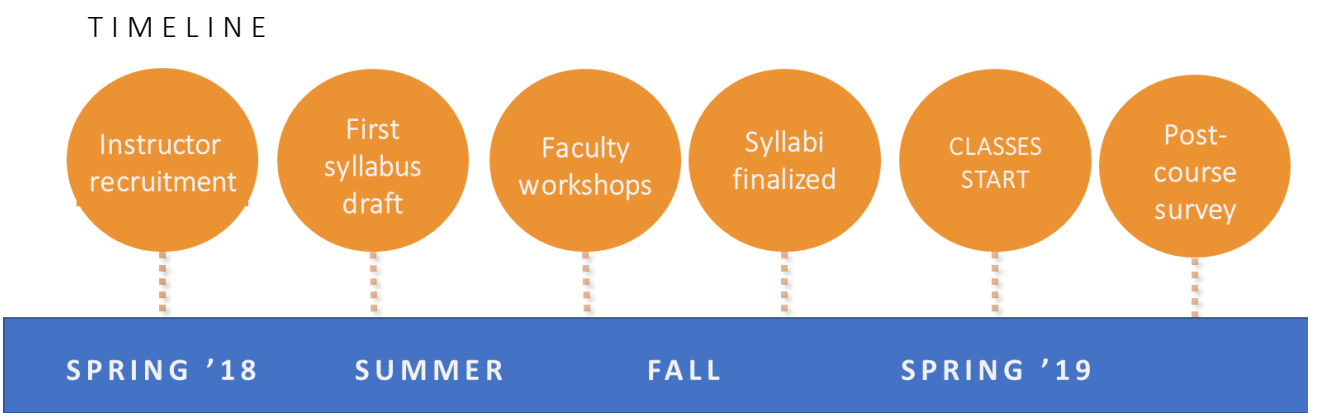


CURE@UF

2018-2019 Undergraduate Research Scholars Program Post-course summary

Over the course of 2018, 14 CURE courses were developed to provide around 200 incoming high achieving freshmen with authentic research experience. These students represent a unique demographic, 74% of whom already plan to pursue postgraduate studies in research or professional school. (ROLE survey, 2019).

The 14 courses were developed in the Summer and Fall of 2018, with the assistance of the CURE team, Dr Anne Donnelly (CUR), Dr Christine Miller (Entomology & Nematology) and Dr Ginny Greenway (CURE post-doc). Whilst research looks very different across disciplines, we shared a general framework with instructors in which broad general concepts and skills are incorporated around the central research or data collection project. This scaffold, along with a series of faculty workshops and a shared Canvas space helped to ensure continuity across courses and disciplines



CURE students investigated questions including:

- How protein forms affect their function

Ways to tackle the opioid epidemic
- How to manage waste better

How honeybees are affected by pesticides
- How pH affects plant roots

How our genetics link with our dietary habits
- Semiclassical paths of electrons in weyl metals

How museums can help improve veteran wellbeing
- How we interact with social media

How microbes and ants interact
- How inhaling vibrated air affects exercise performance

