

Elements of Undergraduate Research Programs

Overview

The tables below identify the elements of undergraduate research programs at six major universities, two of which (Georgia Tech and the University of South Florida) emerged as a result of the Quality Enhancement Plan (QEP) process. While there are distinguishing features of each program, they follow a similar pattern:

- An administrative mechanism for matching student research interests to opportunities with faculty members
- The identification of a faculty sponsor to supervise student work
- The submission of a research proposal by the student, to work on either a self-defined or faculty-defined project
- An award of credit for the student's work, in the form of academic credit, a grant, or a salary (sometimes students work on a volunteer basis)
- An evaluation of the student's work, often by both the faculty sponsor and the student

Program Elements	Stanford	Georgia Tech (QEP)	MIT
Administration	Undergraduate Research Programs Office: <ul style="list-style-type: none"> • Reviews research proposals • Awards grants to students • Awards grants to faculty/departments • Coordinates Summer Research College • Coordinates Summer Honors College • Preps students for field work • Advises on graduate school admissions • Provides editorial support for honors thesis 	Undergraduate Research Opportunities Program: <ul style="list-style-type: none"> • Coordinates research opportunities • <u>Tracks</u> and encourages research experiences • Provides incentives to faculty and students to participate • Raising \$2.5M endowment for undergraduate research 	Undergraduate Research Opportunities Program (includes central office and dept. coordinators): <ul style="list-style-type: none"> • Coordinates research opportunities • Reviews research proposals • Awards grants to students • Reviews evaluations of student work
Student Incentives and/or Academic Credit	<ul style="list-style-type: none"> • Quarterly grants (up to \$1,500) • Major grants (up to \$5,200) • Conference grants (up to \$1,500) • Grants and research support honors thesis 	<ul style="list-style-type: none"> • President's Undergraduate Research Awards: 200 awards up to \$1,500 for a semester's research or \$1,000 to attend a conference to present work • Research Thesis Option (multi-term experience) • 144 courses created to track research experiences 	<ul style="list-style-type: none"> • General elective academic credit • Faculty research grant funding (stipends) • Central funding (stipends) • Volunteering • Transcript recognition
Faculty/Departmental Funding	<ul style="list-style-type: none"> • Faculty grants (\$3,000 to \$5,200) • Departmental grants (\$10,000 to \$120,000) 	<ul style="list-style-type: none"> • \$1,500 per student mentored in Research Thesis Option 	None identified
Student Evaluation	<ul style="list-style-type: none"> • For faculty grants, project evaluation based on faculty and student goals 	<ul style="list-style-type: none"> • Multiple pre- and post-research experience assessments 	<ul style="list-style-type: none"> • Faculty and student evaluations of student performance
Related Programs/Activities	<ul style="list-style-type: none"> • Summer Research College (10-week residential program for student researchers) • Summer Honors College (3-week program of research activities) 	<ul style="list-style-type: none"> • Fall research opportunities fair • Spring student research symposium • Writing class for Research Thesis Option students 	<ul style="list-style-type: none"> • MIT Writing Center (proposal writing assistance) • Research Mentor Program (to prepare students for UROP experience)

Program Elements	University of South Florida (QEP)	University of Delaware	SUNY Stony Brook
Administration	Office of Undergraduate Research: <ul style="list-style-type: none"> • Links students with faculty mentors • Reviews research proposals • Awards grants to students • Assists students in presenting their work (e.g., grant proposals) 	Undergraduate Research Program: <ul style="list-style-type: none"> • Advises students on research opportunities • Links students with faculty members • Awards grants to students • Assist students writing senior thesis • Advises on graduate school admissions 	Undergraduate Research and Creative Activities (central office and departmental liaisons): <ul style="list-style-type: none"> • Advises students on research opportunities • Links students with faculty members • Awards grants to students
Student Incentives and/or Academic Credit	<ul style="list-style-type: none"> • Academic credit • Research grants (\$500 per term) • Travel grants (\$600 per conference) • Discovery Research Scholars (multi-term research experience for top incoming freshmen) 	<ul style="list-style-type: none"> • Academic credit (1-6 credits per semester) • Faculty research funding (stipends/salary) • Work-study (stipends/salary) • Central funding (stipends/salary) • Scholarships (Undergraduate Research Scholars Program, up to \$3,000 during summer) • Volunteering • Research supports “degree with distinction” 	<ul style="list-style-type: none"> • Academic credit (up to 3 credits, independent study) • Small grants for materials & supplies (up to \$300) • Travel grants for conference participation (up to \$400) • Summer Research Program stipend (up to \$3,500)
Faculty/Departmental Funding	<ul style="list-style-type: none"> • GA support • Faculty release time • Incentive funding in start-up packages 	None identified	None identified
Student Evaluation	<ul style="list-style-type: none"> • Captured through assessment of new general education curriculum (also part of QEP) 	<ul style="list-style-type: none"> • Evaluation letters from faculty and students at the end of each term 	None identified
Related Programs/Activities	<ul style="list-style-type: none"> • Undergraduate Research Symposium (to highlight student work) • Undergraduate Research Board (student-run, to promote undergraduate research) • Mentor in Residence Program (two-day visit from national scholar) • “Conjure” (undergraduate research journal) 	<ul style="list-style-type: none"> • Undergraduate Research Scholars Program (summer) • Undergraduate Research Reading Room 	<ul style="list-style-type: none"> • Summer Research Program (10-week summer program) • “URECA Collected Abstracts” (of undergraduate work, published annually) • Celebration of Undergraduate Research & Creativity (annual undergraduate research symposium)

Web Sites

Stanford	http://www.stanford.edu/dept/undergrad/urp/
Georgia Tech	http://www.assessment.gatech.edu/SACS/QEP/QEP_Mar21_Georgia_Tech_final_print.pdf
MIT	http://web.mit.edu/UROP/
University of South Florida	http://www.ur.usf.edu/
University of Delaware	http://www.urp.udel.edu/
SUNY Stony Brook	http://ws.cc.stonybrook.edu/ureca/

