











# **Expanding the Culture of Undergraduate Research and Inquiry**



**Quality Enhancement Plan** 

SACSCOC On-Site Review: February 5-7, 2013

Florida Atlantic University



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"Some universities measure greatness in decades and centuries.

Florida Atlantic
University measures it with every student who earns a degree, every researcher who makes a discovery and every community that is transformed."

— President M.J. Saunders, 2011

The *Distinction Through Discovery* QEP takes a multifaceted approach to improving student learning by expanding a culture of undergraduate research and inquiry at Florida Atlantic University (FAU). Our faculty and students recognize "inquiry" to be a process and/or a product which encompasses intellectual traits that transcend subject matter divisions. We aspire to create an intellectual community of scholars who are engaged in questioning, exploring and pursuing research and inquiry in all their forms.

FAU is a comprehensive public university enrolling approximately 30,500 graduate and undergraduate students, with a student body that ranks as the most diverse in Florida's 12-institution State University System. FAU provides unequaled access to education as the only university with six campuses and sites located along more than 100 miles of Florida's southeast coastline. Built on a rich tradition as a teaching university with a respected faculty, FAU is earning a reputation as a top research institution. Within FAU's Strategic Plan, our University president has established an ambitious, renewed research agenda that builds upon FAU's growing strength in the Science Technology Engineering and Math (STEM), medical, marine and business entrepreneurship fields. Engaged in key partnerships with internationally renowned private organizations, FAU is poised to expand the culture of undergraduate research with the QEP Distinction Through Discovery. This convergence of circumstance, including the choice of topic and plans associated with our QEP, provides FAU with the opportunity to maintain an identity of excellence in research, teaching and service.

The QEP Steering Committee solicited input from stakeholders representing university constituencies regarding current institutional programs and best practices. Their recommendations for expanding a culture of research and inquiry integrated with a review of the scholarly literature and other institutions' best practices framed our QEP plan. The Committee identified four separate themes under which the plan of action could be developed: curricular activities, co-curricular activities, honors programs and student-culture and established six Student Learning Outcomes (SLOs) to directly measure student performance. The efforts to improve the student learning outcomes and implement our plan of action can be divided into four main goals: 1. Establish an undergraduate curriculum which provides students the intellectual skills necessary to successfully engage in undergraduate research and inquiry; 2. Expand student co-curricular opportunities for undergraduate research and inquiry; 3. Increase support and recognition for faculty and students who engage in undergraduate research and inquiry; and 4. Enrich and strengthen an institutional climate that supports undergraduate research and inquiry. We present both current and future plans as a series of action items to establish an "intellectual ecosystem" here at FAU within the goals defined for our QEP.

The Assessment of Distinction Through Discovery will focus on student learning, evaluating the expansion and enrichment of research opportunities and inquiry climate and assessing the effectiveness of the initiative itself. The Committee will use the results of these assessments to continuously inform and improve the QEP initiatives. With the collaboration of FAU students, faculty and our community, these action items are unified with the overall goal of distinguishing FAU students through the practice of discovery.



# **Process Used to Develop the Quality Enhancement Plan**

"It is time now...for
a new, adventurous,
imaginative, courageous
breakthrough for a new
revolution in education
in America."

— Lyndon B. Johnson, 36th President of the United States, at FAU's dedication ceremony in 1964.

# A. Introduction to Florida Atlantic University

Florida Atlantic University (FAU), the fifth public university in Florida and the first in southeast Florida, is a comprehensive public university enrolling approximately 30,500 graduate and undergraduate students. When it opened in 1964, FAU was the first university in the country to offer only upper-division and graduate-level work. In order to better serve the needs of its rapidly growing service region in southeast Florida, FAU opened its doors to freshmen in 1984 and now currently provides opportunity and choice for its undergraduate and graduate students through more than 170 bachelor's, master's, specialist's and doctoral degree programs, including the doctor of medicine. FAU currently has nine academic colleges which include the Dorothy F. Schmidt College of Arts and Letters, the College of Business, the College for Design and Social Inquiry, the College of Education, the College of Engineering and Computer Science, the Harriet L. Wilkes Honors College, the Charles E. Schmidt College of Medicine, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science.

FAU provides unequaled access to education as the only university with six campuses and sites located along Florida's southeast coastline. This structure provides public access to higher education, along with the necessary support services, to an unusually large service area comprising six counties spread along more than 100 miles of Florida's southeast coast.

Figure 1: Florida Atlantic University Campuses and Sites



#### **FAU BOCA RATON**

FAU's first and largest campus occupies more than 850 acres just east of I-95. The campus has all the modern features of a modern university including state-of-the art labs and classrooms, suite style housing for students plus athletic and

recreational facilities. It is also home to the A.D. Henderson University School, FAU High School, The Florida Atlantic Research and Development Park and the nation's largest Lifelong Learning Society.



#### **FAU DAVIE**

FAU's second largest campus offers a wide variety of "2+2" programs in partnering with Broward College which is literally just next door. The campus is also the base of operations for FAU's Everglades research and restoration efforts.



#### **FAU JUPITER**

Located in the Abacoa planned community, the rapidly growing John D. MacArthur Campus at Jupiter offers a variety of upper-division and graduate-level degree programs as well as the four-year liberal arts and sciences curriculum of the Harriet

L. Wilkes Honors College. This campus has the distinction of hosting the South Florida headquarters of two international research grants, the Scripps Research Institute and the Max Planck Society.



## **FAU FORT LAUDERDALE**

Located in downtown Fort Lauderdale, this campus is home to a mecca of professional and design-oriented programs.



#### **FAU SEATECH**

Located on eight acres of land between the Atlantic Ocean and the intracoastal waterway in Dania Beach, Florida, with valuable easy access to the ocean. Its team of world-class faculty, graduate students and engineers and technicians are engaged in federally and

industry sponsored ocean engineering research and technology development.



### **FAU HARBOR BRANCH**

FAU's Harbor Branch and Oceanographic Institute (HBOI) is dedicated to exploring the world's oceans—integrating the science and technology of the sea with the needs of humankind. HBOI is involved in research and education in the marine sciences, marine

mammal conservation, aquaculture and ocean engineering.



"Some universities measure greatness in decades and centuries.

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— President M.J. Saunders, 2011

Built on a rich tradition as a teaching university with a respected faculty, FAU is earning a reputation as a top research institution in areas ranging from biomedicine and biotechnology to ocean engineering and coastline security. FAU faculty researchers utilize more than 40 research centers which provide a foundation for discovery and their efforts have earned the University "High Research Activity" status from the Carnegie Foundation for the Advancement of Teaching. The University is a charter member of the Life Tech Corridor, a regional consortium that is working to establish an industry cluster here in South Florida focused on biotechnology, pharmaceuticals, diagnostics, information technology and medical imaging. In recent years, the State of Florida has invested more than a billion dollars in South Florida to encourage the growth of research and industry in this area. The Life Tech Corridor initiative will position FAU to take full advantage of that investment. Our institution has made key partnerships with private organizations such as the Scripps Research Institute, the Max Planck Institute, the Torrey Pines Institute for Molecular Studies, the H. Lee Moffitt Cancer Research Institute and the Smithsonian Marine Station; we have begun expanding the John D. MacArthur campus at Jupiter in graduate biotechnology research to facilitate this partnership.

# FAU's Mission, Vision and Strategic Plan

FAU's Mission, Vision and 2012-17 Strategic Plan "Making Waves: Celebrating and Cultivating Discovery, Diversity and Distinction," emphasizes research as a key priority with which our Quality Enhancement Plan is aligned. The focus on research and inquiry fits well with the University's mission to pursue excellence in research, scholarship and creative activity.

Figure 2: FAU's Mission and Vision Statement

# **MISSION:**

Florida Atlantic University is a multi-campus public research university that pursues excellence in its missions of research, scholarship, creative activity, teaching and active engagement with its communities.

# **VISION:**

Florida Atlantic University aspires to be recognized as a university known for excellent and accessible undergraduate and graduate education, distinguished for the quality of its programs across multiple campuses and classified as a very high research institution that is internationally acclaimed for its contributions to creativity and research as well as its collaborations with regional partners.

Our QEP initiatives are central to objectives in Goals I and II the University's Strategic Plan (refer to Figure 3).



Figure 3: Excerpts from FAUs 2012-2017 Strategic Plan

# Excerpts from FAUs 2012-17 Strategic Plan "Making Waves: Celebrating and Cultivating Discovery, Diversity and Distinction,"

# Goal I: Enrich the educational experience:

FAU aims to expand the breadth and scope of our honors program offerings and Science Technology Education and Math, STEM initiatives. FAU will increase the number of students, programs, scholarships and degree awards in both of these areas.

# **Objectives:**

- A. Enhance the quality of undergraduate academic programs
- B. Strengthen and expand graduate programs
- C. Invest in the faculty
- D. Support an organizational culture in which all units are dedicated to student success
- E. Create and maintain campus life programs and experiences that support student success

# Goal II: Inspire research, scholarship and creative activity:

FAU plans to double the funded research in five years by hiring additional faculty and leading scholars and by facilitating current faculty interactions with relevant funding agencies. FAU's QEP focused on expanding a culture of research and inquiry throughout the undergraduate experience is emphasized under this goal.

# **Objectives:**

- A. Increase scholarship and creativity
- B. Increase funded research
- C. Enhance the regard and visibility of our research, scholarship and creativity
- D. Strengthen and support interdisciplinary research and its visibility in the University
- E. Involve students at all levels in research, scholarship and creative activity
- F. Foster new types of research funding

Within the Strategic Plan, our University's President has established an ambitious objective to attain the highest designation, i.e., Very High Research Activity from the Carnegie Foundation for the Advancement of Teaching. The renewed research agenda builds upon FAU's growing strength in the STEM, medical, marine, business entrepreneurship and other fields that fit into an interdisciplinary approach by addressing real-life and social problems of great significance. This convergence of circumstance, including the choice of topic and plans associated with our QEP, provides FAU with the opportunity to maintain an identity of excellence in research, teaching and service and expand those efforts through curricular, co-curricular and honors initiatives. In addition to the Strategic Plan, our institution has continued to make research a priority with the development of three signature themes for the University: Marine and Environmental issues, Biotechnology and Neuroscience and Contemporary Societal Issues. These themes capitalize on the University's existing strengths, foster interdisciplinary research and help establish our institution as an engine that generates twenty-first century solutions to twenty-first century problems.





# B. Our Faculty

FAU prides itself in its 1,077 outstanding faculty members who have dedicated themselves to excellence in teaching, research and service. FAU employs over 4,500 diverse faculty and staff, 55% of whom are female. Forty-nine percent are tenured faculty, 15% are in tenure track positions and 18% are term faculty (non-tenure, fixed appointments). Twenty-seven percent of all FAU employees classify themselves as a member of an ethnic minority and 6% as international.

FAU faculty are renowned scholars including Fulbright awardees and winners of national and international awards in all disciplines. FAU has 17 Eminent Scholar Chairs in fields that encompass the arts and sciences, business, education, engineering, growth management, Judaic and Holocaust studies, nursing, philosophy and social science. Per year, our faculty publish over 1,000 peer-reviewed articles and more than 100 books; give presentations at over 1,300 professional meetings or conferences and participate in more than 300 productions, performances and exhibitions. This is a true demonstration of our commitment to excellence in our disciplines. FAU faculty serve as exceptional teachers and research and inquiry mentors to our graduate and undergraduate student population and are essential to expanding this culture through our Distinction Through Discovery plan.



# C. Our Students

As FAU develops as a leading institution in South Florida, our student numbers and diversity grows. The university's enrollment has grown steadily from 11,000 in 1984 to 30,542 in 2012 and the student body ranks as the most diverse among the 12 institutions within the Florida State University System. FAU is rapidly becoming a university of first-choice for students, as evidenced by the fact that the Admissions Office received more than 24,600 applications for the Fall 2011 freshman class, almost double the previous year's number. Of the total student enrollment, undergraduate students comprise 80% (23,615). Students declared as Florida residents constitute 94% of our population, with the majority coming from Broward and Palm Beach Counties. Forty-three percent of the total student population is considered part-time.

FAU students come from all 50 states and more than 180 countries. With 47% of its student body classified as minority or international students, FAU ranks as the most racially, ethnically and culturally diverse institution in Florida's State University System. The percentage of minority students has steadily increased from 10% in the mid-1980s to 44% in 2011. Approximately 18% of students are African-American and 22% are Hispanic. Other minority populations at FAU are Asian (4%), American Indian (0.2%) and Pacific Islander (0.1%). Two percent of FAU's population identifies itself as multiracial. Two percent of our students are international.

Our degree-seeking undergraduates comprise 79% of the student population; 58% of students are female; 59% are full-time, 34% are first-time-in-college students and 53% of our enrolling undergraduate students are either community college or other undergraduate transfer students. FAU is unique from other schools because it is spread out amongst 6 different campuses. Most students attend class and reside on the Boca Raton campus; however, 15% of FAU's total student population attends class on the Davie campus. All of the different partner campuses meet the needs of a large commuter population (88%).





In Fall 2011, FAU welcomed its largest-ever freshman class, 3,351 students including 110 exceptionally high-achieving high school graduates who entered the Harriet L. Wilkes Honors College. In fact, the average high school GPA of our incoming first-time-in-college students was 3.4 and the average ACT score was 23. The number of high achieving (high school GPA 3.5 and above) freshman who enrolled for the Fall 2011 semester reached an all-time high of 39.2% (1,315), a 5% increase from the previous year. A strong sense of diversity is displayed among the Honors College. Of all the students in the Honors College 16% identify themselves as Hispanic, 5% identify as Asian and 4% identify as African American.

To date, the University has awarded more than 130,000 degrees. In recent years, FAU has received national recognition for its outstanding record of conferring both undergraduate and graduate degrees upon minority students, including ranking twelfth in the nation for awarding bachelor's degrees to African American students. Some of the University's alumni have been U.S. and foreign dignitaries, Emmy Award and Pulitzer Prize winners, an astronaut and executives who have served in organizations such as Boeing, eBay, Motorola and the White House. On the average, more than 70% of these FAU graduates remain in Florida to enter the workforce or to continue to graduate and professional schools. This distinguished student population is ideal for fostering excellence through undergraduate research and inquiry initiatives proposed through our Distinction Through Discovery plan.

# D. QEP Topic Selection and Planning Process

Our Distinction Through Discovery QEP focuses on increasing the number and types of curricular and co-curricular opportunities for all motivated FAU students and faculty to engage in scholarly undergraduate research and inquiry. Initial solicitation of pre-proposals included a process which generated ideas from a wide range of university constituents and eventual topic selection utilized SACS guidelines to ensure institutional needs and plan viability. The development of the plan focused on the capability of our institution to develop, initiate, implement and complete the plan associated with enhancing student learning. The planning process included broadbased involvement from all institutional constituencies and was used to outline student learning outcomes, goals and action plan including an appropriate timeline, budget an assessment plan.

We present a chronology of the events and parallel activities that took place during the topic selection and planning process of the QEP (Table 1). Additional detail of the topic selection and planning process can be found in Appendices A and B. The efforts and feedback of our dedicated QEP Topic Selection, Steering and Executive Committee members, evaluators and consultants and consistent feedback from the University faculty, staff and students across a two-year period, led to the development of the Distinction Through Discovery and Executive Summary document for our Quality Enhancement Plan.



Table 1: QEP Topic Development and Planning Process Timeline

Table 1. QLI Topie bevelopment and Flamming Frocess Timeline			
QEP Topic Selection			
Timeline	Action Item	Milestone	
Fall 2010	QEP Co-Chairs selected	<ul> <li>Edward Pratt (Dean, Undergraduate Studies) and Jeffrey Buller (Dean, Wilkes Honors College) appointed</li> <li>Engaged the university community on the QEP process through presentations and open forums and solicited pre-proposals</li> </ul>	
Fall 2010	QEP Website established	<ul> <li>Provided university assessment data to assist in identification of key issues emerging from institutional data through QEP website</li> <li>Solicited Pre-Proposals and feedback on proposals</li> </ul>	
Fall 2010 - Spring 2011	QEP Topic Selection Committee	<ul> <li>See Appendix C</li> <li>Solicited Pre-Proposals and feedback on proposals</li> <li>Charged with selecting 3-4 topics from pre-proposals</li> </ul>	
Spring 2011	QEP Pre- proposals selected	<ul> <li>15 pre-proposals were submitted -See Appendix D</li> <li>Topic Selection Committee evaluated proposals and 3 topics were chosen to move forward. The three topics included:         <ul> <li>Expanding Undergraduate Research and Honors</li> <li>Enhancing Students' Writing Abilities</li> <li>Experiential Learning</li> </ul> </li> </ul>	
Spring 2011	QEP Topic selected	<ul> <li>Submitting teams wrote full proposals on topics chosen</li> <li>Proposals were presented at open forums to university for evaluation – See Appendix D</li> <li>Topic Selections committee summarized and provided university feedback to the SACS Leadership Team</li> <li>SACS Leadership Team chose the topic of Undergraduate Research and Honors to be FAU's QEP - See Appendix C and Appendix E</li> </ul>	
June 2011	QEP Director chosen	<ul> <li>Dr. Donna Chamely-Wiik appointed QEP Director</li> <li>Responsible for leading the initiative to develop, implement and assess FAU's QEP, soliciting input from and participation by all institutional constituencies and ensuring the plan was integrated into ongoing institutional efforts</li> </ul>	
		QEP Planning Process	
Timeline	Action Item	Milestone	
Summer 2011	Honors Education Task Force (HETF) established	<ul> <li>Parallel activity to the Quality Enhancement Plan</li> <li>Charged with recommending a plan to expand honors education and high ability students at FAU-See Appendix F</li> <li>QEP Director served on the HETF committee- See Appendix F</li> </ul>	
Fall 2011	QEP Steering Committee established	<ul> <li>See Appendix G</li> <li>Charged with soliciting and evaluating university-wide information and data, reviewing the literature, identifying best practices and developing the QEP topic focused on student learning and establishing a plan to improve student learning, including budget, timeline, organizational structure and measures of assessment</li> <li>Identified four themes under which the QEP could be developed: Curricular, Honors, Co-curricular and Student Culture</li> </ul>	
Fall 2011	Information gathering and outreach	<ul> <li>Information gathering and outreach continued – See Appendix H</li> <li>QEP Director presents and meets with university-constituencies to discuss QEP plans in development and solicit feedback</li> </ul>	
October 2011	QEP Student Council established	<ul> <li>Participated in a QEP student focus group- See Appendix G</li> <li>Charged with identifying best practices and proposing needs related to the QEP topic</li> <li>Key students participated in QEP Steering Committee</li> </ul>	



Spring 2011	Council of Scholarship and Inquiry (CSI)	<ul> <li>QEP Student Council established CSI</li> <li>Preliminary charged to establish the FAU Undergraduate Research Journal (URJ)</li> </ul>
Fall 2011 – Spring 2012	Faculty Learning Communities implemented	<ul> <li>2 QEP focused Faculty Learning Communities (FLCs)</li> <li>Established a working definition of "research and inquiry" and assisted with a comprehensive review of the literature</li> <li>Provided additional venues for faculty feedback on QEP</li> </ul>
January 2012	QEP Website updated	New information provided on the QEP website
January – March 2012	QEP Subcommittees established	<ul> <li>Four Sub-committees established based on focused themes</li> <li>Continued establishing best practices, reviewing appropriate literature and FAU data See Appendices I and J</li> <li>Established goals, objectives, action plan and timeline</li> <li>Submitted formal recommendations to the QEP Director</li> </ul>
March – April 2012	Executive Committee established	<ul> <li>QEP Executive committee comprised of sub-committee chairs and co-chairs, QEP director and QEP Co-administrative chairs</li> <li>Merged recommendations and plans of action from four sub-committees into one executive working plan of action for the QEP</li> <li>Established a proposed budget for QEP plan of action</li> </ul>
April 2012	Plan of action and QEP budget revised and approved	<ul> <li>QEP Director presented executive working plan and budget to the FAU SACS leadership team</li> <li>Feedback was provided, the plan was refined and</li> <li>A 6-year budget was finalized</li> </ul>
Spring 2012	Information gathering and outreach	<ul> <li>QEP director presents and meets with university-constituencies to discuss QEP plans in development and to solicit feedback – See Appendix H</li> </ul>
April 2012	External consultant site- visit	<ul> <li>Site visit of Dr. Thomas Pusateri of Kennesaw State University         Charged with evaluating the developing plan of action and assisting in developing a QEP</li> <li>assessment plan</li> </ul>
Summer 2012	QEP Website updated	<ul><li>New information provided on the QEP website</li><li>New design of the website launched</li></ul>
Summer 2012	QEP plan refined	<ul> <li>QEP plan, budget, timeline, organizational structure and in-kind collaborations were further refined based on feedback from executive committee, external consultant and university constituencies</li> <li>QEP document writing process began</li> </ul>
July 2012	Assessment Committee Established	<ul> <li>Comprised of members of the Steering committee- See Appendix G</li> <li>Dr. Patricia Kirsch was appointed Assessment Coordinator and continues developing the assessment plan for QEP</li> </ul>
July 2012	Marketing plan established and implemented	<ul> <li>QEP Director partnered with Marketing and Creative Services and the Office of Institutional Technology to create a plan and strategy to market the QEP – See Appendix J</li> </ul>
August 2012	First draft of the QEP document completed	<ul> <li>QEP document edited</li> <li>QEP Steering Committee reconvened to provide feedback on the first draft of the document</li> </ul>
Fall 2012	QEP Evaluator Recruited	<ul> <li>Dr. Mary Crowe was recruited as FAUs QEP Evaluator</li> <li>Dr. Crowe and Dr. Pusateri formally evaluated FAU's QEP document</li> </ul>
Sept – November 2012	QEP document reviewed Marketing and Outreach continued	<ul> <li>QEP Document distributed to SACS Leadership team and made available on the website for feedback from the university community</li> <li>QEP Faculty and student forums hosted, gave presentations re. QEP and solicited feedback from the FAU community - See Appendix J</li> </ul>
December 2012	QEP document completed	<ul> <li>Final revisions and modifications completed</li> <li>Document finalized by Marketing and Creative Services</li> <li>QEP final document distributed to the SACS Onsite team</li> </ul>





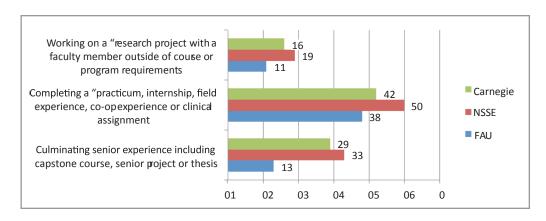
# **Institutional Assessment to Identify Key Issues**

In February 2011, the QEP team began conducting a thorough evaluation of institutional data to identify both best practices and establish institutional needs from which we could build a plan of action through our QEP efforts. Once the Undergraduate Research and Inquiry QEP topic was selected, the QEP team continued data gathering and analysis to establish further best practices and a baseline of current activities on the chosen topic. The findings are presented below.

# A. National Survey of Student Engagement, NSSE

The Steering Committee examined data from the NSSE (2009-2010) most relevant to students' undergraduate research experiences and compared our FAU student responses with two groups: 1. Student responses to NSSE from all institutions and 2. Student responses to NSSE from the Carnegie Class peer group with high research activity. The NSSE data related to student engagement in undergraduate research is summarized in the bar graph below.

Figure 4: Percent comparison of FAU senior responses with NSSE and Carnegie Class peer group senior responses for Student Engagement questions for 2010.

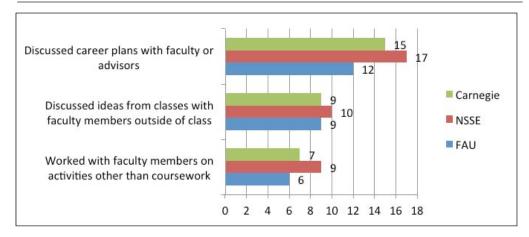


On average, FAU seniors reported a lower level of engagement in the activities presented compared to institutions in its Carnegie classification and well behind the NSSE average. Moreover, as seen in Figure 2 below, FAU seniors reported that they had fewer interactions with faculty outside of class when compared to our Carnegie peers and NSSE. These FAU NSSE results indicated a need to provide more opportunities for students to engage with faculty outside of the curriculum, through additional research and inquiry opportunities such as capstones, research projects and internships. We intend to use these data as benchmarks for assessing progress of our QEP efforts at FAU. We aspire to raise our profile in these areas and move closer to our Carnegie class peer institutions reported student engagement in the future.





Figure 5: Percent comparison of FAU senior responses with NSSE data and Carnegie Class peer group responses to Faculty Engagement questions for 2010



# B. Employer, Faculty and Alumni Surveys

In addition to identifying needs related to specific student engagement activities, the Steering Committee was interested in identifying skills that faculty, alumni and employers valued as we prepared students for their future careers. QEP surveys were distributed in February 2011 to employers, faculty and alumni asking each group to rank the importance of a series of attributes and abilities for the hiring process, for undergraduate education and for skills development respectively. All employers from the Career Development Center database were solicited to complete the survey. All recent alumni from the Alumni Center database were solicited to complete the survey and the faculty survey was distributed to all current FAU faculty. A total of 484 faculty, 332 employers and 1339 alumni responded to the survey. Figures 7 and 8 provide a comparison of those responses for five top attributes identified by these audiences.