Effects of moral themes in video games

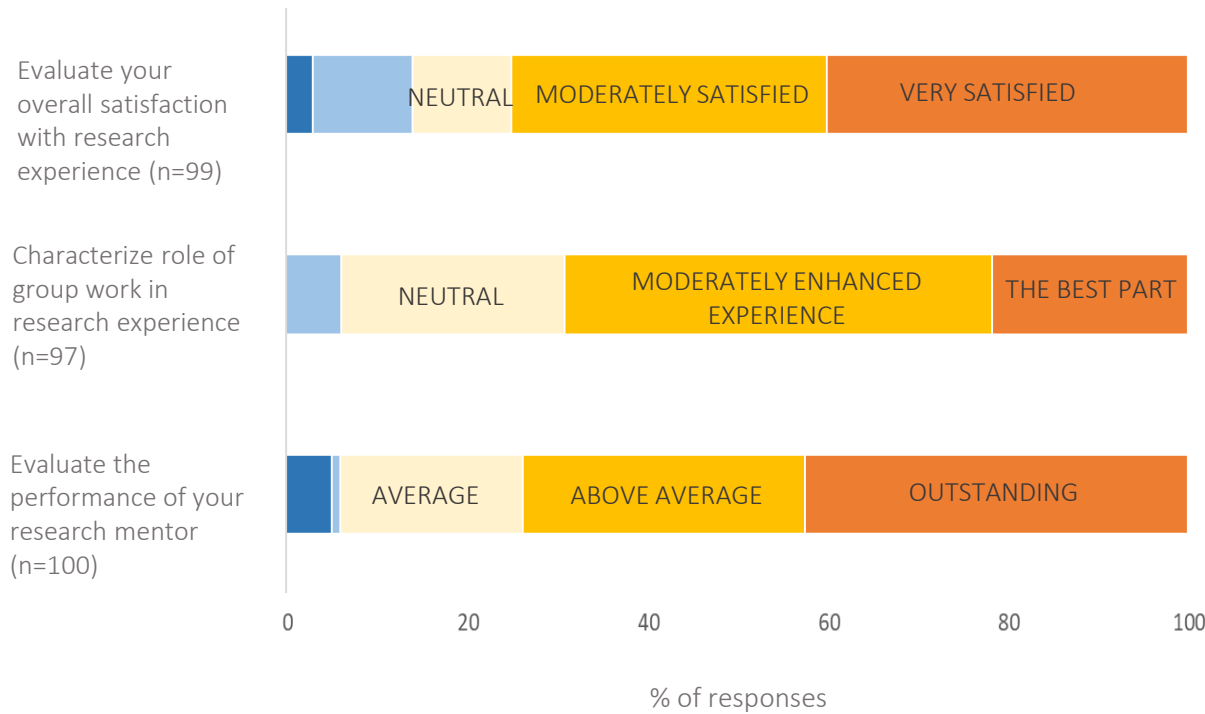
Post-course instructor feedback:

To receive feedback from CURE course instructors, we organized a debriefing session at the close of the Spring semester in which faculty shared their experiences and perspectives on their involvement in the CURE initiative. Several faculty members also provided extensive feedback based on independent self-evaluation reports.

