QEP | Creating Scientists

Learning by Connecting, Doing, and Making

FREQUENTLY ASKED QUESTIONS

WHAT IS QEP? "QEP" stands for Quality Enhancement Plan and is a crucial component of the University's regular reaffirmation (reaccreditation) process through SACSCOC (Southern Association of Colleges and Schools Commission on Colleges). QEP is a set of new initiatives that the University of North Carolina at Chapel Hill seeks to implement over a five-year period (beginning in FY 2016–17) to address a well-defined and focused topic/issue that:

- makes a major, measurable improvement of student learning at the University.
- is aligned with and evolves from the University's mission, strategic priorities, and planning/evaluation efforts.
- involves broad-based campus participation.

WHAT IS THE FOCUS OF THE QEP? The current QEP is designed to improve learning in the sciences (with sciences being broadly defined, including disciplines traditionally associated with the social sciences).

WHY THE FOCUS ON SCIENCES? The Provost's office, in consultation with the Deans Council, chose this topic based on data showing increased interest by UNC students in declaring science as a major, as well as areas for improved pedagogy and student access to specific opportunities.

WHAT WAS THE PLANNING AND EVALUATION PROCESS? Several efforts informed the QEP choice, including the University's 2011 Academic Plan and 2010 Undergraduate Retention Study, the Board of Trustees' 2013 21st Century Vision Committees, the UNC System's strategic plan, and the College of Arts and Sciences' 2013 Task Force on Large Lecture Courses.

WHAT ABOUT THE ARTS, HUMANITIES, AND SOCIAL SCIENCES? The linkages between the humanities, the arts, and the sciences are not always obvious to students. The QEP will leverage the excellence Carolina has in the humanities and arts to integrate them into the QEP to improve science education. This may take many forms, such as integrating art and science in first-year seminars; offering more hands-on experience in courses, labs and research opportunities; and bringing scientists and artists together to brainstorm and build things at campus makerspaces.

WHAT ARE THE QEP'S OVERARCHING GOALS? Our QEP aims to equip our students with the ability to apply science skills and knowledge to better solve real-world problems in the face of changing societal contexts.

We aim to foster awareness of what is currently missing from our curricular and extracurricular offerings to students, and to fill this void.

We aim to identify the achievements that are possible with evidence-based teaching methods focused on high-structure active learning both in and outside the classroom.

WHAT WILL BE INCLUDED IN THE QEP? The QEP Steering Committee has focused on increasing opportunities for undergraduate students in four **experiential or transformative experiences**:

- introducing students to research early through course-based undergraduate research experiences.
- providing avenues for more in-depth study through research-exposure opportunities.
- integrating curricula in the sciences and arts and humanities.
- igniting innovation and discovery through making and the use of makerspaces.

There has been a 60% increase in intended or declared majors in the sciences since 2004.

HIGH-IMPACT EXPERIENTIAL PRACTICES

Course-Based Undergraduate Research Experiences (CURE)

- Redesign course-based laboratory experiences to include more inquiry and undergraduate research experiences, especially to benefit underrepresented minorities, first-generation students, and other students with little research experience.
- Expand CUREs beyond chemistry, biology, and geological sciences into other units within the College of Arts and Sciences.
- Complement existing high-structure active learning efforts within the sciences.

Integrated Curricula

- Develop an infrastructure to implement integrated curricula, particularly with first-year seminars that incorporate a STEAM (science, technology, engineering, arts, and math) theme.
- Provide opportunities for faculty to develop integrated courses.
- Institute a University Lecture in conjunction with the Summer Reading Program.
- Provide funding for interdisciplinary interaction and innovation exchange.

Research Exposure Opportunities on Campus

- Provide infrastructure and more opportunities for research experiences that provide course credit, including research-related skills courses and summer undergraduate research.
- Create Undergraduate Research Consultant Teams for faculty and/or student-generated research projects.
- Create Research University Week to inform students of faculty research.

Innovation and Making

- Create opportunities to enhance student learning across the sciences, arts, and humanities.
- Develop a faculty learning community through the University's BeAM makerspace network and provide incentives for faculty to incorporate making into teaching.
- Develop outlets for informal learning through makerspace workshops and other events.

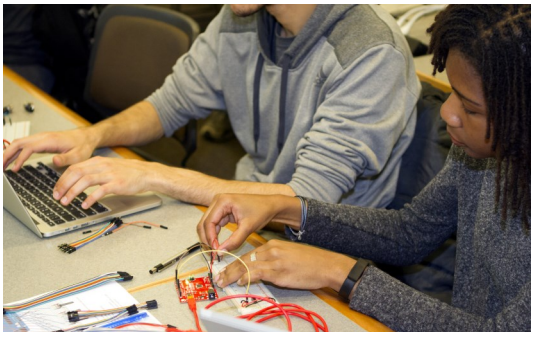
Visit **qep.unc.edu** or contact QEP Steering Committee Co-Chairs Dr. Greg Copenhaver (gcopenhaver@bio.unc.edu) or Dr. Adam Persky (apersky@unc.edu) to learn more.

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

In Seafood Forensics, *a pilot CURE class, students quantify seafood mislabeling using DNA barcoding technology.*

Students collaborate in the first-year seminar Math, Art and the Human Experience.

The 36-meter wave tank in Chapman Hall allows researchers and students to study fluid dynamics, turbulence and other phenomena.



In the new Murray Hall makerspace, one of three campus makerspaces in the BeAM network, students participate in an electronics workshop.