Figure 6: Comparison of Faculty and Employer expectations for student skills. (3 highest – 1 lowest)

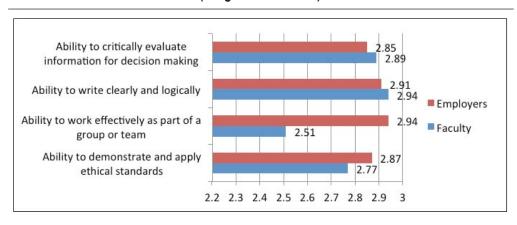
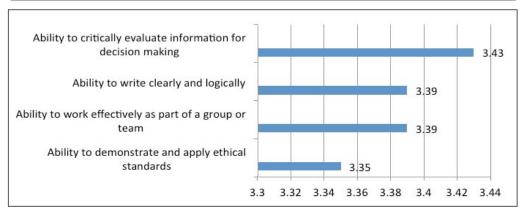






Figure 7: FAU alumni perceptions of FAU's educational contribution to skill development. (4 highest – 1 lowest)

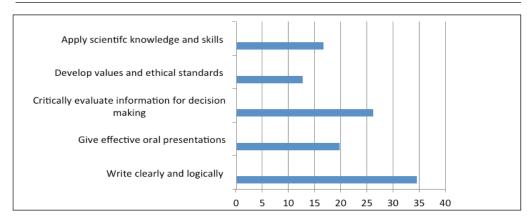


When comparing faculty and employer expectations with alumni responses to how well an FAU education contributed toward the development of these skills, it is clear that there is a need for improving critical thinking, applications of ethics and communication skills to better prepare our students to meet their own and their future employer's needs.

# C. Graduating Senior Survey

Results for FAU's Graduating Senior Survey provided some additional information for identifying a need. For the academic year 2011-2012 a total of 1,771 students responded to this survey. As a part of the survey, graduating seniors are given a series of attributes and abilities and asked to identify the three that are most important to them. The following figure provides a summary of their responses.

Figure 8: Percent responses to specific skills and attributes deemed most important to students



These necessary skills identified by our graduating seniors have been included in the student learning outcomes identified for our Quality Enhancement Plan.



"If the goal of the university is to teach students, then the best way to do it is through research."

— FAU Department Chair, 2012.

# D. Student Panel Discussion and Focus Group

At the 2011 Undergraduate Research Symposium held at FAU, a faculty and student panel discussion was held about undergraduate research at FAU. Through this panel discussion, students stated they had difficulty in navigating the path to become involved in research for a variety of reasons. A summary of student feedback from this panel discussion included:

- a lack of visibility, advising and availability of information on undergraduate research opportunities
- · courses that fail to promote closer interactions between faculty and students
- curricula that gear students (particularly freshmen and sophomores) toward rote memorization rather than process and methodology involving problem solving and critical thinking
- a perception that the definition of research only applied to students conducting experiments in laboratories, rather than taking on many forms to include, for example, works of art requiring original thought

Two final concerns students presented were that without making these opportunities more available and visible, they would be less likely to stay at FAU for their junior and senior years and that they felt under-prepared for entering the work-force. All of these concerns were reinforced through individual discussions with our Student Council to the QEP members. This data provided the basis for the choice of undergraduate research and inquiry as the topic of our QEP and the defined student learning outcomes of these efforts. Our department chairs, faculty and students provided insight into the importance of these activities, identified existing opportunities and highlighted additional needs for advertising current opportunities, establishing new ones both within and outside the curriculum and recognizing existing excellence in all students and faculty across the disciplines.



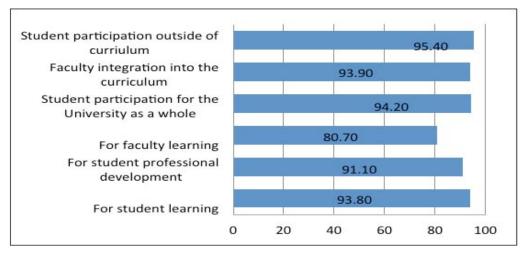
# E. Baseline of Current Activities

During Fall 2011 through Summer 2012, the QEP Steering committee conducted a university-wide self-evaluation in an effort to establish a baseline for the number and type of curricular and co-curricular opportunities for research, scholarship and creative activities conducted across the university. This effort began in December 2011, once the QEP topic of undergraduate research and inquiry was finalized. All faculty were surveyed about current undergraduate research and inquiry practices within their departments, perceived institutional needs and suggested future directions for the QEP Steering Committee. One hundred eighteen faculty (~11%) and 25 department chairs (54%) responded to this survey. The results from this survey are summarized below.





Figure 9: Faculty survey responses on the importance of undergraduate research and inquiry to various factors (percentage response presented of important or very important provided).



The responses indicate that faculty clearly value this high educational impact practice as an important activity for student learning and professional development. FAU faculty highly regard integrating these practices into the curriculum and providing co-curricular opportunities for their students.

In Summer 2012, a follow-up survey was distributed only to department chairs to clarify the types of research and inquiry opportunities that were currently available to students and to gauge the number of students currently participating in undergraduate research and inquiry activities at FAU, both within the curriculum and outside of the curriculum. In addition, the QEP Director met with the directors of university-wide student support programs (e.g. Career Development Center, Weppner Center for Civic Engagement & Service) to catalogue existing undergraduate co-curricular research and inquiry opportunities and discuss future expansion of these offerings.

Through this self-evaluation, we were able to identify a range of current opportunities for students to engage in research and inquiry, many of which comprise a set of institutional best-practices that form the basis for our Distinction Through Discovery plan. These best practices are presented below under the headings "University-wide Co-curricular Offerings," "College and Program-Specific Co-Curricular Opportunities," and "Existing Curricular Opportunities".

# 1. University-wide Co-curricular Offerings:

# a. Undergraduate Research Grants:

For the past two years, the Undergraduate Studies Office has funded an Undergraduate Research Grants Program which provides financial support (up to \$600) for individual students who participate in faculty-mentored research projects. For the 2011 academic year, 37 student awards were funded and 59 were awarded for the 2012 academic year. Figure 10 represents the distribution of students awarded undergraduate research grants by college in 2011 and 2012.



25 **■**2011 **■**2012 20 17 16 13 15 10 5 0 0 0 0 0 0 0 Design and Education Engineering Honors Arts and Business Nursing Science Letters College Social Inquiry

Figure 10: Number of Undergraduate Research Grant Awardees Per College, 2011 and 2012

As shown, the number of Undergraduate Research Grants awarded to students has increased in the last year. However, the distribution of the awards across the colleges was uneven in both 2011 and 2012, with undergraduates in the Charles E. Schmidt College of Science, Harriet L. Wilkes Honors College and the College of Engineering and Computer Science receiving the majority of grants.

# b. Undergraduate Research Symposium

The Undergraduate Studies Office initiated an annual Spring Undergraduate Research Symposium in 2010, which provides an opportunity for all students across FAU to formally share the results of their research and inquiry projects with faculty, staff and students. Fortynine students gave presentations in 2011. The number increased to 54 in 2012. Figure 11 provides the distribution of student presentations by college.

25 20 **2011 2012** 18 20 16 14 15 10 2 5 0 0 0 Design and Education Engineering Arts and Business Honors Medicine Nursing Science Letters Social College Inquiry

Figure 11: Distribution of the Undergraduate Research Symposium Presentations by College

This data shows that the majority of participating students over the last two years have come from the Charles E. Schmidt College of Science, the College of Engineering and Computer Science and the Harriet L. Wilkes Honors College.



# c. Undergraduate Research Journal

Through our QEP efforts, QEP student council members developed an Undergraduate Research Journal. FAU's inaugural undergraduate research journal received 24 submissions which are currently under review. Figure 12 provides student submissions by college.

10 8 8 6 4 2 0 0 0 Arts and Business Design and Education Engineering Honors Nursing Science Letters Social Inquiry

Figure 12: Number of Article Submissions to the Undergraduate Research Journal Per College

The figure reveals that the number of submissions to the journal in 2012 varied widely by college, though the familiar pattern emerged. Science, Honors and Engineering and Computer Science students submitted close to 71% of the total submissions. The data gathered from the three university-wide co-curricular opportunities described above highlight an institutional need to broaden participation in under-represented colleges. Our QEP plan will provide a means to do so.

# 2. College and Program-Specific Co-curricular Opportunities

In addition to the university-wide co-curricular opportunities for students to engage in research and inquiry, a number of opportunities are offered by departments and colleges for their own undergraduates' research and inquiry activities. As Figure 13 demonstrates, only a small percentage of departments across the university provide internal funding for undergraduate research and inquiry projects or offer other forms of faculty support for it.

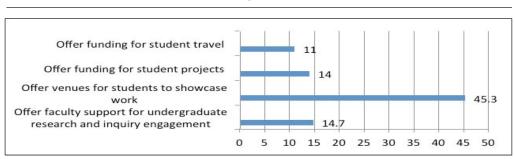


Figure 13: Percentage of departments that offer internal undergraduate research and inquiry support



Qualitative and quantitative information reported by the faculty and department chairpersons reveals a great variety of co-curricular opportunities and best practices for supporting undergraduate research and inquiry. These include discipline-specific opportunities through federal or privately funded projects and college and program specific showcase opportunities for undergraduates. Several key examples of such activities (and the number of students participating in them) are provided in Table 2.

Table 2: Undergraduate Research and Inquiry Co-Curricular Opportunities

Sponsor	Undergraduate Research Opportunity	# Students Participating 2011-12
College of Arts and Letters	Bachelor of Fine Arts Senior Exhibition	57
_	Coastlines Literary Magazine	20
	Remarque Journal	40
	Undergraduate student projects through extramural funding	2
College of Business	*Annual Business Plan Competition	35
(*not limited to FAU students)	Student Honors Society Activities	100
	Special Marketing Event Presentation	19
College of Design and Social Inquiry	Twelve by 12 Exhibit	65
	Exhibition of student work in Fort Lauderdale-Downtown Campus	13
	Undergraduate student projects through extramural funding	70
College of Education	Undergraduate student projects through extramural funding	3
College of Engineering and	Senior Design Presentation	56
Computer Science	Undergraduate student projects through extramural funding	28
College of Science	Undergraduate student projects through extramural funding	11
	College of Science Research Showcase	3
FAU Davie Campus (*not limited to Undergraduates)	Broward Undergraduate and Graduate Research Symposium	11
Wilkes Honors College- Jupiter	Symposium for Research and Creative Projects	66
Student Government	Undergraduate Student Travel for Research & Inquiry Presentations	8



Further analysis of the data provides some insight into the types of support offered directly by departments and programs for co-curricular activities associated with undergraduate research and inquiry. Only a handful of undergraduate students across the university have been involved in presenting research findings or in authoring/coauthoring an article or book (see Figure 14).

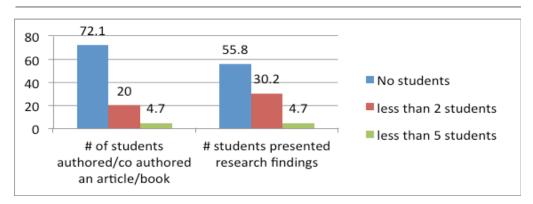


Figure 14: Number of Students Reported to Publish or Present Research Findings

It is not clear, however, whether these low numbers reflect a relative emphasis on (only) internal showcasing opportunities for undergraduates, or whether undergraduate students are not involved in these activities as a whole. One reason why only a few undergraduates have presented and published research and inquiry activities may be lack of knowledge of internal and external opportunities.

# a. Publicizing of FAU Co-curricular Opportunities

Currently, there is no centralized location where students interested in participating in undergraduate research and inquiry can get information about opportunities and resources. Information is currently dispersed among several programs and websites including the Undergraduate Studies Office, Career Development Center, Financial Aid and specific departments and programs. The Undergraduate Studies Office provides information about the Undergraduate Research Symposium and Grants program and disseminates the information to the University through email blasts and announcements. The Career Development Center, CDC, manages a centralized job and internship online portal through a web-based link OWL Career Link. OWL Career Link allows students and registered alumni to upload resumes and apply to online job postings. In addition the job portal allows employers and community partners to upload job/internship opportunities and conduct resume searches. FAU's Financial Aid office hosts a general scholarship website that includes all academic, leadership, athletic and other scholarships. Departments such as the Office of International Programs (OIP), Student Government and several colleges provide information about discipline-specific scholarships and other funding on their websites.

Through the above self-evaluation, it became evident that there are core pockets of research and inquiry co-curricular activity involving small numbers of students unevenly distributed across departments and programs. There is limited funding for such activity and the opportunities for students to showcase their work vary. Our QEP aims to coordinate research-





and inquiry-focused co-curricular opportunities in order to expand participation by students in all colleges and at all campuses, establish new opportunities, increase funding and publicize existing opportunities to all students. In addition, we have designed a plan to track student participation in research and inquiry activities, measure the impact of student participation and communicate and recognize student successes.

# 3. College and Program-Specific Curricular Opportunities

A variety of curricular opportunities exist at FAU for students to engage in research and inquiry. Two main current opportunities include Honors Thesis and Capstone Courses. Table 3 provides self-reported estimates from departments and colleges of students participating in these opportunities.

**Honors Thesis:** All students from the Wilkes Honors College are required to complete an honors thesis. Students completing the Department-specific Honors in the Major program are required to complete either an honors thesis or another capstone project. There are currently 14 (active and inactive) honors in the major programs available at FAU. While most current active honors programs require an honors thesis, other (e.g. Accounting) require a capstone final project (Case study competition).

**Capstone courses:** Conventional capstone courses vary by department and program. Some programs (e.g. College of Engineering and Computer Science) require a research-focused capstone course prior to graduation of their undergraduate students while other programs include capstone projects into elective courses.

Other different types of current opportunities identified by departments and programs include research methods courses, advanced seminars or special topics with an applications emphasis, laboratory or design courses, field work or clinical or other practica, directed independent study, internships and co-ops. Some of these opportunities are required for degree completion and others are provided as elective options for students. The depth and level of research and inquiry included in these courses do vary by instructor, faculty mentor and semester. It is unclear however, how many of these opportunities (Capstone courses, Directed Independent Study, Internships, Field Placement, Clinical Practicums and Co-op's) involve a substantial research and inquiry component.

Our evaluation efforts identified a great deal of variation in the degree to which students across FAU's colleges have access to potential research and inquiry-rich curricular experiences. In most programs, there is no clear path or coordinated approach within the curriculum to scaffold student development of the requisite skills for engagement and success in research and inquiry. Very few programs have a coherent plan to incorporate research- and inquiry-focused pedagogies into their courses or into their overall curricular goals and none of the programs have formalized methods of identifying or quantifying the level of research and inquiry (Exposure, Skill building and Intensive) included and the numbers of students engaged in those activities. Our Distinction Through Discovery QEP aims to address these needs.



**Table 3: Undergraduate Research and Inquiry Curricular Opportunities** 

	Undergraduate Research-based Engagement Activity	
College	Student #'s 2011-2012	
	Capstone Course	Honors Thesis
College of Arts and Letters	11	1
College of Business	54	0
College of Design and Social Inquiry	41	0
College of Education	125	0
College of Engineering and Computer Science	228	0
College of Nursing	0	0
College of Science	261	16
Wilkes Honors College- Jupiter	0	50



"The mind is not a vessel to be filled, but a fire to be kindled"

- Plutarch, 46-127 CE

# **Review of Best Practices**

## A. Review of the Literature

# The Need for Reform – Undergraduate Research and Inquiry as a Recommendation

The rationale behind choosing undergraduate research and inquiry to address the learning outcomes identified for our QEP was based on several reports, including the Carnegie Commission report which recommended reform in undergraduate education by making "research-based learning the standard" through the Boyer Report and the Association of American Colleges and Universities' efforts through Liberal Education and America's Promise (LEAP), by establishing High Impact Educational Practices, which identify undergraduate research as a vital and valued practice for enhancing student success.

FAU has developed its goals and action plan to be consistent with the recommendations of the reports from the Boyer Commission. These reports emphasize the processes of inquiry, investigation, discovery and communication as central to an institution's mission where "faculty and students are learners and researchers, whose interactions make for a healthy and flourishing intellectual atmosphere" (Boyer Commission 2003). The report provides a series of recommendations as a blueprint for institutions whose aim is to establish an "intellectual ecosystem" where "undergraduates benefit from the unique opportunity and resources available in research universities." These recommendations include a focus on promoting a discovery-based undergraduate curriculum; providing opportunities and promoting skill development throughout the entire academic experience beginning in the freshman year; facilitating mentorships through capstone experiences and other project-based activities; and establishing communities of learners (faculty and students) to cultivate a sense of belonging among groups with similar intellectual interests.

The recommendations from the Boyer Report were re-emphasized in Kuh's work, published through the Liberal Education and America's Promise (LEAP) initiative. LEAP's main goal is to align the goals for college education with the needs of the global workforce. Kuh's report challenges higher education to "make excellence inclusive." Kuh challenges educators to focus learning on "essential student learning outcomes" and the kinds of high impact educational activities that students participate in which may foster those learning outcomes. These high impact educational practices include undergraduate research, internships, capstone courses and projects, common intellectual experiences and learning communities. FAU's plan is to incorporate and increase these best practices.

# **Outcomes Impact of Undergraduate Research**

The benefits of participating in high impact educational practices have been documented in the literature for faculty, students and the institution. The committee considered best practices from the literature that demonstrates high impact of Undergraduate Research and Inquiry for students, faculty and the institution.



# **Outcomes for Students**

There is a growing body of literature supporting research-based approaches to learning and undergraduate research and inquiry activities which provide students with skills needed for their future graduate or professional careers. We have summarized the findings reported in scholarly literature about student outcomes for high-impact educational practices in the table below.

Table 4: Outcomes impact for undergraduate research and inquiry for students and the literature references

Executive summary of findings	Literature review
Students engaged in research activities are more likely to proceed to graduate from undergraduate programs; pursue additional research activity and utilize faculty for job recommendations when engaged in undergraduate research activities	Hathaway, Nagda, Gregerman (2002), Summers & Hrabowski (2006); Russell, Hancock & McCullough (2007); Bauer & Bennett (2003); Seymour, Hunter, Laursen, & DeAntoni (2004); Lopatto (2010, 2008, 2003); Ishiyama (2001); Laursen, Hunter, Seymour, Thiry, & Melton (2010)
Students who are involved in research early on demonstrate increased academic achievement and higher retention rates – strongest in African American students and sophomores	Nagda, Gregerman, Jonides, von Hippel & Lerner(1998), Bauer & Bennett (2003); Foertsch et al. (2000); Craney et al. (2011)
Participation in research produces increased curiosity, develops student research processes and skills including oral and written communication skills, analytical and critical thinking; technical skills; information literacy	Lopatto (2007); Kardash (2000); Bauer & Bennett (2003); Summers & Hrabowski (2006); Hunter, Laursen, & Seymour (2007); Seymour, Hunter, Laursen, & DeAntoni (2004); Bauer & Bennett (2008); Kuh, Chen, & Nelson Laird (2007); Lopatto (2006)
Participation in research provides opportunities for peer and faculty mentorship and the establishment of communities of learners	Alexander, Foertsh, Daffinrud & Tapia (2000); Nnadozie, Ishimaya, & Chon (2001); Bender, Blockus & Webster (2008)
Participation in research generates positive perceptions of their discipline and confidence in their abilities in that discipline	Jenkins and Healey (2009), Hunter, Laursen, & Seymour (2007); Kardash (2000); Russell, Hancock, & McCullough (2007); Seymour, Hunter, Laursen, & DeAntoni (2004); Russell et al. (2007)
Participation in research refines career goals and clarifies choice of academic degree	Hunter, Laursen, & Seymour (2007); Seymour, Hunter, Laursen, & DeAntoni, (2004); Russell, Hancock, & McCullough (2007)

# **Outcomes for Faculty**

Students are not the only beneficiaries of involvement in undergraduate research and inquiry; benefits to faculty have also been observed. Jeffrey M. Osborn and Kerry K. Karukstis (2009) summarize these benefits which include enhanced mentoring and teaching, enhanced satisfaction with their career and personal development, achieved scholarly and research outcomes and integrated teaching and scholarship. More faculty are working with undergraduates since they themselves engaged in similar activities as undergraduates and identified the experience as being transformational for their careers (Russell, 2006).



"Our university's reputation and success are dependent on each of us to create the knowledge environment that nourishes and develops all who come in contact with FAU. An institution of excellence creates an atmosphere of excitement that stimulates community involvement and support. Undergraduate research and scholarship guarantees that the university can expand its influence."

— FAU faculty member, January 2012.

#### Institutional Benefits

Institutions embarking on making undergraduate research and inquiry an integral part of their mission will reap the benefits of this investment in their students. These practices establish a community of scholars which reflect a vibrant relationship between faculty and students, enrich the curriculum and foster innovation both within the institution and through community partners. In addition, students who become alumni will take these skills learned through the practice of undergraduate research with them. These are the same skills deemed invaluable for employers and graduate and professional programs. Our alumni will begin their professional career (graduate or otherwise) with a significant advantage for success. As the Boyer Report indicates "Ideally, those trained in an environment filled with inquiry and discovery will extend their experiences to classes they teach to include such pedagogies and practices."

# Best Practices for Establishing a Culture of Undergraduate Research and Inquiry

Many published reports have outlined best practices of undergraduate research and inquiry and have emphasized curricular and co-curricular initiatives. Rowlett et al.'s recent publication, 2012) entitled "Characteristics of Excellence in Undergraduate Research, COEUR," provides a comprehensive summary of best practices to support and sustain undergraduate research programs. Here we present those best practices and how we utilized them to establish a plan for our institution. We organized the information into four main goals of our QEP plan of action: 1) Curricular, 2) Co-curricular, 3) Community of Learners and Recognition and 4) Supporting Infrastructure.

Table 5: COEUR Best Practices adapted for FAU's plan

	COEUR Best Practice	Implemented in FAUs QEP
All Goals	Institutional Commitment and Strategic Planning	<ul> <li>QEP goals and objectives align with FAU's mission, supported as a high priority, evidenced within the Strategic Plan</li> </ul>
	Broad Disciplinary Participation	<ul> <li>Our research definition's emphasis on inquiry includes scholarship and creative activity</li> <li>Opportunities encourage involvement in all disciplines by participants on all campuses</li> </ul>
	Research Infrastructure:	<ul> <li>Office of Undergraduate Research and Inquiry, OURI will collaborate with other programs (e.g. Division of Research)</li> </ul>
	Opportunities for Early and Sustained Involvement by Students	<ul> <li>Curricular, co-curricular and professional development opportunities are offered throughout the entire academic experience</li> <li>Multiple opportunities are encouraged</li> </ul>



	COEUR Best Practice	Implemented in FAUs QEP
All Goals	Accessible Opportunities for Undergraduates	<ul> <li>Integrating research and inquiry into the curriculum provides opportunities to expose all students to these practices</li> <li>Opportunities are available for all students in honors and conventional programs for both upper and lower divisions</li> </ul>
	Establishing and Communicating Research Expectations	<ul> <li>Within each activity proposed by the QEP, student and faculty expectations are/will be explicitly stated</li> </ul>
	Faculty Commitment and Scholarly Faculty Mentors	<ul> <li>FAU faculty have embraced this QEP and through their support and participation we will expand this culture of research and inquiry</li> </ul>
	Faculty and Student Compensation	Small stipends are offered for students and faculty through various QEP opportunities
Curricular	Establish a Research Supportive Curriculum	<ul> <li>Encourage faculty to integrate teaching and research through Curriculum</li> <li>Development Grants Program</li> </ul>
	Developmentally Appropriate Expectations and Intellectual Ownership	Curricular redesign will include scaffolded experiences for students based on their prior knowledge and expertise
	Student Course Credit for Research	Establishment of a Research and Inquiry Certificate program;
Co-Curricular	Travel and other student funding provided by the institution	Offer Undergraduate research grants program, student travel funding offered through Student Government
	External funding	<ul> <li>Current opportunities for students to participate in externally funded projects</li> <li>Intention to increase these numbers and opportunities through our QEP efforts</li> </ul>
	Dissemination including publications, presentations, conferences, on-campus symposia	<ul> <li>Offer annual university-wide symposium</li> <li>Multiple college-based showcase opportunities</li> <li>Established undergraduate research journal</li> </ul>
	Expanding and integrating student research opportunities	<ul> <li>Established collaborations with other programs that offer high-impact experiences</li> <li>Continued partnership with neighboring research based organizations</li> </ul>
	Summer research program	<ul><li>Establishment of a Summer Undergraduate Research Fellowship (SURF)</li><li>Additional marketing of existing summer offerings through OURI</li></ul>
Faculty and Student Support and Recognition	Professional development opportunities- research and non-research related	<ul> <li>Faculty and student professional development opportunities established and expanded</li> <li>Collaboration with Division of Research to offer opportunities undergraduate students</li> </ul>
	Mentorship training for faculty and students	Mentorship training through faculty learning communities and a peer- mentor program



	COEUR Best Practice	Implemented in FAUs QEP
Faculty and Student	Recognition	<ul> <li>Recognition through awards, showcasing excellence and web-based venues</li> </ul>
Support and Recognition	Community of Student scholars	<ul><li>Establishment of a student club, CSI</li><li>Peer Mentor program</li></ul>
Supporting Infrastructure	Administrative support	<ul> <li>Establish an Office of Undergraduate Research and Inquiry and website</li> <li>Financial support and infrastructure provided by the university</li> </ul>
	Integration with other engaging high-impact opportunities	Collaborations with QEP partner programs and affiliated supporting programs with common goals
	Support from Research Grants Office	<ul> <li>Collaborations with QEP partner programs to utilize existing systems in place</li> </ul>

# **Curriculum-based Best Practices**

Because curricular initiatives are central to our efforts of expanding and sustaining a culture of undergraduate research and inquiry at FAU, the Steering Committee completed a more comprehensive review of best practices related to the curriculum. In addition to the recommendations from the Boyer Report, we reviewed the works of Jenkins and Healey (2005, 2009) and several Council of Undergraduate Research publications including Developing and Sustaining a Research-Supportive Curriculum: A Compendium of Successful Practices (2007); Reading, Writing, Research: Undergraduate Students as Scholars in Literary Studies (2009); and specific chapters in Broadening Participation in Undergraduate Research: Fostering Excellence and Enhancing the Impact (2009). Two common tenets have emerged in the literature regarding these curricular and pedagogical reform discussions: 1. Students are at the center of the learning process and 2. A "learning through research and inquiry" approach is adopted. We provide a summary of exemplary practices in establishing a research-supportive curriculum.