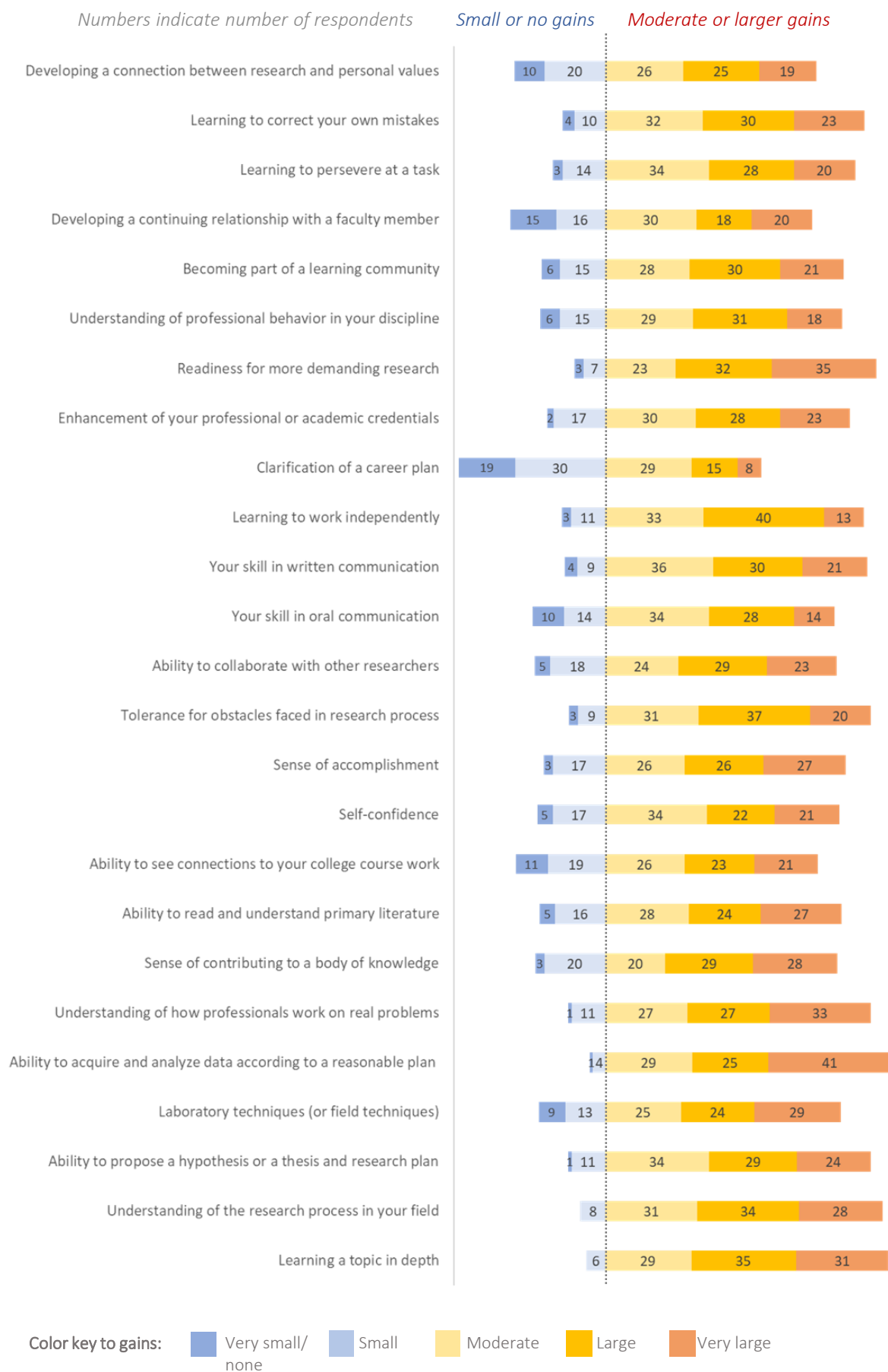
The general consensus was positive: instructors reported enjoying the challenge of developing their CURE classes and involving students in research, whether that was in an intensive REU or a large online course format. Over half of instructors anticipated that data collected by students would contribute to a peer-reviewed publication or serve as pilot data for a future research project. Moving forward, recommendations to maximize long-term course sustainability centered on fostering greater institutionalization at the departmental level, for example by including CURE classes within teaching load. Two thirds of the instructors from the 2018-19 CURE cohort have committed to teaching their course again in 2020.

Post-course student survey:

To gauge student satisfaction and learning gains we administered a post-course Research on Learning and Education (ROLE) survey (designed by David Lopatto, Grinnell College). The 100 students who responded rated their satisfaction with their research experience, their mentors and their attitudes towards working in groups (see below) before scoring their perceived gains across a range of skills on a 5-point Likert scale (page 3). Whilst students generally reported moderate to very large gains across all categories, the exception to this was ‘clarification of a career plan’. This is likely because many of the students in this cohort are already planning on pursuing postgraduate study prior to taking a CURE.



‘From your research experience how much of a gain occurred in...’





Overall, having completed a CURE, students reported an increased understanding of the research process and a greater readiness for more demanding research experience (see above). We anticipate CURE will act as a springboard, accelerating their progression towards independent research at UF.

Interestingly, we observed variation in the areas in which students reported the largest gains across CURES in different disciplines. Students enrolled in Social science/ humanities CUREs rated their overall research experience slightly higher and emphasized gains in collaborative skills and feeling as though they were contributing to a larger body of knowledge. Students in Natural Science and Physical Science CUREs reported an increased understanding not just of how the research process works but how research professionals work.

Top 6 areas of student gains by field

	Humanities/ Social science	Natural science	Physical science
1	Acquire and analyze information	Ready for more demanding research	Ready for more demanding research
2	Ready for more demanding research	Acquire and analyze information	Understanding research process
3	Contributing to body of knowledge	Understand how professionals work	Learning topic in depth
4	Collaboration	Propose hypothesis and plan research	Understand how professionals work
5	Understanding research process	Learning topic in depth	Read and understand primary literature
6	Learning topic in depth	Understanding research process	Perseverance