**Research and Inquiry Exposure Courses:** Introductory courses infuse the excitement of discovery and inquiry that expose students to what research is and is not and how it is conducted. These courses generate an awareness of and appreciation for, research and inquiry as a practice.

**Case Study and Problem-based Learning Pedagogies:** An authentic problem or case study is used to initiate and develop student learning. Students actively participate in groups and mimic the research process to establish possible solutions.

**Research-like Experiences:** Courses and activities employ cooperative learning and project-oriented laboratories which simulate actual research processes and are based on concepts and principles already discovered.

**Skill Building Courses:** Courses such as "Research Methods" or writing intensive courses provide the skills and practices necessary and prepare students to participate in more intensive research and inquiry activities. Such skills and practices include research deconstruction, identification of the research question or problem, reading and communication skills, information literacy, introduction to research and ethics, problem solving and critical thinking, using technology to integrate research and inquiry into classrooms and knowledge specific to the discipline.

**Culminating Experiences:** Courses and programs are designed to include an honors thesis and other capstone or independent study projects. Students participate in a research intensive experience to develop and explore an original question.



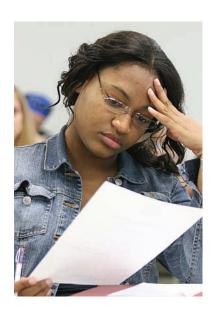
# **B. Best Practices at Other Institutions**

In our efforts to establish a comprehensive review of best practices for our plans, FAU SACS and QEP Steering Committee members participated in conference meetings; site visits, website reviews, phone conversations and list-serve emails to evaluate exemplar undergraduate research and inquiry programs from other institutions (See Appendix H). A variety of institutions were evaluated, many of them active in the Council of Undergraduate Research and other consortia, as well as those institutions whose QEP topic included undergraduate research and inquiry in previous years. Relevant and successful elements of the best practices from these institutions were noted and we have modeled our own QEP plans after these as highlighted below.

Table 6: FAU's Goals and Plans, Modeled After Other Institutions' Best Practices

QEP Goal	Best Practice	Modeled After
Goal 1	Curriculum Grant Program and Curriculum Development	University of South Florida; University of Houston, University of North Carolina Chapel Hill
Goal 2	Summer Undergraduate Research Fellowship	University of North Carolina Chapel Hill , Harbor Branch Oceanographic Institute (FAU), California Institute of Technology
	External Funding Solicitation	University of Florida, University of Central Florida, Louisiana State University
	Expanded Undergraduate Research Symposium	University of Central Florida, University of Michigan, University of Missouri, Columbia, University of North Carolina Chapel Hill, Lock Haven University
	Undergraduate Research Journal	Florida State University, University of Central Florida, University of Florida
Goal 3	Faculty Professional Development	University of Miami, Stephen F. Austin State University, Tennessee State University
	Student Professional Development	University of Central Florida
	Cultivate sense of community for students, peer-mentoring	Morehead State University, University of Central Florida
Goal 4	Office of Undergraduate Research and Inquiry	University of Missouri, University of Central Florida, University of Michigan, University of Houston, University of North Carolina Chapel Hill
	Website	Florida State University, University of South Florida, University of Central Florida, University of North Carolina Chapel Hill
	Collaborations with University Partner Programs	University of Houston, University of Central Florida
	Undergraduate Research and Inquiry Steering Committee	University of Central Florida, George Mason University
	Assistance pairing students with faculty	University of Michigan, Austin Peay State University





# **Desired Student Learning Outcomes**

# A. Definition of Research and Inquiry

As presented in Chapter 2, analysis of data from our institutional self-evaluation and comparisons with peer institutions provide evidence for an institutional need in student learning. The focus of our Distinction Through Discovery plan is to address this need and accomplish the mission of our institution by expanding a culture of undergraduate research and inquiry (URI) across departments and colleges within the university. To achieve this, the QEP Steering Committee has articulated a working definition of research (adapted from the Council of Undergraduate Research, CUR) for the purposes of this QEP.

Figure 15: Definition of Research for FAU's QEP

An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline or practice.

Our definition of research focuses on **inquiry**. FAU faculty and students recognize inquiry to be a process and/or a product which centers on asking questions or solving problems and which encompasses intellectual traits that transcend subject matter divisions. Examples of such processes common to the disciplines may include questioning existing ideas, identifying approaches to unstructured problems, thinking creatively, exploring new ideas and examining the processes by which knowledge is discovered. This "contribution to the discipline or practice" may result in communicated deliverables such as exhibitions, performances, works of art, presentations, publications and other forms recognized within each discipline.

# **B. Student Learning Outcomes**

Since the purpose of our QEP is to enhance student learning and "grow" capable students by engaging them in undergraduate scholarly research and inquiry, the QEP Steering committee developed the set of student learning outcomes (SLOs) for our QEP. FAU faculty recognize that there are many ways in which the processes of research and inquiry are conducted and although these learning outcomes are presented in a numbered form above, the QEP Steering committee recognizes that these learning outcomes do not represent a linear progression of the process.

The QEP Assessment Committee articulated potential Indicators for each learning outcome to guide the development of course-based measures (see Figure 16 below). These learning outcomes were compared to those identified by the American Association of Colleges and Universities VALUE rubrics as well as outcomes identified by other institutions whose QEP focused on Undergraduate Research such as University of Houston, University of North Carolina Chapel Hill, George Mason University and Embry Riddle Aeronautical Institute.

We will address these student-learning outcomes and implement these goals throughout undergraduates' academic careers at FAU. These skills will be introduced and developed by integrating a research and inquiry focus into the curriculum in introductory level "Research and Inquiry Exposure" courses. These skills will be extended, reinforced and applied by continuing



the curricular research and inquiry focus in more advanced "Skill Building" courses. Full-scale faculty-mentored research and scholarly activity will be provided in "Research and Inquiry Intensive" courses. Assessment of how well students achieve the QEP SLOs will center on direct course-based measures.

Figure 16: Distinction Through Discovery Student Learning Outcomes and Indicators

**SLO 1: KNOWLEDGE.** Students will demonstrate content knowledge, core principles and skills.

- Vocabulary/ Basic Skills
- · Theoretical framework or Genres
- Information Literacy or Sources of Information

**SLO. 2: FORMULATE QUESTIONS.** Students will formulate research questions, scholarly or creative problems with integration of fundamental principles and knowledge in a manner appropriate to their discipline.

- · Relevant Issues or content
- Rationale

**SLO. 3: PLAN OF ACTION.** Students will develop and implement a plan of inquiry to address research and inquiry questions or scholarly problems.

- Methods of Exploration
- Design
- Implementation
- · Observations or data collection
- Technical Skills

**SLO. 4: CRITICAL THINKING.** Students will apply critical thinking skills to evaluate information, their own work and the work of others.

- Analysis
- Interpretation
- Sources of Error
- Conclusions

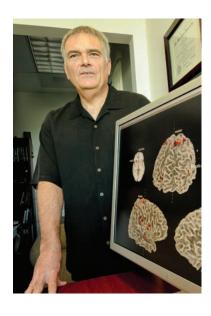
**SLO. 5: ETHICAL CONDUCT.** Students will identify significant ethical issues in research and inquiry and/or address them in practice.

- Academic Integrity
- Safety
- Ethical treatment
- Ethical issues

**SLO. 6: COMMUNICATION.** Students will convey all aspects of their research and inquiry (processes and/or products) in appropriate formats, venues and delivery modes based on the conventions of their disciplines.

- Clarity and Organization
- Quotation, Attribution and Citation
- · Form, Level





# C. Program Goals

Our efforts to improve the student learning outcomes and implement our plan of action can be divided into four main goals:

- 1. Establish an undergraduate curriculum which provides students the intellectual skills necessary to successfully engage in undergraduate research and inquiry.
- 2. Expand student co-curricular opportunities for undergraduate research and inquiry.
- 3. Increase support and recognition for faculty and students who engage in undergraduate research and inquiry.
- 4. Enrich and strengthen an institutional climate that supports undergraduate research and inquiry.

# D. Program Outcomes

We intend to evaluate the success of FAU's QEP in achieving our program goals by examining achievement of the following program outcomes for this initiative. The table below provides the Program Outcomes linked to the associated goals for our Distinction Through Discovery plans.

**Table 7: Distinction Through Discovery Program Outcomes Related to Goals** 

Program Outcomes	Goals
More students and faculty will be involved in undergraduate scholarly research and inquiry.	Goals 1, 2,3 and 4
Curricular changes will be implemented to integrate the teaching and research missions of our university.	Goal 1
Participating undergraduates will become independent, self- motivated critical thinkers who are prepared for their future goals.	Goals 1,2,3 and 4
Faculty and students will be recognized and rewarded for their participation in undergraduate research and inquiry.	Goal 3
5. An Office of Undergraduate Research and Inquiry and associated website will be established and sustained as a supporting structure for FAU's undergraduate research and inquiry efforts.	Goal 4
A method for assessing participation in undergraduate research and inquiry for both formative and summative purposes will be established and implemented.	Goal 4
7. FAU will be recognized for student and faculty undergraduate research and inquiry opportunities.	Goals 1,2,3 and 4



# Actions to be Implemented

"Undergraduate
researchers learn tolerance
for obstacles faced in the
research process, how
knowledge is constructed,
independence, increased
self-confidence and
a readiness for more
demanding research. These
benefits are an advantage
in any career path."

— David Lopatto, 2006.

Our efforts with the QEP will increase the number of FAU faculty and institutional partners who provide curricular and co-curricular opportunities for students to engage in mentored, individual or group research and inquiry projects. To implement and expand a culture of undergraduate research and inquiry at FAU and to improve these identified learning outcomes for our students, we will build and expand upon existing best practices within our institution and begin implementing new initiatives based on others' best practices; these encompass the core goals of our Distinction Through Discovery plan. We have already impacted several programs on campus as a result of these efforts. With a renewed institutional emphasis to increase students' engagement in undergraduate research and inquiry, a number of programs have already begun collaborating with the QEP team to implement elements of the QEP plan of action through current pilot programs. We have done this through curricular, co-curricular and community building initiatives for faculty and students as described below. We present both current and future plans as a series of action items to establish, as Boyer defines, an "intellectual ecosystem" at FAU within the goals defined for our QEP. Opportunities will be made available to all of our students based on Kuh's recommendations of "making excellence inclusive," and "setting empowering educational goals for all students, not just for some of them."

FAU faculty value and recognize research and inquiry to be a process and/or product. That is, in addition to understanding the importance of providing students with opportunities to engage in research and inquiry projects, our faculty acknowledge that the methods of inquiry we expose students to and the means by which we scaffold the development of these skills in our students, are crucial for undergraduates' critical thinking and problem solving. All of these action items are unified with the overall goal of Distinguishing FAU students through the practice of Discovery.

# Goal 1: Establish an Undergraduate Curriculum which Provides Students the Intellectual Skills Necessary to Successfully Engage in Undergraduate Research and Inquiry.

The importance of building undergraduate research and inquiry skills throughout students' academic experience has been recognized as a valuable and necessary part of their undergraduate education. The skills that students can acquire through exposure and engagement in research and inquiry as an exciting and creative process and its effects on society are exceptionally valuable.

Jenkins and Healy (2009) identified the importance of integrating the research and teaching missions of the university. They outlined four categories for integrating research into the curriculum which emphasize the processes, problems and content involved. These categories include research led, research oriented, research based and research tutored curricular components. In the first two categories, students serve as an "audience" for research and inquiry. In the last two, students are more likely to act as participants in the research and inquiry themselves. Drawing upon Jenkins and Healy's rationale, FAU's Distinction Through Discovery QEP will encourage faculty to scaffold these kinds of effective experiences throughout the undergraduate curriculum by establishing developmentally appropriate student opportunities and experiences within programs across all four years. These pedagogical



"We want all students
to access the benefits
exposure to teaching
informed by research
can bring. ... We believe
an understanding of
the research process –
asking the right
questions in the
right way; conducting
experiments; and collating
and evaluating information
– must be a key part of any
undergraduate curriculum"

Bill Rammell MP, Minister
 of State for Lifelong
 Learning, Further and
 Higher Education (2006)

features will direct students to focus and identify specific questions that guide scholarly activity as well as to develop the prerequisite knowledge and skills needed to effectively answer those questions. The student learning outcomes incorporated into our QEP are aligned with these foci and we seek to catalyze institutional change by establishing an Undergraduate Curriculum Grant Program. In this way, our Distinction Through Discovery Initiative will encourage and support faculty to integrate research-focused pedagogical approaches into the undergraduate curriculum.

Based on the feedback our QEP Steering Committee received from the university community through our surveys, focus groups and individual consultations, we adapted Jenkins and Healy's (2009) taxonomy for research in the curriculum for our grant program. Our program will support the redesign of existing courses or creation of new curricular components in the following categories:

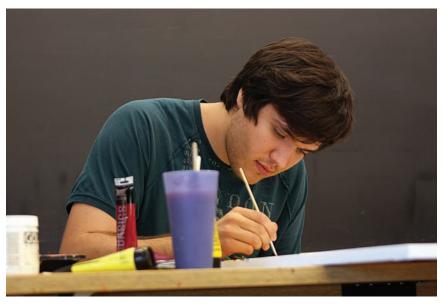
- Research and Inquiry Exposure: Students acquire basic knowledge about
  current practices, literatures and works and research and inquiry methodologies
  in the discipline. Learning is guided through discussion; colloquia; assignments
  that introduce research and inquiry concepts, processes and techniques; or other
  novice-level pedagogies and experiences. Courses which receive the research
  and inquiry exposure designation are expected to address at least three of the six
  QEP SLOs. Student works at this level generally focus on the identification and
  articulation of fundamental research and inquiry content, knowledge and skills.
- Research and Inquiry Skill Building: Students develop intermediate-level discipline-specific research and inquiry skills and more in-depth knowledge of methodologies.
  Learning is guided through instruction-supported advanced experiences such as research discussions and critiques; practice writing or producing specific components of scholarly work with some scaffolding, studio or laboratory training, peer review and developing project proposals. Courses which receive the research and inquiry skill building designation are expected to address at least three of the six QEP SLOs, with SLO 2- Formulate Questions being a requirement. Student works at this level emphasize the refinement of novice-level knowledge and skills and/or demonstrate the development of competency in specific components of the research and inquiry process or products.
- Research and Inquiry Intensive: Students learn to apply and implement the entire cycle of research and inquiry skills to develop and explore an original question or problem. Learning is guided through mentored independent study, thesis projects, assembly and presentation of portfolios, performances and exhibitions; or the completion of other capstone or comprehensive activity. Courses which receive the "research intensive" designation must address all six QEP SLOs and engage students through all stages of an inquiry project. Student works at this level document the identification of new questions, problems, or approaches; a scholarly rationale and design for the approach taken in refining the questions or problems; implementation of the designed plan; critical review and reflection upon



the results or outcomes of the work; and a coherent communication of the design and results of the work.

1. Establish a Distinction Through Discovery Undergraduate Curriculum Grant Program.

The QEP Curriculum Committee will establish a Curriculum Grant Program to support the incorporation of research and inquiry into curricular elements that engage students. The Grant Program will begin by focusing on the upper division for the first two years and then expand to the lower division programs and courses in Fall 2015. Proposals may focus on the revision of preexisting courses and curricular components or programs and/or the creation of new ones. The Curriculum Committee will encourage departments and programs to take a holistic, programmatic approach to implementing research and inquiry skills in their departments by identifying what specific research and inquiry skills are needed; evaluating their curriculum



to identify when, where and how these skills are addressed; identifying what gaps and overlaps exist in developing these skills; evaluating whether current pedagogies have been effective at developing these skills; and suggesting how skill development could be improved through proposed curricular initiatives.

In support of all curricular initiatives associated with Goal 1, the QEP budget includes over \$500,000 in funds over the time frame of the Distinction Through Discovery program. The budget for individual or department grants will be determined by the size and scope of each proposal. We have adopted the University of Houston's QEP model for funding these curriculum grants programs. Curriculum proposals that involve a single course or work limited to a single faculty or staff member will be awarded up to \$5,000 in support; proposals

that include two or more courses within a program will be awarded up to \$10,000 in support and proposals that include collaborations across departments, programs or colleges can be awarded up to \$20,000 in support. The Curriculum Grants Program will be managed by the Office of Undergraduate Research and Inquiry and Curriculum Committee in collaboration with the college deans.

The Curriculum Grant Program provides support at all levels for faculty, departments and colleges to adopt a research and inquiry enriched approach to their undergraduate curricula. The following table provides more concrete examples of ways in which faculty can engage students in research and inquiry through these categories and at different student levels.



Table 8: Examples of Types of Courses and Specific Activities within the Three Categories Established for the Curriculum.

Category	Examples of Research and Inquiry Activity and Courses
Research and Inquiry Exposure	<ul> <li>Assignments and classroom activities that introduce students to research and inquiry tools (e.g., searchable databases) and engage students in the act investigating previous scholarly publications</li> <li>Presentations and discussions with faculty and graduate students about ongoing research and inquiry projects at the institution</li> <li>Coursework that involves case studies of contemporary issues</li> <li>Courses utilizing problem-based learning and other inquiry-based pedagogies</li> <li>Including a historical perspective of the discipline to model how research is developed in an ongoing changing process</li> <li>Research discussions or debates which identify key issues, hot research topics, or policies</li> </ul> Generally, the above examples would be implemented in introductory and lower-division survey courses.
Research and Inquiry Skill Building	<ul> <li>Discussions or assignments in which students identify the strengths and weaknesses of various research and inquiry methodologies used to solve current problems or understand principles in the discipline</li> <li>Research-focused writing assignments or research-themed WAC courses</li> <li>Laboratory, practicum, or studio course components in which students practice specific skills (e.g., instrumentation, performance styles, working with certain materials, etc.)</li> <li>Classroom activities that engage students in planning and decision making about information literacy or discipline-specific forms of communication such as written, oral, visual and technological</li> <li>Assignments or projects in which students collect and analyze data, conduct and reflect upon observations</li> <li>Laboratory, studio, or upper-division seminar courses will Fall into this category and make use of pedagogies similar to the above examples.</li> </ul>
Research and Inquiry Intensive	<ul> <li>Senior capstone courses or practicum experiences (honors and conventional) where students identify and investigate new questions, problems, or approaches and apply knowledge and skills to refine or resolve those questions and problems</li> <li>Activities in which students produce new knowledge in the form of scholarly artwork, performance, or creative activity and also reflect upon the process and development of their work</li> <li>Project-based laboratories or directed independent study which actively engage students in the complete process of research</li> <li>Special internship/co-operative educational experiences which actively involve students in the research and inquiry cycle</li> <li>The distinguishing characteristic of this level is that the coursework or experience actively engages the student in the complete cycle of research and inquiry with facilitation provided by an instructor or mentor.</li> </ul>



Curricular elements of research and inquiry may look quite different at the lower division compared to the upper division and in different departments and programs. Programs may address any number of these curricular levels and their corresponding learning outcomes. Our aim is to expand existing efforts by establishing a curriculum development grant program as a catalyst for departments, programs and colleges to support the development of a culture of research and inquiry and adopt a research enriched approach to their curriculum beginning Fall 2013 (after the implementation of the Pilot Program as described below).

A key to the Distinction Through Discovery Undergraduate Curriculum Grant Program is the alignment of the QEP student learning outcomes (SLOs) with the different categories of curricular integration of research and inquiry. Courses which receive the "research and inquiry exposure" and "research and inquiry skill building" designation are expected to address at least three of the six QEP SLOs, with SLO 2 being a requirement for the "research and inquiry skill building" designation. Courses which receive the "research intensive" designation must address all six QEP SLOs and engage students through all stages of an inquiry project. All proposals submitted to the Curriculum Grant Program will specify exactly how the SLOs are currently manifest in course activities via a curriculum map and explain how these will be developed better through the addition of research-and inquiry-rich courses. Proposals will specify the types of pedagogies and coursework that will be associated with the QEP SLOs; they will be included in the syllabi for those courses.

a) Upper Division Initiatives (3000-4000 level courses) in the Distinction Through Discovery Undergraduate Curriculum Grant Program

Phase 1 (Fall 2012-Spring 2013): Pilot Honors in the Major Programs in three colleges

In Summer 2012, the QEP Steering Committee solicited faculty from three existing Honors in the major programs as a pilot group: Biology (Charles E. Schmidt College of Science), Political Science (Dorothy F. Schmidt College of Arts and Letters) and Accounting (College of Business). They represented a diverse sample of programs and students offered at FAU. Two of the three honors programs (Accounting and Biology) were already in existence and currently serve the most undergraduate honors students. The Accounting program was deemed important because the College of Business has been underrepresented in previous undergraduate research and inquiry opportunities. All three programs received the support of their deans, chairs and departments for integrating undergraduate research and inquiry into their honors programs.

The pilot group served as beta-testers for our QEP plans to create and evaluate a collaborative model between departments and the QEP for establishing, implementing and assessing undergraduate research and inquiry curricular efforts through our curriculum grant program. Currently there is a 1.8% participation rate for undergraduate students in these programs. By Year 5, we expect to see a 3% participation rate.





Each pilot program receiving funding through the Distinction Through Discovery Undergraduate Curriculum Grant received significant support from the QEP leadership team (i.e., the Director, the Assessment Coordinator and individual members of the QEP Executive Committee) to (re) design and implement curricular components of their honors programs. They were provided with the QEP student learning outcomes (SLOs) and program goals and a generic rubric defining different levels of student achievement ("Developing," "Competent" and "Exemplary") for those SLOs which were created by the QEP Assessment Committee.. Ongoing consultation with several of our Undergraduate Research and Inquiry Partner Programs was provided on matters related to teaching and learning best practices, instructional design and assessment. With this assistance, faculty in each pilot honors program accomplished several tasks during the Fall 2012 term: 1. identified student research and inquiry skills (student learning outcomes) targeted for development and improvement; 2. identified or created specific course-based activities aligned with the QEP student learning outcomes to serve as program "indicators" (direct measures) of SLOs; 3. adapted the generic QEP evaluation rubric to the program's discipline and the identified indicators; 4. established benchmarks for "competence" in program indicators; 5. measured how well students achieved SLOs. In Spring 2013, these pilot programs will be asked to report results, suggest improvements to program indicators and rubrics based on student and faculty feedback and establish potential indirect measures and benchmarks to evaluate methods for identifying, recruiting and tracking honors students and recognizing the successes of students in the pilot programs.

The pilot group has been meeting routinely throughout the year with the QEP leadership team. The results obtained from the pilot honors programs and through consultation with our collaborating faculty will help us refine specific guidelines for honors programs and conventional research-intensive upper division programs that may participate in the Distinction Through Discovery Undergraduate Curriculum Grant Program in the future. These refinements will include revisions to our assessment rubrics and operational systems to better meet the needs of our future participating programs.

Phase 2: (Fall 2013–2018): Future Plans for Upper Division Courses and Programs

Beginning Fall 2013, the Distinction Through Discovery Undergraduate Curriculum Grants Program will focus on the upper division curriculum supporting both conventional degree programs and honors in the major curricular initiatives. In the upper division (UD), all three categories of research and inquiry engagement will be supported (see Table 8), with an emphasis on providing more students with opportunities to engage in curricular pedagogies and projects involving research intensive involvement. Participation from colleges that have been underrepresented in previous undergraduate research and inquiry opportunities will be particularly encouraged, as will representation by courses and programs across all of FAU's campuses and sites.

Our current guidelines for establishing honors in the major programs at FAU are consistent with recommendations made by the Council of Undergraduate Research (CUR) and National Collegiate Honors Council (NCHC) recommendations for research and inquiry and will be used to establish such programs. Best practices established through honors courses will



be applied to revise conventional courses and programs as applicable. Currently there are 14 honors in the major programs offered at FAU, however several of these programs are not active. Our overall goals for the upper division include establishing honors in the major programs in 50% of all departmental programs by 2018, totaling 23 active research and inquiry rich honors in the major offerings in the colleges. Twenty-three additional research and inquiry intensive upper division non-honors courses will be established by 2018. The University Honors Council (UHC), the governing body overseeing honors in the major programs at FAU, will continue to serve in this purpose. The QEP Director will serve as a non-voting member on this council. The University Undergraduate Programs Committee (UUPC), the governing body overseeing conventional curriculum, will continue to approve changes within the undergraduate curriculum. Our goal is a 10% increase in honors theses in Year 1 and a 50% increase in honors theses by Year 5.

b) Lower Division Initiatives (1000-2000 level courses) in the Distinction Through Discovery Undergraduate Curriculum Grant Program

While development grants will focus on the upper division in the first two years, lower division curricular initiatives are equally important. They provide an opportunity to reach students in the early phases of their academic journeys. Freshman programs, especially, should both excite students about the possibilities of what lies ahead and establish a foundation to prepare students to embark on a lifelong learning adventure. The ideal curriculum will enrich learning experiences with all categories of research and inquiry pedagogies throughout students' academic careers and explicitly link their aggregated learning experiences in a coherent way. Our efforts at introducing students to the world of research and inquiry at a university builds on the foundations of a best practice we have already established through our learning communities.

Phase 1: (Fall 2012-Spring 2013): Pilot Integration of Research and Inquiry into the Freshman Learning Community Experience

As part of our QEP efforts, we have already begun integrating a "research exposure" component to select Living Learning Communities (LLC) and Freshmen Learning Communities (FrLC). Learning communities are cohorts of first-year students who are placed in different communities based on similar academic goals and interests. These learning communities are ideal for emphasizing discovery and inquiry in a small classroom environment. Students in learning communities take some of the same courses, which include the introductory 2 credit hour Strategies for Learning Success (SLS) course. The Center of Learning and Student Success (CLASS) staff, in partnership with the QEP director, during Summer 2012, included in their faculty development program Fall 2012, a discussion with faculty teaching SLS courses the importance of and suggestions for integrating the excitement of discovery through research and inquiry into the curriculum of SLS courses. CLASS has set a priority to include either a research and inquiry or academic service learning component into 30% of all LLCs and FrLC by Fall 2012.



In Fall 2012, eight Learning Community instructors committed to explicitly integrating research exposure components into their SLS courses. These sections were the Engineering (A) LLC, Engineering (B) LLC, Honors LLC, Women in STEM LLC, Pre Health Professions LLC, Visual Arts FLC, Psychology FLC and Biology FLC. Language in the course syllabus explained that these are research exposure courses based on the level of the research and inquiry activity. We will continue to expand these initiatives throughout our efforts with the QEP. The Assessment Coordinator is working with the CLASS staff to engage in assessments of this initiative.

Phase 2: (Fall 2015-2018): Future Plans for Lower Division Courses and Programs

In Year 3 (2015-2016), we will formally extend the Distinction Through Discovery Undergraduate Curriculum Grants Program to include additional lower-division courses and programs. We will prioritize courses and programs which emphasize the re-design of courses in the Intellectual Foundations Program (IFP, FAU's general education curriculum). IFP courses impact all FAU students who enroll at FAU as First Time in College Freshmen. Thus, our emphasis on IFP courses affords us the unique opportunity to introduce students to learning experiences that expose them to the value and methods of scholarly inquiry, stimulate interest and excitement in possible fields of study and give them first-hand experience with research and inquiry skills while providing the foundational knowledge necessary to progress into the upper division. Our goals for the lower division through the curriculum grants program include establishing an additional 25 courses emphasizing research and inquiry at the lower division. The University Undergraduate Programs Committee, the governing body overseeing conventional curriculum, will continue to approve changes within the undergraduate curriculum.

# Goal 2: Expand Student Co-curricular Opportunities for Undergraduate Research and Inquiry.

Scholarly experiences at FAU should promote undergraduate participation in mentored research and inquiry and support the active dissemination of student works. Independent study, internships and other field-based experiences allow students to apply discovery and inquiry principles in a concrete context. Training and practice for undergraduates in how to effectively communicate their work though presentations, posters, exhibits and professional portfolios builds student confidence and allows them to adapt to the career demands they will face in the future. These experiences can provide additional learning which complements the classroom.

The Distinction Through Discovery Initiative at FAU focuses university efforts on a series of specific opportunities for students to actively join a community of scholars both within our institution and within their chosen fields of study. The strategies for achieving this goal create clusters of student opportunities as categorized below.

1. Expand Opportunities for Students to Participate in Mentored Research and Inquiry

Mentorship is one of the most important elements of undergraduate research and inquiry.



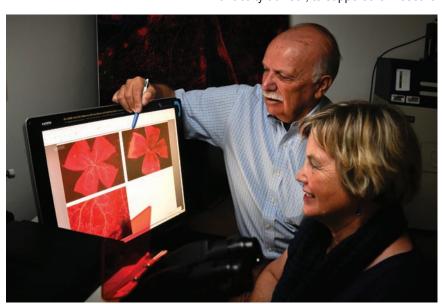
This QEP strategy focuses on providing additional opportunities for students to participate in and disseminate their work with mentored research and inquiry-based activities outside of the curriculum. We will do so by:

- Sustaining and expanding funding for scholarly undergraduate research and inquiry projects
- Coordinating and expanding opportunities for student participation in research and inquiry internships, fellowships and community-based projects
- Expand efforts at communicating these opportunities to students

With the implementation of Distinction Through Discovery, we expect to increase the number of students receiving university-supported research and inquiry grants annually from 59 (currently funded) to 125 by 2018, increase the number of faculty who serve as mentors, disperse these grants throughout all colleges and initiate additional internships and community partnerships and projects.

a) Expand and Improve the Existing Undergraduate Research Grant Program

We begin by building on strengths within our existing faculty-mentored undergraduate research grant offerings. Currently, the Undergraduate Research Grants Program allows only materials and supplies to be offered to individual students engaged in research and inquiry mentored by a faculty advisor, to support their research and scholarship endeavors. In the past, more than



75% of these grants were distributed to students in the Colleges of Science, Engineering and Computer Science and the Harriet L. Wilkes Honors College and the majority of the awardees were seniors. Through our QEP efforts, we have expanded the scope of the existing grant programs to encourage participation from all colleges and refined the application process for students, modeled after a federal grant proposal, which focuses students on the research and inquiry question to be addressed and method of approach.

Undergraduate students in all academic years will be eligible for these grants. We intend to maintain the \$600 maximum amount for individual awards. In Fall 2013, the expansion will invite group projects, which may include collaboration with internal or external participants both nationally and

internationally. Stipends for group projects will be allocated based on the number of participating students and the scope of the overall project (a maximum of \$2,000 for up to five participating students and \$3,000 for up to eight participating students). In 2011, 37 undergraduate research grants were awarded to students for their research and inquiry efforts. In Year 1, 70 undergraduate research grants will be awarded. By Year 5, 100 undergraduate research grants will be awarded. Faculty mentors will be provided with the Council of Undergraduate Research



publication *How to Mentor Undergraduate Students* as a token of recognition. Moreover, we will expand the scope of funded activities to also cover travel and housing allowances for conducting research at national and international travel locations (including study abroad research opportunities). Student awardees will be expected to present their findings at the Spring Undergraduate Research Symposium and encouraged to publish their work through our Undergraduate Research Journal or other venues. They will be advised to apply for Student Travel funds through Student Government to present their findings at regional, national and international conferences. To broaden participation from under-represented colleges, the Marketing Committee will actively recruit submissions from those colleges and in Year 1, the Steering Committee will earmark 15% of the grants to students from those under-represented colleges. Evaluation of future allocations will be made based on analysis of participation in future years. Management of the Undergraduate Research Grants Program will be coordinated between the Office of Undergraduate Research and Inquiry and the Dean of Undergraduate Studies in collaboration with the Steering Committee (See Chapter 7).

# b) Establish a New Summer Undergraduate Research Fellowship (SURF)

Beginning Fall 2014, the Office of Undergraduate Research and Inquiry in collaboration with the Steering Committee will establish a new SURF fellowship at FAU. SURF is intended to be an intensive, ten-week summer immersion research opportunity for FAU students in their junior and senior years that had some prior research experience, i.e., those who have participated previously in smaller projects. Each SURF award will provide \$3,000 in summer support to the student, based on the number of hours of student work, with an additional \$300 for the lead faculty mentor in research support. Students will apply to participate in research projects under mentorship by a faculty member. A limited number of these will be made available beginning with six supported by the institution in 2014 and increasing to ten by 2018.

Each Fall term, beginning in 2013, the Steering Committee will solicit faculty to submit potential SURF projects from all disciplines across all of FAU's campuses and sites. A limited number of these projects will be selected for funding. Students will be invited to apply for one of these projects during Spring and the Steering Committee will select the awardees. SURF awardees will work up to 40 hours a week on the project under the guidance of their faculty mentor and will complete a written summary of the project, present their findings at the Spring Undergraduate Research Symposium and submit a manuscript to our FAU Undergraduate Research Journal (described below) or other peer-reviewed venues. Moreover, participating students may be given the opportunity to sit on a panel at the Undergraduate Research Symposium. Students will be encouraged to present their findings at other venues, too and apply for student travel funds through Student Government.

We anticipate that faculty mentors and departments will continue to provide students the skills and professional development opportunities to successfully engage in research and inquiry. As we establish and expand the summer fellowship, we will consult with participating faculty to assess whether additional support for these summer scholars is needed and establish structured workshops through the Office of Undergraduate Research and Inquiry, if necessary.



"Giving students an opportunity to become active members of their research community and giving them a voice to disseminate within that community seems crucial to their continued involvement in academic research."

Falkenburg, Gibson and Hanley (2012),

# c) Solicit Support Through External Funding Sources

Our intention for the SURF and Undergraduate Research Grants program is to work toward pursuing additional student awards and other grants which expand this culture of research and inquiry through external funding sources. Such sources could include the Ronald E. McNair Scholars Program, National Science Foundation, National Institute of Health, National Endowment for Humanities and other sponsored projects through collaborations with community partners. Our Distinction Through Discovery goals fit into the Division of Research and Graduate College's goal of doubling grant-funded research efforts at FAU within the next five years. Additional research and inquiry opportunities at the undergraduate level supported through a centralized office opens the door for more faculty research funding opportunities and other large, interdisciplinary or center grant applications. The Office of Undergraduate Research and Inquiry will collaborate with the Division of Research to provide information for faculty and students on available grant-proposal funding opportunities related to undergraduate research and inquiry through targeted emails utilizing the Division of Research's list-serve and by hosting roundtable discussions or other venues which bring faculty together to discuss submission of a specific proposal. Both programs will collaborate with faculty in departments and colleges to develop ideas and submit appropriate proposals with the intent of increased funding for related activities.

The Division of Research has already established a Faculty Research Seed Grant program which provides faculty stipends to foster increased extramural funding by facilitating the development of innovative research ideas and collaborations that will lead to successful grant applications. In 2011, 70 proposals were submitted by faculty and the Division of Research funded 15 with a total sum of over \$200,000. To support the efforts of our Distinction Through Discovery Plan, the Division of Research has committed to allocating a portion of these funds to strongly encourage faculty to submit proposals which target undergraduate research and inquiry initiatives for both curricular and co-curricular purposes.

As a key Goal (Goal 2) of our University's Strategic Plan, strategy F commits to "Foster new types of research funding" by promoting funding from other sources such as philanthropic and private-sector partnerships. Within these fund-raising efforts, our institution will place a priority on support for Undergraduate research and inquiry opportunities for students including additional scholarships and fellowships.

#### 2. Expand Opportunities for Students to Disseminate their Work

The Boyer Report emphasizes students conveying the results of their work effectively as part of the research and inquiry process. The concept that "no idea is fully formed until it can be communicated" establishes communication as a necessary life skill. The QEP Steering committee identified best practices of both undergraduate and graduate research symposia and journal offerings at FAU and other recognized institutional practices nationally and established a goal to expand and improve FAU's offerings. All best practices mirror those recognized institutional practices that are currently implemented nationally. These inform a series of action items to FAU's culture and offerings toward undergraduate research and inquiry.



# a) Expand and Improve the Spring Undergraduate Research Symposium

In Spring 2012, we expanded the Symposium to include two concurrent oral sessions and began archiving the abstracts of the symposium through the University Libraries. Through our QEP efforts we will double the number of poster and oral presentations offered by 2018. Our goal is to have 60 oral and poster presentations by Year 1 and 96 oral and poster presentations by Year 5. Beginning Spring 2014, the Steering Committee will expand the scope to include submission of creative activities such as works of art and musical scores and compositions, increase marketing of this event, establish a peer-review process for evaluation of submissions, include professionals, alumni and researchers from within FAU and nearby institutions to serve as judges and/or keynote speakers and recognize outstanding student presenters and faculty mentors.

To assist with these goals, Student Government and the Graduate Student Association (GSA) will collaborate with our undergraduate student club Council of Scholarship and Inquiry (CSI) to formalize the student and faculty volunteers for this event to include judges and potential keynote speakers. Increased marketing for this event will be managed by the Marketing Committee and supported by the Undergraduate Research and Inquiry Partner Programs. Student Government has committed to purchasing 20 additional poster boards to support the expansion of all symposia offerings at FAU. They are negotiating to acquire a poster plotter for the FAU Boca Raton Campus. We have begun discussions with the Division of Research and Graduate College and Student Government to coordinate other showcase events at the undergraduate and graduate level into a research week at FAU.

# b) Establish and Sustain the FAU Undergraduate Research Journal (FAURJ)

Students from FAU's Student Council to the QEP established a new student club in Fall 2011, the Council for Scholarship and Inquiry (CSI). CSI's mission is to promote the existing culture of undergraduate research and inquiry at FAU across as many disciplines as possible, enhance scholarship, creativity and academic excellence and encourage and foster school pride and unity at FAU. In Spring 2012, CSI established the FAU Undergraduate Research Journal, FAURJ, to showcase high quality undergraduate research in all fields, supply younger students with information regarding the standard of research and promote inquirybased activities at FAU. Through their informational website and with the assistance of the QEP Steering Committee, CSI advertised a call for papers and a call for faculty and student reviewers for the inaugural issue during Spring 2012. Twenty-four papers were submitted and 30 faculty, 60 graduate and 80 undergraduate students volunteered to serve as peer reviewers. During Summer 2012, CSI student leaders distributed the manuscripts for peer review. CSI established layout and editing during Fall 2012 with the assistance of the University Libraries. FAU's inaugural issue was published Fall 2012, using the Open Journal System, open source software and hosted online at Florida Open Journals hosted by the University Digital Libraries Open Journal publishing system. FAURJ is financially supported by both Student Government (through CSI) and the Office of Undergraduate Research and Inquiry (OURI). Marketing for FAURJ will be supported by the Marketing Committee in collaboration with the Undergraduate Research and Inquiry Partner Programs (See Goal 4). In Fall 2013, OURI will recruit and



"An institution that values undergraduate research as a high-priority activity that is integral to its educational mission will provide clear, tangible forms of recognition for faculty and students who engage in it."

— CUR Quarterly; COEUR April 2012.

employ a faculty editor for the journal. By Year 5, the FAURJ hopes to see a 20% increase in submissions. FAURJ's efforts will be sustained through continued collaboration between OURI and Student Government and its supporting partner programs.

c) Facilitate Funding for Student Conference Travel

The QEP Steering Committee, endorsed by feedback from the university faculty and students as a whole, expressed a strong need to put systems in place that provide support for students to conduct undergraduate research and inquiry and disseminate their work nationally and internationally. Currently Student Government does provide support for student travel, with specific guidelines and procedures, overseen by a university-wide Student Travel Committee. From this, SG has an annual allocation of funds specific to dissemination of undergraduate research, including presentations, exhibitions and case competitions. SG is in the process of re-evaluating and revising their guidelines and has agreed to additionally support our QEP efforts by including one undergraduate representative from CSI on the Student Travel Committee as a voting member. Undergraduate research and inquiry students will be encouraged to apply for SG funds. CSI students are also working on an easy to use "how to" instruction sheet for students to guide the applications process.

# Goal 3: Increase Support and Recognition for Faculty and Students who Engage in Undergraduate Research and Inquiry.

Our emphasis on a cultural change and synergistic approach to research and teaching involving both faculty and students requires additional support and recognition through professional development programs as well as a rewards system.

- 1. Provide Faculty Support and Recognition
- a) Offer Enhanced Institutional Membership to the Council of Undergraduate Research (CUR)

FAU has committed to offering enhanced institutional membership to the Council of Undergraduate Research. Membership at this level exemplifies our institution's commitment to transforming and supporting undergraduate research and inquiry. This membership option provides all faculty, staff and students access to the many benefits this signature organization for supporting undergraduate research offers. This will assist FAU with expanding the culture and implementing and sustaining our Distinction Through Discovery initiatives.

b) Establish Faculty Learning Communities Dedicated to the Distinction Through Discovery Initiative

The Faculty Learning Communities (FLC) program is administered by the Scholarship of Teaching Office (SoTO) within FAU's Center for Teaching and Learning. FLCs provide a formal venue for exploration of topics and rich discussion by faculty from multiple disciplines who engage in active, collaborative year-long work on a specific topic of interest. Each FLC is led



"To remain effective scholars throughout their careers, faculty need the opportunity to learn new research methodologies, obtain recurrent research training, establish external research collaborations and scholarly networks, complete scholarly pursuits and freshen mentorship skills. Such professional development opportunities are critical to undergraduate research."

— CUR Quarterly; COEUR

April 2012.

by one to two faculty members and includes up to ten additional faculty participants from the different colleges. Stipends are provided to the participating faculty at the end of the year when the objectives of the FLC are met. Each year, five to six FLCs are supported. In Fall 2011, SoTO sponsored two FLCs dedicated to the QEP. One focused on "Research, Creative and Scholarly Activities into the Undergraduate Curriculum" and the other was on "Teaching High Ability Students." These FLCs were successful in identifying appropriate literature, establishing discipline-specific case-study examples of research and inquiry rich pedagogies and practices and developing assessment strategies that follow best practices.

Phase 1 (Fall 2012-Spring 2013):Pilot QEP-Focused Faculty Learning Community

To support the development of courses discussed in Goal 1, in Summer 2012, the QEP Executive committee utilized the best-practices of the two previous FLCs and identified other literature associated with curriculum re-design and assessment and established a series of professional development modules for future QEP-focused FLCs (See Appendix K). These Distinction Through Discovery FLCs have two main goals:

- Equip faculty and staff to enhance the role of scholarly inquiry and research throughout FAU's undergraduate programs and to achieve the student learning outcomes of the QEP
- Provide formative feedback and assistance for programs to develop successful proposals for curricular redesign projects (QEP Curriculum Grant Program beginning Fall 2013)

Seven modules were developed covering specific content-related topics associated with research and inquiry and guided proposal development and refinement (See Appendix K). FAU faculty and staff who have expertise in the content related to the specific modules have been identified and will lead these parts of the FLC as part of a team-taught approach. We are currently piloting these upper division modules with sixteen faculty participating in the Fall 2012 FLCs. Participants were actively recruited from all colleges, particularly those that have been underrepresented in previous undergraduate research and inquiry opportunities in the past. The colleges of education, nursing, science, engineering and computer science and arts and letters are represented. By Spring 2013 (April), FLC participants will have developed proposals for new upper division courses or programs (conventional or honors) or for the modification of existing courses or programs to include appropriate research and inquiry pedagogies, practices, assignments and assessments. They will be encouraged to apply for the Curriculum Grants Program for Fall 2013 to implement these new or revised programs. Feedback and results from this cohort will be the basis for module modifications for the 2013-2014 FLC.

Phase 2: (Fall 2013-2018): Future Plans with Faculty Learning Communities

We will continue to use the FLCs as vehicles for professional development associated with the Distinction Through Discovery Undergraduate Curriculum Grants Program and encourage participation from all colleges. Additional modules which include revised content about upper-division curricular features and new lower division redesign content will be developed for future offerings of these FLCs. As these QEP focused FLCs are implemented, bringing together



teams of faculty distributed across the different colleges with similar interests, we anticipate that through these rich discussions throughout the year, interdisciplinary connections may be forged and collaborative projects established. Some of the FLC content will be adapted for dissemination through the Office of Undergraduate Research and Inquiry website and the Scholarship of Teaching Office website. This will allow open access to these professional development materials. Surveys will be administered at the beginning of each module to establish baseline information from the participating individuals and programs and to assess the impact of FLC participation.

c) Provide Additional Opportunities and Support for Faculty Professional Development

# i. Workshops and Programs

Through the Office of Undergraduate Research and Inquiry and collaborations with our Undergraduate Research and Inquiry Partner Programs that offer faculty development, e.g. Writing Across the Curriculum (WAC) program, Scholarship of Teaching Office and Center for e-Learning, we have begun to offer other professional development opportunities to engage faculty in conversations about undergraduate research and inquiry. During Summer 2012, the WAC program partnered with the QEP Pilot Program to provide specialized training for the Accounting Pilot Honors Program faculty on designing research-writing assignments. OURI and other programs will continue to offer those kinds of opportunities as well as informational brown bag lunches, workshops, seminars and showcases on integrating active pedagogies and best practices associated with research and inquiry in upper division, lower division and larger classroom environments, assessment of student learning outcomes and guidance on mentoring undergraduate and graduate research students.

# ii. Travel Funding

Beginning Fall 2013, OURI has allocated a small travel fund (\$10,000 annually) to support groups of 5-7 faculty to participate in conferences related to undergraduate research, honors and effective teaching pedagogies such as the Gordon Conferences and National Collegiate Honors Conference.

# d) Establish Master Faculty Mentor Program in Each College

FAU's existing Master Teacher program, administered by the Scholarship of Teaching Office (SoTO) provides support systems at the departmental and college level by identifying a small number of faculty in each college who, among other responsibilities, serve as a resource for other faculty interested in engaging in discussions about teaching, host college-specific faculty development workshops and advise department and college leadership on policies related to teaching and learning. We will adapt this model by establishing a Master Faculty Mentor program in each college. In Fall 2014, Master Faculty Mentors will be appointed by the college deans for a two-year term. Six faculty will be appointed in 2014 and the number will increase to 12 by 2018. In addition to the prestige of this appointment, \$5,000 will be provided to each faculty mentor to be used for course buy-out and travel for professional development related



to undergraduate research and inquiry. Master Faculty Mentors will serve as a point of contact for OURI endeavors in each college; faculty steering committee member to OURI; coordinators of the undergraduate research and inquiry mission of the college; facilitators of one/two major professional development (PD) opportunities within each college; guides for other interested faculty; student liaison for college-wide undergraduate research experiences and college assessment liaisons for the QEP. These mentors will also be responsible for providing an annual summary report to the OURI.

e) Establish a Distinguished Undergraduate Research and Inquiry Mentor of the Year Award

FAU's current faculty recognition awards and programs include the University Researcher and Scholar of the Year that rewards and recognizes excellence in sponsored and project-oriented research and scholarship and the Research mentor/mentee program which supports senior faculty who engage in mentoring of junior faculty. In Fall 2013, we will establish three additional Distinguished Undergraduate Research and Inquiry Mentor of the year awards (assistant, associate and full) to faculty who serve as model faculty mentors to their students. During Spring-Summer 2013, the Steering Committee will establish the criteria for these awards using the existing recognition award criteria as templates and oversee the selections process. College deans will be asked for faculty nominations for these awards and the awards ceremony will be included during our annual undergraduate research symposium. Beginning in Year 2 (Fall 2014), each year three awards will be given to faculty for their efforts in undergraduate research and inquiry. Awardees will be recognized with a \$1,000 stipend to be used toward their ongoing research and inquiry projects.

#### Provide Student Support and Recognition

Student professional development is currently offered through several of our Undergraduate Research and Inquiry Partner Programs. Many of the offerings include some research and inquiry supported topics. The Career Development Center provides comprehensive services and programs for FAU students from first semester freshman to doctoral students, including professional development workshops such as Resume Writing, Mock Interviews, Job Search, Applying to Professional/Graduate School, Choosing a Major, Co-op Education/Internships and Career Day 101. The Center hosts leadership forums, networking events and how to transition to the workforce student conferences throughout the year. The CLASS office offers several opportunities for student professional development, including training to present at workshops for incoming freshmen and transfer students, supplemental instruction and tutor training. Topics for the trainings include effective communication skills, working with diverse populations, ethics, critical thinking skills, group dynamics and conflict resolution. Students from learning communities have a variety of opportunities for their professional development. After the first year, learning community students are invited to apply to become Learning Community Liaisons (LCLs). These LCLs (typically ten per year) are provided ongoing training to serve as peer mentors for incoming students. Through our efforts with the QEP, we will expand the existing student development offerings and establish new professional development and recognition opportunities to support the expansion of this culture at FAU.



# a) Provide Specific Research Training Programs for Undergraduate Researchers

The Division of Research and Graduate College currently offers training for faculty and graduate students on responsible conduct of research (RCR), human subjects' research protection programs (IRB); animal care and use programs (IACUC); and good clinical practices and monitoring. The Division has committed to expanding these professional development programs beginning Fall 2013 to include undergraduate researchers and will provide certificates and maintain tracking of students completing such courses and programs. Students applying for and receiving university-wide undergraduate research grants are already required to indicate in the grant application if the intended research includes methodology involving an area of compliance that is regulated by federal, state, or university laws and policy. Those students will be required to attend such workshops and training programs during the time frame of the grant funding.

# b) Provide Additional Professional Development Opportunities for Students

Beginning Fall 2013, the Office of Undergraduate Research and Inquiry and Peer Mentors will develop student workshops and online tutorials in collaboration with our Undergraduate Research and Inquiry Partner Programs, along with departments, programs and colleges. These workshops will include getting started in research and inquiry and information literacy or discipline-based writing sessions based on need as the program grows. OURI will offer at least one workshop per semester and increase the number and variety based on need as the program grows. OURI will offer some online training programs with the assistance of the Center for e-Learning. As specific online modules are developed, they will be added to course Blackboard websites and the OURI website. As honors programs begin to be offered and more students begin writing theses and faculty begins to integrate research and inquiry in their courses, there will be additional need to support student writing. The QEP will support the University Center for Excellence in Writing by providing one additional graduate writing consultant in 2014 and 2015 and a total of two consultants in 2016 and 2017. These consultants will provide support to students completing capstone writing projects and other research-writing assignments.

# c) Cultivate A Sense Of Community for Students

In a large institution such as ours, where faculty and students are divided among several campuses and sites, there is a need to establish a sense of belonging and community. Establishing FAU as an intellectual home was the main recommendation of our QEP Student Council members. Students in different departments have already made strides in this area through honor societies and discipline-specific clubs, but there has never been an opportunity for students with common intellectual interests to come together as a larger community.

# Phase 1: Current Efforts with the Council of Scholarship and Inquiry (CSI)

In Fall 2011, the Council for Scholarship and Inquiry (CSI) was established as a club affiliated with Student Government in collaboration with the QEP to become that larger community



of learners. The purpose of the FAU CSI is to promote and foster a culture of research and creative activities at FAU and to provide students with opportunities to become immersed in this culture. CSI's first priority was the establishment of the FAURJ, our undergraduate research journal. CSI officers spent the year establishing the process to create this inaugural edition. The QEP has supported the FAURJ with a paid student editor position.

# Phase 2: Future Efforts with the Council of Scholarship and Inquiry

Once the FAURJ process becomes streamlined, this student club intends to begin coordination with existing clubs and discipline-specific societies. The goal will be to extend their community of learners by establishing connections with other clubs, assist in disseminating research and inquiry-focused campus-wide initiatives and gatherings and initiate new opportunities for faculty and students across all disciplines to gather in an informal setting. Since this student club is integral to the mission of the Distinction Through Discovery plan and its sustainability, CSI officers will continue to serve as student council members to OURI. Additionally, an office with a computer in the space allocated for OURI has already been provided for CSI students. The Director of the QEP will serve as the faculty advisor for CSI. CSI is co-sponsored by Student Government and the QEP.

# d) Establish and Sustain a Student Peer-Mentoring Program

OURI will recruit ten upper division undergraduate students and/or graduate students, representatives from all colleges and partner campuses during Summer 2013 to serve as near-peer mentors beginning Fall 2013. The Steering Committee will establish the criteria for these positions and oversee the selections process. Mentors will provide advising to interested students by hosting open office hours. In addition, they will co-host workshops, deliver small presentations about existing research and inquiry opportunities to students in lower division classrooms and collaborate with CSI to host annual social networking events for active undergraduate scholars. The student mentors will be awarded a \$600 stipend to be used toward their ongoing research and inquiry projects. Faculty will be asked to recommend students for the peer-mentoring program during summer. The Steering Committee is in the process of developing a summer training program for these students by adapting the successful training models similar to the Howard Hughes "Entering Mentoring" Program and best practices from the Learning Community Liaisons peer mentor training program offered by CLASS. We are currently working with the Division of Research to include this mentoring program in the two-day training workshop hosted by the Division of Research and Graduate College each semester. Peer-mentors will be required to attend this training session and other undergraduate students will be encouraged to attend.

# e) Establish an Undergraduate Student Researcher of The Year Award

FAU's current university-wide student recognition awards include the Stan E. and Renee Wimberly Scholarship, the University Club Presidential Scholarships and five Phi Kappa Phi Scholarships. Students are nominated by college deans based on student scholarship and service. We will establish three additional annual undergraduate student awards. In Fall



"Creating a campus culture that values and rewards undergraduate research is essential for sustaining a robust undergraduate research program."

— CUR Quarterly; COEUR April 2012.

2013, the Steering Committee will establish the criteria for these positions by using the existing scholarship applications as templates and oversee the selections process. Deans, in consultation with department chairs and program directors, will be asked to nominate students for these awards and the awards ceremony will be included during our annual undergraduate research symposium. Beginning in Year 2 (Fall 2014), each year eight awards will be presented to students for their efforts in undergraduate research and inquiry. The student awardees will be awarded a \$500 stipend to be used toward their ongoing research and inquiry projects.

 f) Provide Formalized Recognition for Undergraduate Research and Inquiry Activities

Through the establishment of more honors in the major programs that are research and inquiry focused, students will be formally recognized for their accomplishments through notations on their transcripts. This is a current practice for students completing the lower-division University Honors Program. Both the Harriet L. Wilkes Honors College and the Department of Accounting have established a medallion ceremony that celebrates and recognizes honor students' accomplishments and the medallion is worn at commencement. The University Honors program hosts a ceremony where students are awarded their certificates of completion and a UHP cord. Such practices will be encouraged for other research and inquiry enhanced programs supported by the QEP.

As part of our future efforts with the QEP, we intend to establish a new university-wide Research Certificate Program for honors and non-honors students. We intend to establish this in Year 4 of our Distinction Through Discovery plan, once upper and lower division courses begin to be established, assessed and revised. Criteria for this certificate will need to be established at that time. We envision that such a certificate program will include student completion of a research and inquiry intensive course as part of the requirements. We are in the process of evaluating whether our existing Directed Independent study (DIS) credit program could be used for this purpose. The QEP Steering Committee has discussed establishing a new zero-credit research option (RIS) as a possible choice in the future. We will continue discussions with faculty and students to identify the best approach for providing credit on student transcripts.

# Goal 4: Enrich and Strengthen an Institutional Climate that Supports Undergraduate Research and Inquiry.

Although FAU students and faculty have been involved in undergraduate research and inquiry, one of the most common recommendations we have received for expanding existing efforts is to systematically market and disseminate information about existing opportunities for undergraduates to participate in research and inquiry. As Kuh states, "A much greater level of coordination and intentionality" is needed. We intend to address this need in the following ways.



- Establish and Sustain an Office of Undergraduate Research and Inquiry (OURI)
- a. Establish space and staffing for the Office of Undergraduate Research and Inquiry

FAU has established a small administrative support office for the QEP housed under the Dean of Undergraduate Studies as part of the Center for Teaching and Learning, the central hub of all student and faculty support programs at FAU. In Fall 2013, this office will become the Office of Undergraduate Research and Inquiry; OURI which will oversee the establishment and sustainability of the culture of undergraduate research and inquiry here at FAU and serve as a clearinghouse of information for faculty and students.

OURI will manage and support the following programs: the existing annual undergraduate research symposium, our recently established FAURJ (co-supported by the CSI student club); the existing undergraduate research grants program; the new summer undergraduate research fellowship (SURF); the curriculum grants programs associated with our QEP efforts and professional development opportunities for faculty and students; and the peer-mentoring program. In addition, OURI will serve as the central office associated with implementation, management and assessment of QEP efforts including updating the university community of all ongoing QEP initiatives available for student and faculty participation, data collection and analysis for program assessment of QEP learning outcomes and program objectives and writing appropriate reports required for SACS.

The office will be staffed with a faculty director, graduate student assistant and budget manager who will be responsible for the administrative and managerial responsibilities associated with OURI. In addition, we have employed a part-time assessment coordinator to oversee the assessment and achievement of outcomes for our ongoing QEP and SACS reporting requirements and who will be recruiting an external evaluator in Years 2, 4 and 5 to ensure that the goals of the QEP are being met. The assessment coordinator with the Director of the QEP, the Assessment and Instruction Office and the Office of Institutional Effectiveness and Analysis, will be responsible for assessing the effectiveness of our existing plan and recommending and implementing modifications, based on results and feedback in the future.

b. Establish a Centralized Website for Undergraduate Research and Inquiry

To further enhance the research and inquiry culture of FAU, increase communication of opportunities for faculty and students on QEP and undergraduate research and inquiry and foster support for all participants on all our partner campuses, we will establish and maintain an OURI informational website (Fall 2013) associated with the office. We are currently examining websites at other institutions to serve as models for FAU's site. In Fall 2013, the existing QEP website will be merged into the new OURI website. Initially, this website will provide an up-to-date list of available opportunities including research and inquiry designated course offerings, fellowships, workshops, grant deadlines and direct links to existing honors programs, university wide research and inquiry initiatives and college specific events being



offered. We will have web-based resources for students, staff, faculty and external community on research and inquiry. The OURI website will be used to showcase students and faculty actively engaged in student scholarship and creative research through faculty and student spotlights and newsletters. The existing undergraduate research resources currently hosted by the Dean of Undergraduate Studies website will migrate to the new OURI website to centralize all information related to undergraduate research and inquiry. We are currently in discussion with the Career Development Center regarding the feasibility to invite faculty to refer their industry contacts to post their internship opportunities in OWL Career Link to serve as a centralized database for other undergraduate student research and inquiry opportunities including faculty credit-bearing and stipend-supported projects.

This website will serve a dual purpose of updating the community on FAU's QEP initiatives including the QEP final report, follow up reports required by SACS and annual update reports to the university community on the progress of the QEP. The information on our current QEP website will be merged with the OURI website to centralize information related to the QEP. Proposal requirements, deadlines and assessment rubrics will be hosted on the OURI website. The website will be used for submissions of applications for faculty, staff and students for all our QEP initiatives presented in this report and create a repository of all submissions, which will assist with tracking the growth of our programs.

c. Disseminating Information on Existing Co-Curricular Opportunities through Collaborations with Programs with Shared Goals

Several recent reports and publications have advocated for the critical role of experiential learning in undergraduate education. Additionally, by engaging students in the community, these experiences allow students to explore "entrepreneurial applications" and consider "policy implications" (CUR Quarterly, April 2012). The QEP Steering Committee has identified best practices at FAU for collaborating with other programs offering experiential educational experiences. These include internships, international projects and those involving community partners. In July 2012, the QEP Steering Committee invited several representatives from these programs to meet and share information about what existing opportunities are available for students and best practices for disseminating the information. Through discussions with the representatives, we identified a need for better communication and coordination among the groups to provide services and information for our students, faculty and community partners. FAU has recently centralized this initiative through an online job portal system managed by the Career Development Center called OWL Career Link. Two individual colleges (Engineering and Computer Science and Business) have merged their internal systems and database for college-specific student internships and other job postings into FAU's centralized online job portal. However, most of the other programs only provide information through website updates by which students and faculty obtain information about these co-curricular opportunities. Initially the Office of Undergraduate Research and Inquiry website will serve as a clearinghouse of information on existing opportunities and resources for students and faculty. We have already begun discussions of re-branding the existing research landing page, which currently links to the Division of Research website, to provide unified resources and information from Academic Affairs and Student Affairs for students (undergraduate and graduate), faculty and community



partners on all research and inquiry opportunities. This landing page will be maintained by the QEP unit with help from Division of Research and Graduate Studies, Career Development Center, Office of International Programs, Weppner Center for Civic Engagement & Service and other programs. We anticipate establishing additional opportunities for students and faculty through further collaborations with these groups. Additional discussions are currently underway to further utilize this web-based system as a central database for all internships and job opportunities for students, alumni and community partners within the other colleges.

d. Disseminating Information on other Showcasing Opportunities offered within departments and programs

Several colleges and campuses/sites offer undergraduate student showcasing opportunities (See Chapter 2). To support these existing initiatives, OURI will collaborate with these groups to communicate and share information about upcoming showcasing opportunities to students. We anticipate that as the culture of research and inquiry grows, additional opportunities for showcasing excellence in research and inquiry may be established by colleges which currently do not offer discipline-specific showcasing opportunities.

2. Establish an Undergraduate Research and Inquiry Steering and Sub-Committees

Support of, coordination among and communication between collaborators in a university-wide initiative such as Distinction Through Discovery are crucial keys to its success. In Spring 2013, OURI will establish an undergraduate research and inquiry (URI) steering committee and additional sub-committees. The current QEP steering committee will transition to become the URI Steering Committee in Fall 2013 and will be chaired by the OURI Director. The OURI Steering Committee will include faculty, staff and student representatives from all colleges and partner-campuses. The Steering Committee will meet bi-monthly or as needed with the OURI Director to guide the Distinction Through Discovery implementation and support the expansion of the culture of undergraduate research and inquiry, including identifying keynote speakers and judges for events, coordination of organization, marketing and evaluation of current efforts and to work together to establish additional opportunities for FAU students to showcase their research and inquiry efforts. The steering committee will be divided into a series of sub-committees to include a Curriculum Committee, Co-curricular Committee, Assessment Committee and Marketing Committee. Details of the Sub-committees' roles will be provided in Chapter 7.

3. Collaborate with Undergraduate Research and Inquiry Partner Programs

Engaging undergraduate students in a culture of research and scholarship will require fundamental changes in the way students and faculty think about curricula, research, scholarship and the relationships among them. Instituting these changes will require participation and resources throughout the entire university. Through our efforts with the QEP, we have established a series of Undergraduate Research and Inquiry Partner programs that have been instrumental from the start in the development, establishment and implementation of this plan and that are currently providing in-kind support for our pilot programs underway. These groups will continue to play an instrumental role by providing resources for the common



goal of an enhanced institution with a unified mission for students, faculty and staff and by continued collaboration with OURI through serving on the Undergraduate Research and Inquiry Steering Committee.

# Center for e-Learning

The Center for e-Learning (CeL) at FAU is committed to increasing access to education, improving student-learning outcomes and effectively utilizing technology in course delivery redesigns. The Center works with colleges, faculty and other administrative units to provide funding, training, consulting and supporting e-Learning initiatives at FAU. CeL offers a variety of professional development programs to support faculty interested in integrating technology and digital media in e-Learning academic program development. The Center for e-Learning currently co-hosts a Teaching with Technology Showcase with the Scholarship of Teaching Office (SoTO) and the Office of Information Technology (OIT).

CeL is fully committed to support the QEP. CeL will provide instructional designer assistance to develop eLearning research and inquiry courses and programs, consult with faculty members establishing research and inquiry courses or developing research skills modules to be delivered in the e-Learning environment, collaborate to develop an e-Learning student orientation module specifically for students interested in research and inquiry, collaborate to develop online research and inquiry tutorials or tools, collaborate with OURI through steering committee participation and potential research and inquiry track for the planned Teaching with Technology Showcase.

#### Center for Learning and Student Success

The Center for Learning and Student Success (CLASS) supports the mission of the University and promotes undergraduate student success and retention. CLASS, under the Division of Undergraduate Studies, manages Learning Communities (LC): cohorts of first-year students with similar academic goals and interests; Supplemental Instruction (SI) and Tutoring: peer-facilitated study sessions and general tutoring in a variety of disciplines; and student success programs, workshops and retention counseling initiatives.

CLASS is partnering with the Quality Enhancement Plan and will continue to do so through the Office of Undergraduate Research and Inquiry. CLASS offered a curricular initiative with the Learning Communities as part of the pilot program in Fall 2012 (previously described under Goal 1). CLASS commits to providing training for faculty teaching SLS courses on integrating research and inquiry, explicitly integrates research and inquiry pedagogies into SLS courses; promotes research and inquiry opportunities to faculty and students through programs offered and collaborates with OURI through steering committee participation. CLASS commits to ensuring all Learning Communities supported by their office have either a Research and Inquiry component or an Academic Service Learning emphasis.



# Harbor Branch Oceanographic Institute (HBOI)

FAU's Harbor Branch Oceanographic Institute's mission is to explore, protect and wisely use ocean resources, articulated as Ocean Science for a Better World™. Harbor Branch scientists, engineers and support staff are leaders in ocean-related innovation, exploration, research, education and conservation. HBOI currently engages students through a variety of programs and offerings including the Marine Science Education Programs, a Summer Intern Program, a Semester by the Sea program and Directed Independent Study (DIS) opportunities.

HBOI faculty and staff fully commit to supporting the QEP and will provide opportunities for undergraduate researchers to pair with HBOI faculty through existing fellowships and programs and collaborate with OURI through steering committee participation.

# Harriet L. Wilkes Honors College

FAU's Harriet L. Wilkes Honors College offers a Bachelor of Arts degree in Liberal Arts and Sciences, with majors or concentrations in 24 different disciplines. The purpose of the Honors College is to offer students a liberal arts education of the highest intellectual and scholarly standard. Small class size, rigorous requirements and an emphasis on interdisciplinary study anchor a community of dedicated faculty and a talented, diverse student body. All courses offered are honors courses and students culminate their academic experience by writing an honors thesis or completing a senior project. Students are afforded an abundant number of opportunities to conduct research alongside faculty members and to publish or present discoveries. The Honors College takes pride in providing all the advantages of a small selective liberal arts college with full access to a large research and teaching university.

The Honors College will support the establishment of honors courses in majors in all partner campuses and sites, provide best practices through rubrics, operational processes and practices, promote research and inquiry opportunities to all honors students and collaborate with OURI through steering committee participation.

# Scholarship of Teaching Office

The Scholarship of Teaching Office (SoTO) facilitates professional development in the areas of teaching and learning and sustains a culture of "best practices" in effective pedagogy. SoTO seeks to promote a community of "scholarly teachers" who use the tools of inquiry to improve their teaching and add to the body of professional knowledge. SoTO organizes and supports workshops, seminars, brown bag lunches, presentations, faculty learning communities, a Master Teacher Program and one-on-one consultations. All events are open to FAU's graduate assistants, faculty, staff and administrative personnel on all campuses and sites. SoTO will provide faculty and student professional development through brown bag lunches, host faculty learning communities including QEP-focused FLCs and assist with peer mentoring training. SoTO will collaborate with OURI through steering committee participation.





# The University Center for Excellence in Writing

The Writing Center, also known as the University Center for Excellence in Writing (UCEW), supports and promotes writing for all members of the FAU community. UCEW serves to provide writing instruction across the curriculum that supports the academic, professional and personal needs of our diverse academic community. Graduate and undergraduate Writing Center consultants help clients with all levels of writing skill at any point in the writing process. The Center sponsors workshops on common writing issues and engages in research on effective tutoring strategies.

The Writing Center will support student research writing sponsored by the QEP process by providing additional consultations for these students and linking individual consultants to specific programs. By the last year of the QEP process, the UCEW should be serving an additional 38 sessions a week dedicated to research writing. In addition, the Writing Center will serve as a source of research and inquiry projects, collaborate on student professional development opportunities and collaborate with OURI through steering committee participation.

# Writing Across the Curriculum Program

The University's Writing Across the Curriculum (WAC) program promotes the teaching and learning of writing across all levels and all disciplines, with a primary focus on writing in undergraduate education. The WAC program is designed to convert all state recognized Gordon Rule (GR) classes to a more rigorous set of university-supported guidelines.

The WAC program is partnering with the Quality Enhancement Plan and will continue to do so through the Office of Undergraduate Research and Inquiry. The WAC program offered a pilot training program in late July 2012 with the School of Accounting as part of the pilot program in Fall 2012. Two-day workshops are being tailored for each participating department. The Assistant Director of WAC will provide ongoing support for these programs. The WAC program will collaborate on faculty development through brown bag lunches and workshops and provide faculty support for departments that are developing research and writing-based programs and courses to meet SLO requirements.

# **University Libraries**

The FAU Libraries are composed of the Wimberly Library on the main Boca campus and libraries on its partner campuses. The primary objective of the FAU Libraries is to assist students and faculty in locating appropriate, quality information to address questions and to aid in the research and inquiry process.

The FAU Libraries are fully committed to the program goals of the Quality Enhancement Plan in support of undergraduate research. Instruction is a primary focus and librarians provide formal instruction through classes, orientations, workshops and individual research consultations. Informal instruction is given at the Reference desks and at special collections



locations. Resource guides or LibGuides are available as subject resources and as supplements to class sessions. Embedded librarians work with faculty within course frameworks to customize instruction.

Collections housed in the Libraries support undergraduate research. The FAU Digital Library maintains digital collections that contain student and faculty publications and will host the Undergraduate Research Journal through the FAU Digital Library Open Journal Systems and archive FAU undergraduate honors theses and symposia abstracts. The Marvin & Sybil Weiner Spirit of America Collection at FAU offers a wide variety of primary source materials suitable for research in the disciplines of history, political science, philosophy, pre-law and linguistics. In addition, the Jaffe Center for Book Arts Collection is one of the largest and most varied collections of its kind in the country. These collections are suited for use as a teaching module



or academic investigation. Undergraduate classes from across the university visit the Jaffe Center and return to work with librarians on individual research projects. The Libraries also serve as a venue for showcasing undergraduate research and inquiry and will continue to collaborate with OURI through steering committee participation.

# **Undergraduate Studies**

The mission of Undergraduate Studies is to assure that FAU provides baccalaureate degree programs which are of the highest academic quality regardless of their location or method of delivery within the distributed campus structure of FAU. Advancement of this mission is supported by a number of ancillary academic services including Freshman Academic Advising Services, the Center for Teaching and Learning encompassing

the Center for Learning and Student Success, the Math Learning Center, the Director for the Scholarship of Teaching, the Quality Enhancement Plan (QEP), the University Center for Excellence in Writing and Writing Across the Curriculum Program; Office of International Programs; Student-Athlete Center for Academic Excellence; Testing and Evaluation; and the University Honors Program.

Undergraduate Studies will partner with the QEP to promote research and inquiry opportunities through the University Honors program, collaborate on integrating research and inquiry into Intellectual Foundations courses, collaborate with OURI through steering committee participation and assist with implementing the curriculum grants program and spring symposium.

In addition to these key partner programs, other university-wide programs have committed to formally collaborate with FAU's Distinction Through Discovery QEP. We present the entire list of university-wide collaborators and their commitments in Table 9.



Table 9. University-Wide Collaborators and their Commitments

QEP Collaborators	Commitments to the URI efforts through QEP
Student Government	Promote research and inquiry opportunities; Support dissemination through travel grant program and purchasing of poster boards
Division of Research and Graduate College	Provide seed grant money for faculty applying for external grants related to undergraduate research and inquiry; Provide training and support for students in responsible conduct of research through IRB, IACUC and CITI training; Promote and communicate undergraduate research and inquiry opportunities to faculty and students; Collaborate on a quarterly newsletter showcasing all research and scholarship; Collaborate on peer-mentoring training program; Collaborate on research symposia for undergraduates; Collaborate with OURI through steering committee participation
Assessment and Instruction	Provide data and collaborate on assessment and integrate QEP into ongoing assessment initiatives currently underway
Career Development Center	Collaborate to establish research and inquiry internships and Co-op's; Provide informational seminars for faculty and students to increase participation in research and inquiry opportunities. Facilitate faculty involvement in monitoring the academic credit bearing research and inquiry internships/Co-op's along with referring industry contacts for such opportunities
Weppner Center for Civic Engagement & Service	Collaborate to establish community-based research projects for academic service-learning courses; Collaborate to provide: faculty-community connections opportunities and showcasing student work in Fall and/or Spring semesters; Promote research and inquiry opportunities to students
Office of International Programs	Collaborate to increase international study abroad research opportunities for faculty and students; Promote international research and inquiry opportunities to students
Institutional Effectiveness and Analysis	Provide data and collaborate on assessment for annual QEP reports
Office of Admissions	Promote research and inquiry opportunities to recruit students
Student Advising	Promote research and inquiry opportunities to students
Marketing and Creative Services	Promote research and inquiry opportunities; Support OURI website; Support the development of promotional materials marketing undergraduate research and inquiry
Office of Information Technology	Support OURI website; Collaborate to establish promotional videos and other student and faculty showcases
Office of the Registrar	Support annual QEP assessment; Support research and inquiry designated courses and certificate program; Support honors designation on students transcripts



- 4. A Plan Within the Plan to Address FAU's Unique Student Population.
- a. FAU Partner Campuses

FAU's distributed campus setting provides a unique environment to expand this culture. To ensure that opportunities are made available to all students and faculty on all campuses, communicating opportunities and needs becomes crucial for success of this initiative. In addition to ensuring that all opportunities are made available to all students and faculty on our campuses through the OURI and website, there will be one partner campus faculty from the Davie campus, the Harriet L. Wilkes Honors College and Harbor Branch Oceanographic Institute serving on the URI Steering committees and appropriate sub committees (a continuation of the existing QEP Steering committee). Our partner campuses will be represented in the Master Faculty Mentor program. OURI will serve all FAU campuses and will collaborate with the partner campus faculty and all other steering committee members to ensure the office meets the needs of our students and faculty.

# b. FAU Transfer Student Population

Since a high percentage of FAU students are transfer students and the majority of students do not live on campus, our Distinction Through Discovery initiative aims to engage these students in the following ways: 1, OURI will partner with the Division of Student Affairs who hosts Transfer Orientation to ensure information related to undergraduate research and inquiry opportunities are provided to students during orientation and 2. All students taking courses at FAU will be engaged in research and inquiry through the QEP's curricular initiatives. This program focuses on the upper division for the first three years targeting the transfer student population.

# c. FAU Part-time and Commuter Student Population

Engaging part-time and commuter students who have additional time constraints poses a challenge. Our steering committee reached out to other institutions that serve this unique audience. Feedback was received from colleagues at The University of Nevada, Las Vegas and The University of Illinois, Springfield and through their recommendations, we provide the following suggestions: 1. Our SURF fellowship may serve as the best opportunity for these students. Interested students can opt to engage in these paid research opportunities during the summer as an alternative to other jobs, 2. We will encourage faculty to have flexible research hours for students and 3. Faculty mentors and their students will be encouraged to use web and other social media tools that will allow for communication for asynchronous progress on research and inquiry. FAU provides training for video capturing and embedding in Blackboard so that visual communication can happen.



# d. Expanding Participation in all Colleges

Data from all three University-wide research and inquiry offerings (Chapter 2) identified a need to broaden participation in under-represented colleges. Within our plan, we intend to increase participation in these colleges in the following ways: 1. The Marketing Committee will actively recruit submissions from those colleges and in Year 1, the Steering Committee will earmark 15% of the undergraduate research grants to students from those under-represented colleges. Evaluation of future allocations will be made based on analysis of participation in future years, 2. The College of Business is an active participant in the Curriculum honors pilot program in Fall 2012 and the Colleges of Education and Nursing have already expressed interest in developing undergraduate research and inquiry focused honors programs (currently approved) and are currently participants in our QEP-focused Faculty Learning community, one main goal of which is to produce strong curriculum grant program proposals for Fall 2013 and 3. All



colleges have had faculty representatives on the QEP steering committee, who were instrumental in developing this plan. Faculty representatives will continue to serve a role through steering and sub-committee participation.

# e. Continued Partnership with Nearby Research Centers

Our university is uniquely situated around a series of Research Centers including 23 companies comprising FAU's Research Park as well as the Max Planck, Torrey Pines and Scripps Research Institutes. FAU faculty, departments and colleges have partnered in research and inquiry with these Centers through collaborative grants and student internships. In FY 11, 35 undergraduate students conducted internships with FAU's Research Park companies and 65 Harriet L. Wilkes Honors College students participated in internships through these Centers. Of those, 19 could be defined as research and

inquiry internships. As a key Goal (Goal 3) of our University's Strategic Plan, strategy A.8 commits to" Expanding opportunities for experiential learning including internships/externships, service learning and co-curricular programs." By expanding these opportunities and through collaborations with the programs that offer them, additional research and inquiry internships are anticipated.

We have established a timeline for the actions identified through our Distinction Through Discovery plan. The timeline includes projects already completed and the pilot plan and assessments currently underway during the Pre-QEP years. It also includes future plans for our QEP that will be gradually passed in and manageably implemented within the five-year time frame. Some of our action items are implemented in Year 1 while others not until Year 4. Our plans for a research and inquiry- rich curriculum begin Year 1 with upper-division courses and extend to the lower division courses in Year 3.

# **Table 10: Distinction Through Discovery Timeline**

							V2			V2			V4			V		
	2012 2012-2013				Year 1			Year 2			Year 3		Year 4 2016-2017				ear 5	
Activities	2012 Spring Sum'r	Spring Sum'r Fall Spring Sum'r Fall		Fall	2013-2014 2014-2015			2015-20 Spring		Fall	Spring			2017-20 Spring				
Activities	Spring Summ	Tan 3						urriculum		1411	Spring	Summ	run	эртть	Summ	1011	Spring	Summ
Upper Division Curriculum Grants Program			GOal 1.	nese	ai cii aiiu	iliquily n	icii ci	arriculum										
Phase 1: a.i. Establish Pilot Honors																		
Program Guidelines																		
Phase 1: a.ii. Implement Pilot Honors														Ì				
Program																		
Phase 2: a.iii Establish Guidelines																		
for Curriculum Grants Program																		
Phase 2: a.iv Call for UD Curriculum																		
Proposals																		
Phase 2: a.v. Implement UD																		
curriculum seed grant program																		
Lower Division, LD Curriculum Grants Program	m																	
Phase 1:b. i. Implement Pilot																		
Program for Freshman Learning																		
Phase 1: b.ii Implement QEP focused																		
Freshman Learning Communities																		
Phase 2:b.iii. Establish Proposal for																		
LD Curriculum Grant Program Phase 2:b.ii. Call for LD Curriculum				_														
Proposals																		
Phase 2:b.iii. Implement Lower-																		
division Curriculum Grant Program																		
arriston cameatam stancinogram			C12: O		-141 6				LIDI									
			Goal 2: Opp	ortui	nities for	students	wno	engage in	UKI									
1. Undergraduate Research Grants Programs																		
a. Expand existing Undergraduate																		
Research Grants Program												1						
b.i. Develop new SURF Applications																		
b.ii. Call for Faculty Proposals SURF																		
b.iii. Call for Student Applications																		
SURF																		
b.iv. Implement SURF																		
c. Solicit support from external sources																		
2. Student Dissemination Opportunities																		
a.i. Develop guidelines for expanded																		
Spring Symposium																		
a.ii. Expand Spring Symposium																		
				•			•			•								

					Year 1		Year 2			Year 3			Year 4			Year 5				
	2012		2012-2013			2013-2014			2014-2015				2015-20			2016-20		2017-2018		
Activities			l	Spring		Fall	Spring		Fall	Spring			Spring		Fall	Spring		Fall	Spring	
b.i. Establish FAURJ Website																				
b.ii. Call for FAURJ Manuscripts																				
b.iii. Peer-review FAURJ manuscripts																				
b.iv. Publish FAURJ																				
c. Facilitate Student Travel funding																				
Goal 3: Support and recognition for Faculty and Students in URI																				
1. Faculty support and recognition																				
a. CUR Institutional Membership																				
Phase 1: b.i Implement pilot program																				
for QEP -focused FLCs	-																			
Phase 2: b.ii Implement QEP-focused FLCs																				
c.i. Implement faculty workshops and																				
programs																				
c.ii. Offer faculty travel funding																				
opportunities																				
d.i. Establish guidelines for Master																				
research mentor program d.ii Call for College Master research																				
mentor applicants																				
d .iii Implement Master Research																				
and Inquiry Mentors																				
e.i Establish guidelines for																				
Distinguished undergraduate																				
research mentor																				
e.ii. Implement Award program																				
2. Student support and recognition																				
a. Host student research training																				
program			_																	
b. Offer student professional																				
development workshops																				
c. Establish Student Club - CSI																				
d.i Establish guidelines- Peer mentor																				
program	-																			
d.ii Call for applicants - Peer mentor																				
program	-																			
d.iii Implement Peer Mentor Program																				

					Year 1		Year 2			Year 3			Year 4			Year 5				
	2012		2012-2013			2013-2014			2014-20	15		2015-20	16		2016-20	17	2017-2018			
Activities	Spring	Sum'r	Fall	Spring	Sum'r	Fall	Spring	Sum'r	Fall	Spring	Sum'r	Fall	Spring	Sum'r	Fall	Spring	Sum'r	Fall	Spring	Sum'r
e.i Establish student award guidelines for Undergraduate research award																				
e.ii Implement Award program																				
f.i Establish program guidelines for Undergraduate Research & Inquiry Certificate Program																				
f.ii Implement Certificate Program																				
					Goal	4: Enri	ch and St	rengthe	n URI	climate										
1. Office of Undergraduate Research and Inqu	iiry							-												
a. Establish space and hire staff																				
b.i Develop OURI Website																				
b.ii. OURI Website Live																				
c.i. Disseminate information on existing and new opportunities																				
d.1 Disseminate college-based showcase																				
opportunities  2. Undergraduate Research and Inquiry Steer	ing Com	mittee																		
a.i Establish an Undergraduate Research	1																			
and Inquiry Steering Committee	]																			
a.ii Implement plans of the Steering																				
Committee																				
3. Collaborate with URI Partner Programs																				
				D	evelop,	Imple	ement an	d Evaluat	e QEF	Initiativ	es.									
a. Recruit QEP External Consultants																				
b.i Update QEP Website																				
b.ii QEP Website Live															R					
c.i Develop QEP Marketing Plan																				
c.ii Implement QEP Marketing																				
d.i Establish Assessment Committee																				
d.ii Recruit assessment coordinator																				
d.iii Establish Assessment Database																				
d. iv Implement QEP Assessment																				
e. Invite external Evaluator for onsite visit																				

# **Organizational Structure**



# 1. Office of Undergraduate Research and Inquiry (OURI)

FAU will establish the Office of Undergraduate Research and Inquiry (OURI) to serve as the centralized organizational structure supporting the Distinction Through Discovery efforts. Four new positions have been (or will be) supported under OURI.

 a) QEP Director to become Director of the Office of Undergraduate Research and Inquiry

Dr. Donna Chamely-Wiik has been appointed QEP Director and will oversee the QEP initiative and establish an Office of Undergraduate Research and Inquiry (OURI) as a centralized office for the QEP, its supporting programs and budget. This position is a full time (1 FTE) faculty assignment. The Director will provide coordination and communication of all aspects of the Distinction Through Discovery initiative to ensure success and sustainability. The Director will serve on the University-wide Honors Council and collaborate with our Undergraduate Research and Inquiry Partner Programs. The Director will supervise the Budget Coordinator and graduate students associated with the office. The Director will collaborate with the QEP Assessment Coordinator and Steering Committee to monitor the progress of implementation and in consultation with the deans and university provost, modify the plan based on an as needed basis. The Distinction Through Discovery initiative will be housed in Undergraduate Studies, as part of the Center for Teaching and Learning (CTL).

# b) QEP Assessment Coordinator

Dr. Patricia Heydet -Kirsch has recently been appointed QEP Assessment Coordinator, a part-time (0.35 FTE) faculty appointment whose responsibility is to lead the assessment efforts of the QEP and its programs. The QEP assessment coordinator will work with the QEP assessment committee, QEP director, the Associate Provost for Assessment and Instruction, Institutional Effectiveness and Analysis and departments and programs as we implement the QEP and assist them in evaluating the success of these initiatives in terms of meeting our learning outcomes and goals of the QEP. The Assessment Coordinator will be a member of the University Team for Assurance of Student Learning (TASL) led by Dr. Janet Cramer, Associate Provost for Assessment and Instruction. The assessment coordinator will continue to ensure that the assessments required for the QEP are coordinated with ongoing university-wide departmental assessments as well as other assessments required for professional programs.

#### c) Budget Coordinator for OURI

Ms. Jennie Soberon has been appointed as Budget Coordinator to the QEP and will serve in both an administrative and budgetary role for this initiative. The budget coordinator's position will initially be 0.5 FTE (pre-Year 1) and will become a full time (1 FTE) position beginning August 1, 2013. The Budget Coordinator will assist with implementing all aspects of the Distinction Through Discovery plan and assist collecting and dissemination information between colleges, OURI and students.



# d) Graduate Teaching Assistant for OURI

The office will be staffed with one graduate teaching assistant (0.5 FTE). The GTA will primarily assist with updating the OURI website with information and opportunities for the university community as well as all marketing and informational events and workshops associated with this initiative. The GTA's responsibility will be to assist the Assessment Coordinator with collecting and analyzing data associated with QEP programs on an annual basis. The GTA will be a member of the Council of Scholarship and Inquiry (CSI).

In addition to the Office of Undergraduate Research and Inquiry, an organizational structure has been established which includes collaboration with existing Undergraduate Research and Inquiry Partner Programs and the establishment of several committees to support communication, implementation, assessment and sustainability of our Distinction Through Discovery initiative.

#### 2. Undergraduate Research and Inquiry Steering and Sub Committees

OURI will collaborate with the URI Steering Committee and sub-committees to assist in the implementation and sustainability of the plan. The main steering committee will include representatives from colleges and partner campuses and other key administrators, faculty and students in the programs. The Steering Committee will serve in an advisory capacity to the Director of the Office of Undergraduate Research and Inquiry. From the main Steering Committee, a number of sub-committees will be formed.

- a. The Curriculum sub-committee will establish and refine the Student Learning Outcomes; establish and refine the criteria and guidelines for the Distinction Through Discovery Undergraduate Curriculum Grant Program and review submitted proposals for funding; and collaborate in the establishment and refinement of the content of the Distinction Through Discovery Faculty Learning Communities. The Curriculum sub-committee will include the Director of the Scholarship of Teaching Office and faculty, staff and students representing each college and key partner campus.
- b. The Co-curriculum sub-committee will establish and refine criteria and guidelines and evaluate proposals for the Undergraduate Research Grants and SURF awards, Spring Symposium, Master Faculty Mentor and Distinguished Undergraduate Research and Inquiry Faculty and Student of the Year Awards and Peer Mentor applications. The Co-curriculum sub-committee will include the OURI Director, representatives from each colleges, key-partner campuses and students.
- c. The Assessment sub-Committee will develop an assessment plan to include curricular and co-curricular direct and indirect measures, review assessment data, generate reports and provide recommendations for modifications to the plan. The Assessment committee will be comprised of the QEP Coordinator of

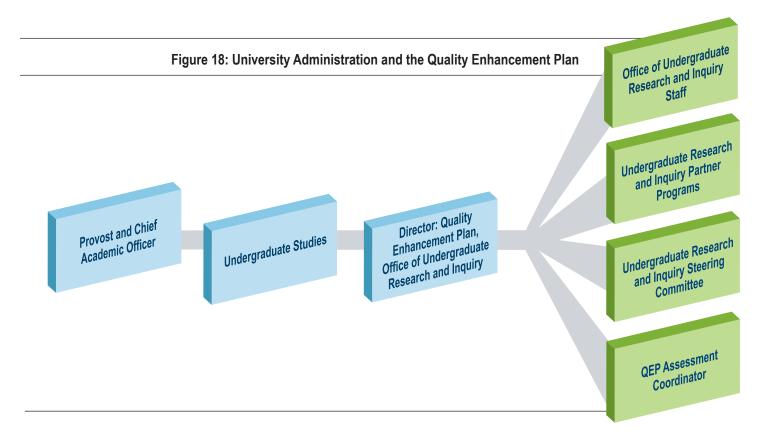




Assessment, student and faculty representatives from programs engaged in QEP programs, Partner Campus faculty, Information Technology representative, TASL representative, Faculty engaged in Faculty Learning Communities and a representative from the Office of the Registrar.

d. The Marketing sub-committee will collaborate with OURI to advertise opportunities for faculty, staff and students in all colleges and on all campuses, to ensure there is widespread distribution of information related to our Distinction Through Discovery plan. This sub-committee will include the OURI Director, graduate assistant and CSI member, Partner Campus faculty, representatives from the Office of Information Technology, Marketing and Creative Services, Student Government, the Division of Research and Admissions and other faculty, staff and students as needed.

Figure 18 below provides the organizational structure of Distinction Through Discovery





# 3. Academic Administrative Roles and Responsibilities

In addition to the URI partner programs and steering committee members, other key academic administrative and faculty leaders will have roles in implementing and sustaining our Distinction Through Discovery plan. We present their roles in Table 11.

Table 11: Academic Administrative Roles and Responsibilities

Administration Leadership	Roles and Responsibilities
University President	Ultimately responsible for the administrative oversight of all university initiatives, including FAU's Quality Enhancement Plan: Distinction Through Discovery; Responsible for updating the Board of Trustees and Board of Governors at appropriate meetings and venues
University Provost	Serves as the Chief Academic Officer of the university.  Promotes College participation through the Council of Deans committee; Monitors progress of the plan including student learning outcomes, goals and objectives as well as milestones established; Provides guidance and recommendations to enhance the Distinction Through Discovery initiative through ongoing assessments
Academic Deans	Oversee faculty research and inquiry activities in their colleges; Encourage and facilitate faculty participation in Distinction Through Discovery initiatives; Assist with communication of opportunities to faculty and students in their departments
Department Chairs	Encourage and enable faculty and student involvement in the Distinction Through Discovery initiative; Assist with communication of opportunities to faculty and students in their department; Maintain discipline-specific existing undergraduate research and inquiry opportunities on departmental websites
Faculty Members	Participate in faculty professional development, curriculum grant offerings, co-curricular initiatives as appropriate; Serve as college-specific Master Mentors, steering and sub-committee members; Serve as student mentors; Integrate and evaluate Distinction Through Discovery curricular initiatives and student learning outcomes; Utilize services provided by the Office of Undergraduate Research and Inquiry; Engage students in undergraduate research and inquiry both inside and outside of the classroom

The organizational structure presented was designed to ensure success and sustainability of the Distinction Through Discovery initiative. As the initiative is implemented, accommodations in its organizational structure including additional personnel or collaborations with other groups will be considered as needed.



CHAPTER 8

**Budget** 

Our Distinction Through Discovery initiative is a major priority for FAU as evidenced in the University's Strategic Plan 2012-2017. The institution is fully committed to supporting this initiative from development to implementation and ensuring its sustainability beyond the QEP time frame. FAU has committed both new and in-kind financial, physical and human resources to support this initiative. The QEP Steering Committee carefully examined and refined the plan of action and timeline for implementation during the planning process and established annual budgets to reflect the necessary resources to carry-out this plan. The University will invest approximately \$3 million over the six-year implementation of the QEP (including pre-QEP year). The steering committee identified and secured in-kind support from operating budgets of existing programs to supplement new money provided to the QEP. As program development and implementation costs are determined more clearly following discussions with faculty, department chairs and others, adjustments may be needed in the budget estimates to better reflect modified goals and needs. All budget-related expenses will be administered, tracked and evaluated through the Office of Undergraduate Research and Inquiry. Table 12 summarizes the six-year total budget for the QEP including in-kind contributions.

Table 12: Distinction Through Discovery Budget Including New and In-kind Funding

			•	-				
	Pre-QEP	Year 1	Year 2	Year 3	Year 4	Year 5	Total All Years	
	Fall 2012- Summer 2013	Fall 2013- Summer 2014	Fall 2014- Sumer 2015	Fall 2015- Summer 2016	Fall 2016- Summer 2017			
Goal 1: Curricular Enrichment (Lower and Upper)								
New funds Goal 1	\$22,500	\$60,000	\$65,000	\$125,000	\$125,000	\$115,000	\$512,500	
In-Kind Goal 1	\$4,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$52,000	
Total Goal 1	\$27,000	\$69,500	\$74,500	\$134,500	\$134,500	\$124,500	\$564,500	
Goal 2: Expanded Co-currifular opportunities								
New funds Goal 2	\$25,000	\$56,300	\$63,100	\$73,700	\$84,000	\$90,000	\$392,100	
In-Kind Goal 2	\$44,400	\$69,500	\$69,500	\$69,500	\$69,500	\$69,500	\$391,900	
Total Goal 2	\$69,400	\$125,800	\$132,600	\$143,200	\$153,500	\$159,500	\$784,000	
Goal 3: Faculty and Student Support and								
Recognition Initiatives New funds Goal 3	\$42,625	\$54,200	\$99,100	\$110,250	\$138,150	\$138,300	\$582,62	
In-Kind Goal 3		\$23,250	\$23,250	\$23,250	\$23,250	\$23,250	\$135,050	
Total Goal 3	\$18,800 <b>\$61,425</b>		\$122,350	\$133,500	\$161,400	\$161,550	\$717,67	
Goal 4: Enrich and Strengthen URI climate at F	AU							
New funds Goal 4	\$147,847	\$207,737	\$213,180	\$218,769	\$224,525	\$230,453	\$1,242,51	
In-Kind Goal 4	\$47,800	\$67,800	\$67,800	\$67,800	\$67,800	\$67,800	\$386,800	
Total Goal 4	\$195,647	\$275,537	\$280,980	\$286,569	\$292,325	\$298,253	\$1,629,31°	
QEP Development, Implementation and Assessment								
New funds	\$70,650	\$34,145	\$40,169	\$36,224	\$42,311	\$43,430	\$266,929	
In-Kind funds	\$13,500		\$105,000	\$105,000	\$105,000	\$105,000	\$538,500	
Total Assessment	\$84,150		\$145,169	\$141,224	\$147,311	\$148,430	\$805,429	
Total ALL GOALS	\$437,622	\$687,432	\$755,599	\$838,993	\$889,036	\$892,233	\$4,500,91	
Total In-Kind funding	\$129,000	\$275,050	\$275,050	\$275,050	\$275,050	\$275,050	\$1,504,25	
Total New Funding	\$308,622	\$412,382	\$480,549	\$563,943	\$613,986	\$617,183	\$2,996,66	



#### **BUDGET JUSTIFICATION DETAIL:**

#### Goal 1: Curricular Enrichment (Lower and Upper)

- a. Pilot program for 3 honors in the major program: pre Year 1 = \$22,500. Total \$22,500
- b. Upper division curriculum grant program: \$60,000 Yr. 1, \$65,000 Yr. 2, \$55,000 Yr. 3, \$50,000 Yr. 4 and \$40,000 Yr. 5. Total upper division all years = \$270,000
- c. Lower division curriculum grant program: \$70,000 Yr. 3, \$75,000 Yrs. 4 and 5. Total lower division all years = \$220,000
- d. In-kind funding includes: Collaborative curriculum grant programs from WAC, eLearning and CLASS and administrative support from CLASS. Total in-kind all years = \$52,000

# Goal 2: Expanded Co-curricular opportunities

- a. Expanded Undergraduate Research Grants Program: \$18,000 Pre. Yr. 1, \$24,000 Yr. 1, \$27,000 Yr. 2, \$30,000 Yr. 3, \$36,000 Yr. 4 and \$42,000 Yr.5. Total all years = \$177,000
- b. Summer Undergraduate Research Fellowship, SURF @ \$3300 per fellowship. \$19,800 Yr. 1, \$23,100 Yr. 2, \$29,700 Yr. 3, \$33,000 Yrs. 4 and 5 and \$40,000 Yr. 5. Total SURF all years = \$138,600
- c. Expanded Spring Undergraduate Research Symposium: \$2,000 Pre Yr. 1, \$2,500 Yr. 1, \$3,000 Yr. 2, \$4,000 Yr. 3 and \$5,000 Yrs. 4 and 5. Total all years = \$21,500.
- d. Undergraduate research Journal editorial support: \$5,000 Pre Yr. 1, \$10,000 Yrs. 1-5. Total all years = \$55,000
- e. In-kind funding includes: Existing funds associated with the current Undergraduate Research grants (\$30,000 annually) and Annual Symposia (\$8,000 annually) to be re-allocated to the QEP (from Clearwire funding). Student Government support through CSI, Student Travel to conferences, purchasing additional poster boards for Research Symposium. Division of Research Seed Grant support and administrative support. Undergraduate Studies administrative support. Total in-kind all years = \$391,900

#### Goal 3: Faculty and Student Support and Recognition

- a. Council of Undergraduate Research and Inquiry expanded institutional membership. \$4,000 Pre Yr. 1- Yr. 5 . Total all-years = \$24,000
- b. QEP focused Faculty Learning Communities: 2 x \$12,500 = \$25,000 Pre Yr. 1 Yr. 5. Total all-years = \$150,000
- c. Faculty workshops and programs to include cost of materials, books, food, small stipends, etc.: \$1,250 Pre Yr. 1, \$1,500 Yr. 1, \$2,000 Yr. 2, \$2,500 Yr. 3, \$3,000 Yrs. 4 and 5. Total all-years = \$13,250
- d. Professional development for research and inquiry enriched curriculum: \$5,000 Pre Yr. 1 Yr. 5. Total all-years = \$25,000
- e. Faculty Travel for professional development: \$10,000 Pre Yr. 1 Yr. 5. Total all-years = \$60.000
- f. Master Faculty Mentor Program: \$30,000 Yr. 2, \$40,000 Yr.3, \$60,000 Yrs. 4 and 5. Total all-years = \$190,000
- g. Faculty mentors of grant recipients- CUR book, Mentoring Undergraduates: \$1,125 Pre Yr.1, \$12,00 Yr. 1, \$1,350 Yr. 2, \$1,500 Yr. 3, \$1,650 Yr. 4, \$1,800 Yr. 5. Total all-years = \$8,625



- h. Distinguished Undergraduate Research Mentor Awards: \$3,000 Yrs. 2-5. Total all-years = \$12,000
- i. Student workshops and programs to include cost of materials, books, food, small stipends, etc.: \$1,250 Pre Yr. 1, \$1,500 Yr. 1, \$2,000 Yr. 2, \$2,500 Yr. 3, \$3,000 Yrs. 4 and 5. Total all-years = \$13,250
- j. UCEW support for capstone writing projects: \$6,750 Yrs. 2 and 3, \$13,500 Yrs. 4 and 5. Total all-years = \$40,500
- k. Peer Mentoring Program. \$6,000 Yrs. 1-5. Total all-years = \$30,000
- I. Undergraduate student research awards: \$4,000 Yrs. 2-5. Total all-years = \$16,000
- m. In-kind funding includes: Administrative support for faculty and student professional development from SOTO, eLearning, CLASS, WAC, Division of Research and Graduate College. Administrative support for marketing from Marketing and Creative Services, OIT and Division of Research and Graduate College. Total in-kind all years = \$135,050

#### Goal 4: Infrastructure to enrich climate

- a. OURI Staff including Faculty Director (12-month all years) ,Budget coordinator (0.375 Pre Yr. 1, full-time Yrs. 1-5) and Graduate Student Assistant (20-hours per week Pre-Yr. 1 Yr. 5) salary and fringe benefits with potential 3% increase annually to be allocated based on other university distribution. \$ 128,847 Pre Yr. 1, \$191,237 Yr. 1, \$196,680 Yr. 2, \$202, 269 Yr.3, \$208, 025 Yr. 4 and \$213, 953 Yr. 5. Total all-years \$1,141,011
- b. Office Setup (computers, phones, printers etc.): \$5000 Pre-Year 1. Total = \$5,000
- c. General administrative costs for OURI. \$9,000 Pre Yr. 1 Yr. 5. Total all-years = \$54,000
- d. Travel allocation for the Director to attend SACS, CUR and other conferences: \$5000 Pre-Yr. 1 Yr. 5. Total all-years = \$30,000
- e. Marketing QEP and OURI \$2,500 Yrs. 1-5. Total all-years = \$12,500
- f. In-kind funding includes: University Space allocation for OURI; Administrative support from Undergraduate Studies, Wilkes Honors College, Center for Teaching and Learning, Steering Committee members from colleges and departments. Website and marketing support from Marketing and Creative Services and OIT. Total in-kind all years = \$386,800

# **QEP Development, Implementation and Assessment**

- a. QEP External Evaluators: \$ 12,000 Pre-Yr. 1, \$5,000 Yrs. 2, 4 and 5. Total all-years = \$27,000
- b. SACS Lead evaluator (onsite visit): \$ 3,000 Pre-Yr. 1. Total all-years = \$3,000
- c. QEP Document editor: \$2,500 Pre Yr. 1. Total all-years = \$2,500
- d. QEP Assessment coordinator (Faculty 0.35 FTE) salary and fringe benefits with potential 3% increase annually to be allocated based on other university distribution. \$33,150 Pre Yr. 1, \$34,145 Yr. 1, \$35,169 Yr. 2, \$36,224 Yr. 3, \$37,311 Yr. 4, \$38,430 Yr. 5. Total all-years = \$214,429
- e. QEP Marketing \$20,000 Pre Yr. 1. Total all-years \$20,000
- f. In-kind funding includes: Administrative and Technical support for QEP Assessment and Marketing support from the College of Arts and Letters. Total in-kind all years = \$538,500

Total new money all goals = \$2,999,665



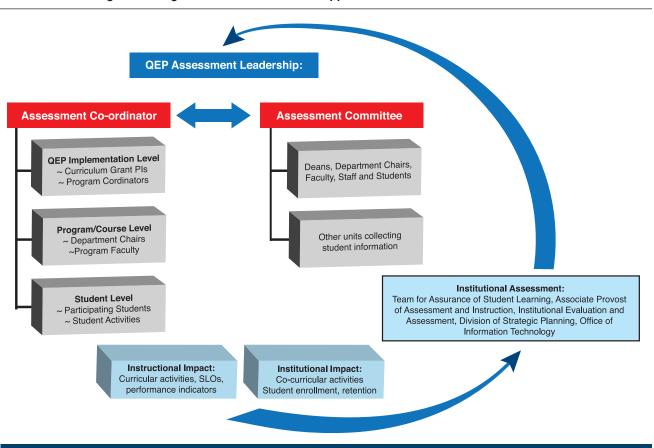
# Assessing the Effectiveness of the Distinction Through Discovery Initiative

The plan for assessing the effectiveness of the Distinction Through Discovery initiative at FAU includes an infrastructure and a set of indicators for assessing progress in achieving the program goals. The design of the plan provides a framework for evidence that FAU's undergraduate students learn to apply the targeted knowledge and skills and that a positive shift occurs in the institutional climate.

# Organizational Structure in support of QEP Assessment

Responsibility for assessing the QEP is shared by the QEP Leadership team, the QEP Assessment Committee, FAU's institutional assessment infrastructure and several layers of stakeholders. Indicators of changes in institutional climate supporting undergraduate research and inquiry will be collected and monitored at the implementation level (QEP-supported curriculum grant PIs), the program/course level (deans, department chairs and program faculty) and the student level (participating students and other supporting units across the institution). The organizational structure for QEP oversight is designed to promote the appropriate delegation of activity and communication to all participants in the initiative. A graphic depiction of this organizational structure is presented below.

Figure 18: Organizational Structure in Support of QEP Assessment







# **Student Learning Outcomes Assessment**

The primary aim of our QEP is to promote the development of undergraduate competencies in research and inquiry. This will be assessed directly with measures of achievement of QEP SLOs via the Distinction Through Discovery Undergraduate Curriculum Grant Program. The student learning outcomes assessment plan involves analysis and review of student achievement through a series of cohorts engaged in curricular redesign. The plan begins with the establishment of a baseline through our Pilot programs currently underway (see Goal 1, Chapter 5). The plan extends over a six year period, initially focusing on upper-division curricula (beginning Fall 2012) and extending to the lower-division beginning Fall 2015. Annual aggregation and analysis of the Undergraduate Curriculum Grant Program cohorts' student learning assessment results will inform ongoing program improvement within the QEP.

The QEP Assessment Committee and Coordinator utilized the six Student Learning Outcomes (SLOs) and their respective performance indicators (See Chapter 5) to develop an assessment rubric designed to evaluate student achievement of the learning outcomes. In Fall 2012, this assessment plan and rubric was beta-tested through the Pilot Programs. The table below provides an example of one SLO, one of its selected indicators, an assignment and the student performance definitions from the initial assessment rubric that was utilized by one program in the Pilot Group. The blue-shaded "assessment rubric" shown in the appendix was used to score student assignment submissions.

Table 13: Initial Rubric for Pilot Group Assessment

Fall 2012	Fall 2012	01.0	Selected		Research	Assessment Rubric					
Honors Program	Pilot Course	SLO	Indicator	Assignment	Component Level Link1	Developing	Competent	Exemplary			
Political Science Honors Program	Political Science POS 4391 (level S)	SLO 3: Plan of Action Students will develop and implement a plan of inquiry to address research and inquiry questions or scholarly problems	Appropriate Methods: Develop a plan to systematically investigate a question or problem using appropriate discipline- based inquiry strategies	Draft Prospectus: Students will develop and implement a plan to investigate a research question	Level S: Intermediate- level discipline specific research and inquiry concepts are practiced in a draft prospectus responding to a research question	Fails to develop and implement a plan of inquiry to investigate a research question	Adequately develops and implements a plan of inquiry to investigate a research question	Articulately develops and implements a plan of inquiry to investigate a research question			



The QEP Assessment committee used mid-semester feedback from the Pilot Group to refine the rubric (see Appendix L for the current version of the QEP Student Achievement Rubric). The Competent level in the rubric is expected to align with the pedagogical practices defining the research and inquiry taxonomic category of Exposure. The Exemplary level of the rubric is expected to align with the research and inquiry category of Skill Building and Intensive. However, we fully expect to see variation in student achievement among the different courses and students at FAU. The rubric is intended for use as an assessment tool only and not for grading purposes, but can be used to provide feedback to students as appropriate.

Responsibility for assessing QEP SLOs will reside with Curriculum Grant Program faculty, who will decide which level(s) of the research and inquiry taxonomy (described in the "Goal 1" section of Chapter 5) they wish to target in their curricula and which SLOs they intend to assess. Following consultation with the QEP Assessment Coordinator, these faculty will select the SLO indicators



they deem most appropriate to their programs, designate specific coursework to serve as assessment measures, align assignment rubrics with the QEP Student Achievement Rubric and set mid-semester and end-of-term benchmarks for their courses. Program faculty will collect and evaluate student coursework and record student performance per the QEP rubric. These results will be aggregated and analyzed by the Assessment Coordinator and communicated in an annual report to the Steering Committee for review and program improvements. Each program receiving a

Curriculum Grant will identify a Principal Investigator who will ensure the program's full compliance with this assessment plan, review assessment results and facilitate program improvement efforts and provide an annual report to the Steering Committee at the end of the year of funding and for two more years afterward.

This assessment strategy will be managed within an electronic assessment tool that facilitates the collection and storing of retained student work, scoring by rubric, entry of assessment data, feedback to students and the aggregation and reporting of results. It allows student demographics and transcript information to be matched with student performance data in order to aggregate and disaggregate data measures. The system will yield student performance data for analysis and review by program faculty, students and the QEP Assessment Committee to inform continuous program improvement efforts.



## Assessment of QEP Student Learning Outcomes is Aligned with Other Curricular Assessment Efforts a FAU

The Assessment System at Florida Atlantic University, in compliance with Florida Board of Governors Regulation 8.016, includes the use of Student Learning Outcome Assessment (SLOA) measures across all academic programs in all colleges. These were previously called Academic Learning Compacts (ALC). FAU has been assessing Academic Learning Compact skills for each of its baccalaureate degree programs since 2005. In addition, in accordance with Florida Board of Governors Regulation 6.017, FAU defines and assesses general education core competencies through the Intellectual Foundations Program (IFP) which was implemented in Fall 2009. The QEP Assessment Committee acknowledges the overlap of integrated assessments at the undergraduate level and the value of these existing assessments as a context for the overall QEP Assessment Plan. The alignment among these core competencies, FAU's Intellectual



Foundations Program (IFP) outcomes and the QEP learning outcomes are depicted in Appendix M. This matrix serves to provide a visual representation of the institutional assessment context in which QEP Learning Outcomes are embedded. All of these layers of learning outcomes, where applicable, will be tracked in the electronic assessment tool utilized by the QEP throughout its duration. Programs receiving Undergraduate Curriculum Grants will be required to incorporate their QEP assessment plans into the other assessment strategies for their programs and departments after the initial support provided by the Undergraduate Curriculum Grant Program ends. In doing so, they will sustain the QEP assessment plan and support the success of FAU's Strategic Plan.

FAU's Team for Assurance of Student Learning, under the direction of the Associate Provost for Assessment and Instruction, is evaluating

replacement options for FAU's current institutional electronic assessment tool. In May 2013, when the institution commits to a new system, FAU's QEP assessments will be integrated into that system. The Associate Provost of Assessment and Instruction will be responsible for arranging training for faculty and staff on the use of this system, including those involved with the QEP. The QEP Assessment Coordinator will set up Undergraduate Curriculum Grant Program courses in the assessment tool and verify that the system is enabled to accept student work samples and faculty evaluations of student performance.

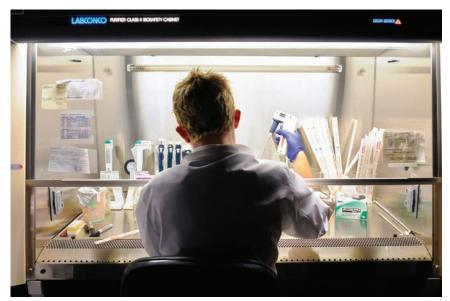
## **Assessment of Change in Institutional Climate**

Our Distinction Through Discovery initiative includes several strategies to examine the institutional impact of the QEP. The first strategy makes use of the institutional partnerships that the QEP has established with several units of the university that contribute to student and faculty development.



In collaboration with these units, the QEP Assessment Director will track indicators related to co-curricular involvement including a host of direct and indirect measures of research and inquiry courses, programs and opportunities offered to faculty and students, the amount of financial and academic support available to assist in research and inquiry activities and the rates of participation therein. Increases in the quantity and types of research and inquiry opportunities supported by this QEP and the rates of student and faculty participation in these opportunities will be tracked annually both in overall trend analyses and as a function of the different campuses, colleges and programs represented. A full listing of the assessment indicators for this QEP and the extant baselines and benchmarks associated with those indicators, is provided in Appendix N. The QEP's electronic assessment tool will serve to assist the QEP Assessment Committee with collecting and storing data each year for analysis and reporting.

The second method for assessing institutional impact will examine changes in institutional



climate via surveys. Because the very nature of climate change requires that institutional characteristics be examined over time and include a large representative sample of all constituents, a simple "blitz" survey strategy will be adopted. All participants and recipients (students, faculty, staff and administrators) of all QEP-sponsored activities and resources will be asked to provide their contact information (e.g. name, email) that will remain functional over the next 3 to 5 years. Each will be contacted for participation in two institutional surveys. The QEP Assessment Committee in consultation with the university's Team for Assurance of Student Learning will develop these surveys; they will be administered, maintained and analyzed by the Office of Institutional Effectiveness and Analysis. Both surveys will be submitted to FAU's Institutional Review Board for approval prior to their administration.

The first instrument, a "QEP Participation Survey" will be administered electronically two weeks after the end of a QEP-sponsored activity and will gauge participants' perceptions (using a Likert scale) of the extent to which the QEP activity was marketed, accessible, representative of their interests and future plans and related to the research and inquiry skills they are developing in their studies, work, or personal and professional lives. Open-ended questions for feedback about the QEP will be included and respondents will indicate their willingness to participate in other QEP activities and assessments. A second instrument, an "Undergraduate Research and Inquiry Climate Survey" will be developed and administered annually to assess university constituents' perceptions about the culture of research and inquiry that exists at FAU, the amount and type of support offered for such activity, the impact of undergraduate research and inquiry on the professional development of institutional constituents and stakeholders. These surveys are



included in the list of assessment indicators presented in Appendix N. The Office of Institutional Effectiveness and Analysis will be responsible for aggregating the results from both surveys and will report the results annually to the QEP Director. The QEP Director will communicate the findings to the FAU community in a public presentation and/or panel discussion each Fall in the QEP period.

A third and final strategy the QEP will employ to gauge institutional climate will include a set of QEP-specific questions in existing institutional assessment instruments currently administered to students (e.g., Graduating Senior Survey, Student Satisfaction Survey, Student Perception of Teaching surveys) and to academic programs (e.g., Departmental Dashboard Indicators). Each of these instruments is maintained and administered by the Office of Institutional Effectiveness and Analysis (IEA); the results of these QEP-related questions will be included in the annual reporting of responses via IEA's interactive reporting web site. These indicators of institutional climate are listed in Appendix N.



## **Continuous Program Review**

The QEP Assessment Committee has collaborated with university partner programs to develop appropriate measures to assess its program outcomes (see Chapter 4). The cornerstone of the QEP's Continuous Program Improvement Plan is ongoing introspective review of the outcome indicators as listed in Appendix N. Each summer of the QEP period, the Steering Committee and its constituent sub-committees will convene for a retreat to examine all extant assessment data from QEP activities and initiatives to determine compliance with its assessment plans and interpret trends in achievement for student learning outcomes and institutional climate. On the basis of these results, the Curriculum, Co-Curriculum, Assessment

and Marketing Sub-Committees will conduct a SWOTT analysis—to be presented to the QEP Executive Committee in August—of institutional strengths, weaknesses, opportunities, threats and trends and offer recommendations for improvements to be made to the QEP for the coming year. These will be the basis of a QEP Assessment Annual Report that will be disseminated for stakeholder review at the end of each year of the QEP program.

The Assessment Plan is purposeful, yet flexible. The plan ensures that the QEP leadership will continuously monitor the progress of our "Distinction Through Discovery" initiative, adapt to the needs of all stakeholders in FAU's undergraduate educational mission and ultimately guide our institution toward a significant and sustained cultural change for scholarly research and inquiry at all levels.



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## **QEP Topic Selection Process**

In Fall 2010, Edward Pratt, Ph.D., Dean of Undergraduate Studies and Jeffrey Buller, Ph.D., Dean of the Wilkes Honors College, co-chaired the initiative to select the topic of the Quality Enhancement Plan (QEP). They made presentations at each college's faculty assembly meeting and held open forums for faculty, staff and students. A QEP website (www.fau.edu/qep) was also established for informational purposes, soliciting feedback from the university community and to provide results of surveys and other assessment information gathered from students, faculty, alumni and employers. Moreover, a QEP Topic Selections Committee was established; it included Dr. Pratt and Dr. Buller as the co-chairs, as well as faculty and staff representatives from each college, institutional administration, the University Library, the Center for Learning and Student Success, as well as an undergraduate student representative (See Appendix C). Community feedback assisted the QEP Topic Selection Committee in identifying topics focused on student learning that were based on well-demonstrated institutional needs.



In January 2011, the QEP Topic Selections Committee solicited two-page pre-proposals from the FAU community on potential QEP topics that could improve undergraduate student learning. The University responded positively to the request for ideas and proposals. Fifteen pre-proposals were submitted by dozens of faculty, staff and one student, representing every college and multiple units across the university (See Appendix D). The QEP Selections Committee used the SACS guidelines as a framework to evaluate the preproposals. After discussion, several of the proposals were combined to narrow down the options to three topics: 1. Integrating an Honors Undergraduate Research Focus at FAU; 2. Enhancing Students' Writing Abilities; and 3. Experiential Learning. The authors of those combined proposals were asked to work together to develop full proposals (six pages

including a proposed budget) and present their proposals at two open forums for FAU faculty, staff and students in April 2011.

Well over 100 faculty, staff and students attended the QEP proposal presentations in person or via broadcast on the QEP website. .Evaluation and feedback about the proposals was solicited from the university community through evaluation forms at the open forums and online on the QEP website. In May 2011, the QEP selections committee presented the three proposals, a summary of the discussions at the April 2011 open forum and the evaluations of the proposals from the university community to the FAU SACS Leadership team. In June 2011, the SACS Leadership team selected the winning QEP proposal which was on the topic of Undergraduate Research and Honors.



## Excerpt from the Honors Education Task Force report

Honors Education and the QEP

The topic selected for FAU's QEP is "Integrating and Expanding a 'Culture of Research and Scholarship' at FAU through the Framework of an Honors Program." The focus of this plan provides an excellent complement to the goals established by the Taskforce. It is thus possible for the University to use the recommendations of the Taskforce to underscore for SACS the institution-wide importance FAU places on honors education. In other words, the University can leverage its efforts in expanding its honors opportunities by carefully aligning the implementation of the QEP with the recommendations outlined in this report. Nevertheless, the QEP and the goals of this proposal, while overlapping, are not identical.

## **QEP Planning Process**

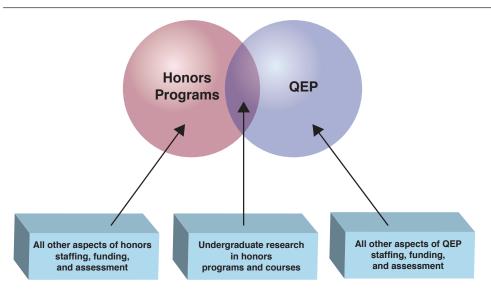
Once FAU's QEP topic was selected, Dr. Donna Chamely-Wiik, lead writer for the Undergraduate Research and Honors proposal, was appointed Director of the QEP. She was charged with leading the initiative to develop, implement and assess FAU's Quality Enhancement Plan and ensuring the plan was integrated into ongoing efforts of our institution and including participation by all institutional constituencies in the development of the plan.

#### **Honors Education Task Force**

On May 31, 2011, FAU's President, Dr. M.J. Saunders, charged the Honors Education Taskforce with developing a proposal for increasing the number of high ability students who choose to attend FAU because of its honors opportunities. (See Appendix F). The Taskforce identified a series of recommendation, which were summarized in a final report and distributed to the University community in August 2011. Many of these recommendations are currently being implemented, which include: 1) a unified theme called "Distinction through Discovery" (later adopted by the QEP); 2) the development of additional honors programs (an additional five to date) which emphasize student engagement in research and inquiry; 3) collaboration with University Admissions to establish new Honors recruitment materials; 4) expanded membership of the University Honors council to include the QEP Director and College representatives; and 5) a unified web-presence for all honors opportunities.

In the full report, the task force committee identified the relationship between these two institutional initiatives. We provide an excerpt and a diagrammatic representation from the report.

## Representation of the relationship between Honors Education and the QEP



Our QEP planning began with this Taskforce and integrating a culture of undergraduate research into the institution's plans to expand honors education and continued through the establishment of a QEP steering committee.



## **QEP Steering Committee**

During September and October 2011, the QEP director met with key constituents (See Appendix H and I) to introduce the QEP topic and to solicit assistance with identifying key personnel who would be willing to serve on the QEP steering committee. In October, 2011, the QEP Steering Committee was established, which included some members from the topic selection committee, honors education task force and new representatives from every college, representatives from our different partner campuses and other key participants from programs well-suited to integrate with our QEP efforts. This committee was charged with the responsibility of fully developing the plans for QEP.

The QEP Steering Committee first met at the beginning of November 2011 to become more familiar with SACS, the QEP process and topic and Honor Education Task force report. Subsequent committee meetings focused on refining the working definition of research to include "inquiry", reflecting creative activities and scholarship as well. The Steering Committee established and finalized QEP goals, objectives and student learning outcomes. The committee continued reviewing best practices, gathering data and establishing ideas of how these practices could be expanded into the undergraduate experience. During this time, two surveys were designed and distributed to solicit information about existing programs and best practices, recommendations for expanding this culture and perceived barriers. Four separate themes for an action plan emerged from the efforts of the Steering Committee, namely: 1. Curricular activities, 2. Co-curricular activities, 3. Honors programs and 4. Student culture.

#### **QEP Student Council**

In October 2011, Dr. Chamely-Wiik collaborated with FAU's Student Government and issued a call for student applications for representatives to serve on a new QEP Student Council. Those selected to serve, participated in a student focus group conducted by the QEP Director to share their experiences and involvement in undergraduate research and inquiry. They also provided a "student-eye view" of the necessary resources and institutional needs to support and sustain this culture at FAU. Key members of the QEP Student Council were asked to serve as members of the larger QEP Steering Committee. To date, additional efforts of the QEP Student Council have led to the formation of the Council for Scholarship and Inquiry (CSI) and the establishment of the Undergraduate Research Journal in January 2012.

## **Faculty Learning Community Participation**

Additional opportunities for faculty to engage with FAU's QEP development were provided through two QEP-focused Faculty Learning Communities (FLCs), during Fall 2011–Spring 2012. They included "Research, Creative and Scholarly Activities into the Undergraduate Curriculum" led by Dr. Chamely-Wiik (QEP Director) and Dr. Daniel Meeroff (College of Engineering) and "Teaching High-Ability Students" led by Dr. Chris Strain (Harriet L. Wilkes Honors College). The contribution these FLCs provided to the QEP team included a working definition of research which could be applied to all disciplines, a comprehensive review of relevant literatures, discipline-specific case study examples of research and inquiry-rich pedagogies and practices and assessment strategies that follow best practices.



#### **QEP Sub-Committees**

In January of 2012, the QEP Steering Committee members were divided into four sub-committees, based on the themes which emerged and charged with establishing and prioritizing a university-wide plan to expand a culture of undergraduate research and inquiry under their assigned theme. Each sub-committee was chaired by a member of the original QEP Steering Committee; additional faculty, staff and student members were recruited from the university community. Each sub-committee met one to two times a week for over two months.

The sub-committees began by analyzing results from the two QEP surveys and meeting with key representatives in relevant units within FAU. Sub-committee members reviewed the literature and communicated with faculty and administrators at other institutions with existing expertise in undergraduate research and inquiry (See Appendices J and K). Each sub-committee produced a proposed set of specific action items for the QEP including programs, grants, fellowships, reward and recognition and professional development opportunities for participants in undergraduate research and inquiry. In addition, they established an implementation plan for each action item with guidelines for program development, appropriate budgets, a time frame for implementation, suggestions for assessment of these action items and the needed infrastructure to carry out the expansion. Completed written reports were submitted it to the director on March 9th, 2012.

During March and April 2012, the QEP Executive Committee (See Appendix G) met weekly to merge ideas and priorities of the sub-committees into a coherent executive summary (working plan) and to establish a budget and timeline for implementation of the plan. This was reviewed, approved and finalized by the re-convened QEP Steering Committee and presented to the FAU SACS Leadership Team on April 6th, 2012. Feedback was provided and the plan was refined. The QEP Executive Committee was then charged with finalizing a 6-year budget and estimated cost for sustainability of the QEP with the University's Financial Affairs staff.

#### **Ongoing Consultation**

The QEP steering committee recruited two external consultants, Dr. Thomas Pusateri, Associate Director, Center for Excellence in Teaching at Learning at Kennesaw State University and Dr. Mary Crowe, Associate Provost of Experiential Education at Florida Southern University and President elect of the Council of Undergraduate Research, to assist with establishing and evaluating the plan of action and assessment for our Distinction through QEP initiative. In April 2012, Dr. Pusateri visited FAU for two days and met with key personnel including active undergraduate student researchers, a college dean, steering committee and executive committee members, the vice president for strategic planning, the associate provost for assessment and instruction and university provost. Prior to his visit, Dr. Pusateri was provided with all completed sub-committee recommendation reports; student learning outcomes document; executive summary (working plan); draft of QEP budget and timeline; slides from FAU's SACS Leadership Team meeting presentation and latest draft of FAU's 2012-17 Strategic Plan. Upon completion of the visit, Dr. Pusateri summarized his findings in a formal report in which he provided recommendations for the student learning outcomes,



gave suggestions on an assessment plan and provided feedback on FAU's efforts to adhere to SACS guidelines for a Quality Enhancement Plan. These included the scope of FAU's QEP, the university's infrastructure supporting QEP implementation and continuation of FAU's QEP and its sustainability.

The executive summary (working plan) was shared with several university constituencies including Council of Deans, Faculty Senate, Undergraduate University Programs Committee Colleges, Departments, Programs, Student Government, Division of Research and Admissions to obtain feedback on the proposed plan of action and budget. During Summer 2012, the QEP plan of action, budget and timeline was further refined and developed based on all received feedback and additional detail was included as the first draft of the QEP document was being written. A request was sent out to department chairs to gather more data on existing curricular and co-curricular activities associated with undergraduate research and inquiry to serve as baseline for the QEP.



A request was sent out to department chairs to gather more data on existing curricular and co-curricular activities associated with undergraduate research and inquiry to serve as baseline for the QEP. Once the entire QEP document was completed in September 2012, the manuscript was distributed to both consultants, Drs. Pusateri and Crowe to assist with evaluating FAU's Quality Enhancement Plan. Feedback was provided by both consultants, and the document was revised to address their recommendations including specific plans to meet the needs of FAU's student population (i.e. transfer and commuter students and partner campuses). The document was provided to the SACS leadership team and uploaded on the QEP website from September through November 2012. Feedback was solicited from the entire university. During October 2012, QEP kickoff forums

were hosted on three campuses. Over 250 faculty, staff and students participated in QEP round-table discussions that took place at these forums. Final revisions were made based on feedback received from the website, kickoffs and SACS leadership team, and the Distinction Through Discovery document was distributed to Marketing and Creative Services for final formatting and printing.

### **QEP Assessment Committee**

An assessment committee was established for developing and implementing an assessment plan for the QEP by which the achievement of student learning outcomes and other program goals could be evaluated. The QEP Assessment committee solicited applications for an assessment consultant to assist their efforts. Dr. Patricia Kirsch (College of Education) was welcomed during July 2012 as the Assessment Coordinator to the QEP and a QEP assessment plan was established.



## **QEP Topic Selection Committee and SACS Leadership Team**

QEP Topic Selection Committee		
Member	Title	Academic Unit
Jeffrey Buller (Co-Chair)	Dean and Professor	Harriet L. Wilkes Honors College
Ed Pratt (Co-Chair)	Dean and Professor, Undergraduate Studies Dean's Office	Undergraduate Studies
Edgar An	Professor & Director, Ocean & Mechanical Engineering	College of Engineering and Computer Science
Marina Banchetti	Associate Professor, Philosophy	Dorothy F. Schmidt College of Arts and Letters
Marc Rhorer	Assistant Dean, Business	College of Business
Sharon Dormire	Assistant Dean & Associate Professor, Nursing Dean's Office	Christine E. Lynn College of Nursing
Evelyn Frazier	Instructor, Biological Sciences	Charles E. Schmidt College of Science
Eliah Watlington	Associate Provost & Associate Dean, Jupiter Vice President Office	College of Education
Patricia Heydet-Kirsch	Assistant Professor, Education Dean's Office	College of Education
Patricia Patterson	Adjunct Faculty, Education Leadership	Directed Independent Study
Chris Ely	Associate Professor, History; Honor's College Social Science	Harriet L. Wilkes Honors College
Madelyn Lavigne	Assistant University Librarian	S. E. Wimberly Library
Jennifer Bebergal	Director, Student Retention	Center for Learning and Student Success
Joshua Scholl	Student Representative	Charles E. Schmidt College of Science

SACS Leadership Team		
Member	Academic Unit	
Mary Jane Saunders	President	
Charles Brown	Senior Vice President Student Affairs	
Jeffery Buller	Dean of Harriet L. Wilkes Honors College; Co-chair QEP	
Brenda Claiborne	University Provost and Chief Academic Officer	
Dennis Crudele	Chief Financial Officer, Senior Vice President of Finance & Administration	
Gitanjali Kaul	Vice President for Strategic Planning and Information Technology SACS Liaison	
William McDaniel	Chair Faculty Senate	
Edward Pratt	Dean, Undergraduate Studies; Co-chair QEP	



## **List of Pre-Proposal Topics Submitted**

Name of Submitter	Title	College	Name of Pre-Proposal
Ray Amirault	Faculty	College of Education	Technology to Enhance Student Learning
Clifford Brown	Faculty	Dorothy F. Schmidt College of Arts and Letters	QEP: Mathematics Across the Curriculum
Leslie Calhoun	Faculty	College of Education	Integrate Field Experience Activities
Donna Chamely-Wiik	Faculty	Charles E. Schmidt College of Science	Integrating an Honors Undergraduate Research Focus at FAU
<b>Lorraine Cross</b>	Faculty	College of Education	Engaging Students through Academic Service-Learning
Sharon Dormire	Faculty	Christine E. Lynn College of Nursing	Enhancement of Academic Writing
Lawrence Feidelman	Faculty	College of Business	Enhancing Our Student's Global Knowledge Base
Jeffrey Galin	Faculty	Dorothy F. Schmidt College of Arts and Letters	Writing Across the Curriculum
Simon Glynn	Faculty	Dorothy F. Schmidt College of Arts and Letters	Analytic Thinking: Teaching Method and Faculty Training Proposal
Chaouki Ghenai	Faculty	College of Engineering and Computer Science	Classroom Assessment for Student Learning – Formative Assessment
Jason Immerblum	Student	College of Engineering and Computer Science	Physical, Technological, Social and Instructional Change at FAU
Catherine Meschievitz	Faculty	Division of Undergraduate Studies, Office of International Programs	Graduate globally competent students by expanding student learning opportunities in study abroad and international and global studies
Becky Mulvaney	Faculty	Dorothy F. Schmidt College of Arts and Letters	Enhancement of Oral communication Skills
Patricia Patterson	Faculty	College for Design and Social Inquiry	Evaluating information for decision making and "Making the Case" for education
Jennifer Peluso	Faculty	Charles E. Schmidt College of Science	Learning Never Ceases program



# **QEP Pre-Proposal Selected – Contributing Faculty**

Contributing Faculty	Representative College/ Program
Donna Chamely-Wiik, Jerome E. Haky and Deborah Louda	Charles E. Schmidt College of Science and Charles E. Schmidt College of Medicine
Jennifer Peluso, Rodney Murphey, Evelyn Frazier and Evonne Rezler	Charles E. Schmidt College of Science
Dan Meeroff, Tsung Chow –Su	College of Engineering and Computer Science
Joy Longo	Christine E. Lynn College of Nursing
Nancy Romance, Teaching and Learning	College of Education
Jeffrey Galin, Barclay Barrios, Michael Horswell, and Ken Keaton	Dorothy F. Schmidt College of Arts and Letters
Ellen Ryan	College of Design and Social Inquiry
Kimberly Dunn	College of Business
James Fowlkes	Information Resource Management- E-Learning
Madelyn LaVigne	University Libraries
Jennifer Bebergal and Angelica Nevin	Center for Learning and Student Success

## **APPENDIX F**

## **Honors Education Task Force Participants**

Name	Title	College
Jeff Buller	Dean	Harriet L. Wilkes Honors College
Ed Pratt	Dean	Undergraduate Studies
Somnath Bhattacharya	Associate Dean and Professor	College of Business
James Capp	Communications and Events Coordinator	Office of the Provost
Donna Chamely-Wiik	Assistant Scientist/Scholar	College of Science
Sharon Dormire	Assistant Dean and Associate Professor	College of Nursing
Charles Dukes	Associate Professor	College of Education
Ana Fiallos	Education Outreach Coordinator	Max Planck Florida
Sameer Hinduja	Associate Professor	College for Design and Social Inquiry
David Kian	Senior Vice President	Strategic Relations and General Counsel
Paul Kirchman	Chair and Associate Professor	Harriet L. Wilkes Honors College
Patricia Kollander	Chair and Professor, Department of History	College of Arts and Letters
Mihaela Metianu	Director	International Students
Monica Orozco	Assistant Provost	eLearning, Academic Affairs
Marc Rhorer	Assistant Dean for Academic Affairs	College of Business
Dorothy Russell	Associate Vice President	Financial Affairs
Timothy Van Epps	Director/Instructor, Innovation Leadership Honors Program	College of Engineering and Computer Science
Joshua Voss	Assistant Research Professor	Harbor Branch Oceanographic Institute

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## **QEP Steering and Subcommittees: August 2011 – Present**

	QEP Steering Committee	
Member	Title	Academic Unit
Barrios, Barclay	Assistant Professor, English	College of Arts and Letters
Bebergal, Jennifer	Director, Student Retention	CLASS
Branaman, Ann	Associate Professor, Sociology	College of Arts and Letters
Buller, Jeffrey	Dean and Professor	Harriet L. Wilkes Honors College
Castrogiovanni, Gary	Professor, Management-International Business Entrepreneurship	College of Business
Chamely-Wiik, Donna	QEP Director, Assistant Scientist, Chemistry	College of Science
Coicou, Patricio	Student Representative	College of Science
Crawford, Melissa	Associate Director	CLASS
Davis, Megan	HBOI Director & Research Professor,	Harbor Branch Oceanographic Institute
DiCosola, Angela	Professor, Visual Art & Art History	College of Arts and Letters
Dormire, Sharon	Assistant Dean & Associate Professor,	College of Nursing
Dunn, Kim	Associate Professor & Director of SOA, Accounting	College of Business
Fowlkes, James	Director, Instructional Design, Academic Affairs	Instructional Services
Galin, Jeffrey	Associate Professor, English	
Director, UCEW and WAC	College of Arts and Letters	
Haky, Jerome	Associate Professor, Chemistry	College of Science
Hughes, Colin	Associate Professor, Biology	College of Science
Lavigne, Madelyn	Assistant University Librarian	S. E. Wimberly Library
Liehr, Patricia	Professor, Associate Dean, Nursing	College of Nursing
Long, Vincent	Student Representative	College of Science
Meeroff, Daniel	Associate Professor, Civil Environment & Geomatic Engineering	College of Engineering and Computer Science
Oner, Ceylan (Asli)	Assistant Professor, Urban & Regional Planning	College of Design and Social Inquiry
Peluso, Jennifer	Director, SoTO, Instructor, Psychology	Center for Teaching and Learning
College of Science		
Ploger, Donald	Associate Professor, Teaching and Learning	College of Education
Pratt, Edward	Dean and Professor, Undergraduate Studies Dean's Office	Undergraduate Studies
Raviv, Daniel	Professor, Computer & Electrical Engineering & Computer Science	College of Engineering and Computer Science
Risucci, Genna	Graduate Student Representative	College of Education
Scholl, Josh	Student Representative	College of Science
Vos, Jaap	Director & Associate Professor, Urban & Regional Planning	College for Design and Social Inquiry



# **QEP Subcommittees: January 2012 – May 2012**

	Curriculum Subcommittee	
Member	Title	Academic Unit
Jennifer Peluso (Co-chair)	Instructor, Psychology	College of Science
<b>Edward Pratt</b>	Dean Undergraduate Studies	Undergraduate Studies
<b>Barclay Barrios</b>	Assistant Professor, English	College of Arts and Letters
Ceylan (Asli) Oner	Assistant Professor, Urban & Regional Planning	College of Design and Social Inquiry
Jerome Haky	Associate Professor, Chemistry	College of Science
Jennifer Bebergal	Director, Student Retention	CLASS
Sharon Dormire	Assistant Dean Nursing	College of Nursing
Colin Hughes	Associate Professor, Biology	College of Science
Madelyn Lavigne	Assistant University Librarian	S. E. Wimberly Library
James Fowlkes (Co-chair)	Director, Instructional Design,	Center for eLearning
Viet-Hang (Jeanette) Truong	Student Representative	College of Arts and Letters
	Co-Curricular Subcommittee	
Donna Chamely-Wiik (Co-Chair)	QEP Director, Assistant Scientist, Chemistry	College of Science
Megan Davis (Co-chair)	HBOI Director & Research Professor,	Harbor Branch Oceanographic Institute
Daniel Meeroff	Associate Professor, Civil Environment & Geomatic Engineering	College of Engineering and Computer Science
Angela DiCosola	Professor, Visual Art & Art History	College of Arts and Letters
Jaap Vos	Associate Professor, Urban & Regional Planning	College for Design and Social Inquiry
Gary Castrogiovanni	Professor, Management- International Business Entrepreneurship	College of Business
Melissa Crawford	Associate Director CLASS,	CLASS
Jeffrey Galin	Associate Professor, English, Director University Center for Excellence in Writing	College of Arts and Letters
Madelyn Lavigne	Assistant University Librarian	S. E. Wimberly Library
Patricio Coicou	Student Representative	College of Science
Vincent Long	Student Representative	College of Science
	Upper Division Honors Subcommit	tee
Jeffrey Buller (Chair)	Dean and Professor	Honors College
Kim Dunn	Chair, Accounting	College of Business
Daniel Raviv	Professor, Computer & Electrical Engineering	College of Engineering and Computer Science
Patricia Liehr	Professor, Associate Dean	College of Nursing
Ann Branaman	Associate Professor, Sociology	College of Arts and Letters
Don Ploger	Associate Professor, Teaching and Learning	College of Education
Jerome Haky	Associate Professor, Chemistry	College of Science
Aruna Khan	Student Representative	College of Science
Madelyn Lavigne	Assistant University Librarian	S. E. Wimberly Library
Patricio Coicou	Student Representative	College of Science
Vincent Long	Student Representative	College of Science

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	Student Subcommittee	
Aarons, David	College of Arts and Letters	
Chen, Adam	College of Science	
Coicou, Patricio	College of Science	
Geubelle, Francis	College of Science	
Horace, Reginald	College of Science	
Khan, Aruna	College of Science	
Miller, Michael	College of Business	
Lambrinos, Nikolle	College of Science	
Long, Vincent	College of Science	
Maceda, Cynthia	College of Education	
Risucci, Genna	College of Education	
Rodriguez, Alena	College of Science	
Scholl, Joshua (Chair)	College of Science	
Truong, Viet-Hang	College of Arts and Letters	
Wengert, Nicole	University Honors Program	
Wengert, Tara	University Honors Program	
	QEP Assessment Committee	
Jennifer Peluso	College of Science	
James Fowlkes	Instructional Services	
Jeffrey Galin	College of Arts and Letters	
Jerome Haky	College of Science	
Jennifer Bebergal	Center for Learning and Student Success	
Sharon Dormire	College of Nursing	
Daniel Meeroff	College of Engineering and Computer Science	
Patricia Heydet-Kirsch	College of Education	
Madelyn Lavigne	S. E. Wimberly Library	
	QEP Executive Committee	
Jennifer Peluso	Charles E. Schmidt College of Science	
James Fowlkes	Instructional Services	
Edward Pratt	Dean, Undergraduate Studies; Co-chair QEP	
Jerome Haky	Charles E. Schmidt College of Science	
Jeffrey Buller	Dean, Wilkes Honors College; Co-chair QEP	
Donna Chamely-Wiik	Director, QEP; Charles E. Schmidt College of Science	
Megan Davis	Faculty, Harbor Branch Oceanographic Institute	
Joshua Scholl	Student, CSI President	
Vincent Long	Student representative	



## **QEP University Outreach and Information Gathering - Internal**

Date	Meeting/Event	
Fall 2010	Quality Enhancement Plan (QEP) website established	
Fall 2011	QEP website content updated	
August 16, 2011	Council of Deans meeting	
August 26, 2011	Meeting with Dean, College of Education	
August 29, 2011	Meeting with Dean, College of Business	
August 31, 2011	Phone conversation, Director, Harbor Branch Oceanographic Institute	
September 7, 2011	Meeting with Dean, College of Science	
September 8, 2011	Meeting with Dean, College of Arts and Letters	
September 9, 2011	Meeting with Director, Office of International Programs	
September 12, 2011	Meeting with Dean, College of Computer Science and Engineering	
September 14, 2011	College of Design and Social Inquiry Executive Committee meeting	
September 15, 2011	Meeting with Dean, College of Nursing	
September 15, 2011	Meeting with Director, Student Government	
September 15, 2011	College of Education Executive Committee meeting	
September 16, 2011	College of Engineering and Computer Science Undergraduate/Honors committee meeting	
September 19, 2011	Email update to SACS Leadership team	
September 23, 2011	Undergraduate Honors student advisor meeting	
September 26, 2011	College of Engineering and Computer Science Executive Committee meeting	
September 27, 2011	College of Arts and Letters Executive Committee meeting	
October 3, 2011	Dean and Associate Dean, College of Business meeting	
October 4, 2011	Department of Math, Faculty meeting	
October 5, 2011	Meeting, Assistant Provost, e-Learning	
October 17, 2011	College of Nursing Executive Committee meeting	
November 1, 2011	Update to Provost and Chief Academic Officer	
November 4, 2011	Meeting, Chair of Accounting – Accounting Scholars program	
November 17, 2011	Meeting, Chair of Biology – Biology Honors program	
November 21, 2011	Meeting, Dean Honors College – Honors college programs	
December 2, 2011	Harriet L. Wilkes Honors College Faculty Assembly Meeting	
December 7, 2011	College of Science, Faculty Assembly Meeting	
December 9, 2011	University Libraries meeting	
December 19, 2011	Meeting, Vice Provost of Assessment and Instruction	
January 17, 2012	FAU New Faculty Orientation Presentation	
January 17, 2012	Council of Deans Presentation	
January 18, 2012	Survey to Chairs and Faculty distributed	
January 19, 2012	Meeting, Assistant Provost, e-Learning	
January 20, 2012	Presentation to the University Faculty Senate	
February 16, 2012	Division of Research - Research Council Meeting presentation	
February 22, 2012	Office of International Programs Meeting	
February 24, 2012	FAU Student Financial Aid meeting	
March 02, 2012	Career Development Center meeting	
March 12, 2012	Weppner Center for Civic Engagement and Service meeting	



March 15, 2012	Meeting, Marketing and Creative Services	
March 29, 2012	Meeting, Director, Strategies for Learning Success	
April 3, 2012	Presentation, SACS Leadership Team	
Spring 2012	QEP website content updated and new links, graphics and logo added	
April 6, 2012	Undergraduate Research Symposium presentation	
April 10, 2012	CLASS – Freshman Year and Beyond students' presentation	
April 20, 2012	University Undergraduate Programs Committee ( UUPC) presentation	
May 1, 2012	Meeting, Marketing and Creative Services	
May 08, 2012	CLASS – Living Learning Community (LLC) Faculty Retreat presentation	
May 15, 2012	Meeting, Student Affairs, Graduate Student Association and Student Media	
May 17, 2012	Meeting, Director of Student Government	
May 24, 2012	FAU Announcement: call for reviewers needed for inaugural issue of the FAU Undergraduate Research Journal (FAURJ)	
May 25, 2012	Request for feedback on Self-study survey to Deans, Chairs and Faculty	
May 30, 2012	Meeting Marketing and Creative Services and Office of Information Technology	
June 4, 2012	QEP Steering Committee	
June 12, 2012	College of Arts and Letters Executive Committee meeting	
June 14, 2012	FAU Announcement: call for interest stories on Undergraduate Research, Inquiry and Creative Activities	
June 14, 2012	FAU Admissions Staff presentation	
June 14, 2012	Meeting, Director Student Government	
June 14, 2012	Meeting, Accounting Honors Pilot Faculty	
June 20, 2012	College of Science Executive Committee meeting presentation	
June 22, 2012	Meeting, Director of Admissions and Staff- Honors marketing	
June 22, 2012	QEP Steering Committee	
June 26, 2012	Meeting, Vice Provost for Assessment and Instruction	
June 27, 2012	FAU Self-study survey for baseline distributed through Deans and Chairs	
June 27, 2012	Meeting, Arts and Letters Faculty and Dean, Pilot program selection	
June 28, 2012	Meeting, Marketing and Creative Services	
July 2, 2012	Meeting, Chair of Management and International Programs	
July 5, 2012	Meeting, Biology Faculty – Howard Hughes Training program	
July 5, 2012	Meeting, University Libraries	
July 6, 2012	Meeting, Director Student Government	
July 9, 2012	Graduate College Representative meeting	
July 9, 2012	Meeting SoTO Director, Faculty Learning Communities	
July 11, 2012	Meeting with Freshman Learning Community (FLC) and Living Learning Community (LLC) Faculty re: Freshmen Research and Inquiry exposure	
July 11, 2012	Meeting Office of Instructional Technology, Video – QEP	
July 13, 2012	Division of Research and Graduate College meeting presentation	
July 17, 2012	Council of Deans meeting presentation	
July 19, 2012	Meeting, Chair, Finance	
July 19, 2012	Meeting, Marketing and Creative Services	
July 19, 2012	Meeting, Assessment committee	
TATI		



July 20, 2012	Meeting, Honors Pilot Programs	
-	Meeting, Notions Fliot Programs  Meeting, Weppner Center, Career Development Center, Office of International Programs, Adams	
July 20, 2012	Center for Entrepreneurship, Faculty representatives- Design and Social Inquiry and Science	
July 23, 2012	Meeting, Assessment Coordinator	
July 26, 2012	College of Business Executive Committee meeting presentation	
July 26, 2012	Meeting, Political Science faculty representatives – honors pilot	
August 3, 2012	Meeting, Director SoTO – Faculty Learning Communities	
August 6, 2012	Meeting, Assessment Director and Director SoTO	
August 9, 2012	Meeting, Marketing and Creative Services	
August 9, 2012	Meeting, Director SoTO – Faculty Learning communities	
August 16, 2012	College of Science Faculty Assembly presentation	
August 19, 2012	Promotional table at FAU Freshman Club-fest	
August 20, 2012	College of Nursing Faculty Assembly presentation	
August 21, 2012	Meeting Assessment coordinator	
August 21, 2012	Meeting, Faculty Arts and Letters – Marketing efforts	
August 24, 2012	College of Design and Social Inquiry Faculty Assembly presentation	
August 24, 2012	Meeting, Director SoTO – Faculty Learning communities	
August 31, 2012	Harriet L. Wilkes Honors College Faculty Assembly presentation	
August 31, 2012	Meeting, Assessment Coordinator and Director SoTO	
September 5, 2012	Meeting, Student Affairs Staff	
September 7, 2012	College of Education Faculty Assembly presentation	
September 11, 2012	QEP Document sent to SACS Leadership Team	
September 13, 2012	College of Medicine Faculty Assembly presentation	
September 17,2012	Meeting Student Government Body President and Governor	
<b>September 18, 2012</b>	Meeting, Enrollment Management Staff	
September 18, 2012	Meeting, SACS Leadership Team	
September 24, 2012	Presentation at FAU's student hazing seminar	
September 25, 2012	QEP Document distributed to University community through website	
September 25, 2012	Presentation to students in SLS class – Honors LLC	
September 28, 2012	College of Arts and Letters Faculty Assembly presentation	
September 28, 2012	College of Business Faculty Assembly presentation	
October 1, 2012	Jupiter Forum for Faculty and Students	
October 2, 2012	Meeting, Vice President Enrollment Management	
October 10, 2012	Boca Raton Forum for Faculty and Students	
October 11, 2012	Davie Forum for Faculty and Students	
October 16, 2012	Enrollment Management meeting	
October 19, 2012	College of Engineering and Computer Science Faculty Assembly presentation	
October 24, 2012	University Libraries Faculty Assembly meeting presentation	
November 9, 2012	Meeting with FAU IRB Review committee	
November 1, 2012	Presentation to the Academic Advising Council	
November 14, 2012	Presentation to Harbor Branch Oceanographic Institute	
December 14, 2012	Presentation to the IRB Committee: Division of Research	



# **Conferences and Information Gathering – External**

Date	QEP Attendees	Description
October 14 – 15, 2011	Donna Chamely-Wiik Jerome Haky	Florida State-wide Undergraduate Research Conference (UCF)
October 19 – 22, 2011	Donna Chamely-Wiik Jeffrey Buller	National Collegiate Honors Conference (NCHC)
December 3 – 6, 2011	Edward Pratt Jeffrey Buller Jennifer Peluso Donna Chamely-Wiik	Southern Association of Colleges and Schools (SACS) Conference in Orlando, Florida
January 30, 2012	Donna Chamely-Wiik	Conference call with University of Central Florida – QEP and Undergraduate Research
January 31, 2012	QEP Executive Committee SACS Leadership Team	Site visit by Dr. M. Smith of Southern Association of Colleges and Schools
February 13, 2012	Donna Chamely-Wiik Jennifer Peluso	Conference call with University of North Carolina at Chapel Hill – QEP, Honors and Undergraduate Research
February 29, 2012	Donna Chamely-Wiik Jennifer Bebergal Patricio Coicou Melissa Crawford	Site visit to University of Central Florida – QEP and Undergraduate Research
April 16 – 17, 2012	QEP Steering Committee, Student representatives, SACS Leadership team representatives	Site visit by external evaluator Dr. Thomas Pusateri of Kennesaw State University
May 8, 2012	Donna Chamely-Wiik	Conference call with George Mason University – QEP
May 23 – 25, 2012	Donna Chamely-Wiik	Council of Undergraduate Research Institute: Initiating and Sustaining Undergraduate Research Programs at the University of Michigan
June 1, 2012	Donna Chamely-Wiik	Conference call with University of Missouri, Columbia – Undergraduate Research
June 22, 2012	Donna Chamely-Wiik	Conference call with University of South Florida – QEP
July 20, 2012	Donna Chamely-Wiik	Conference call with University of Houston – QEP
July 26, 2012	Donna Chamely-Wiik	Meeting, Broward College QEP
October 13, 2012	Donna Chamely-Wiik	Conference call with Embry Riddle Aeronautical University – QEP
October 19 – 20, 2012	Daniel Meeroff Donna Chamely-Wiik Mirya Holman Jennifer Peluso	5th Annual Florida State-wide Symposium: Engagement in Undergraduate Research, Orlando, Florida
November 15, 2012	Donna Chamely-Wiik Edward Pratt Mary Mertz	Site visit to Florida International University – QEP
December 8 -11, 2012	Donna Chamely-Wiik	2012 SACS Commission on Colleges' Annual Meeting in Dallas, Texas



**Marketing Timeline** 

						QEP	MARKE	TING CALENDAR
2010	2011 SPRING	SUMMER	FALL	2012 SPRING	SUMMER	FALL	<b>2013</b> SPRING	AND BEYOND
UPDATE F	ACULTY, STUDEN	TS, STAFF AND	UNIVERSITY	LEADERS				
<ul> <li>Meeting</li> </ul>		with Deans, Chai	irs, Executive cor aculty at orienta • President's	mmittee, Faculty assembly, ition (ongoing)	ess, Board of Governors and Board eam meetings (ongoing)	Student affairs, CTL and Enrollment management Directors meeting (9/12)  QEP Faculty and Student Forums on three campuses (10/12)  CSI and QEP table at FAU Welcome week event  Classroom presentations in Fall SLS 1502 classes;  Computer monitor displays in Center for Teaching and Learning (CTL) and other digital signage	Quick-facts broo	chure on QEP mailed to faculty (1/13)
MARKET	QEP THROUGH W	EB PRESENCE		-				
QEP well	bsite routinely upda			<ul> <li>Announcements, myfau, blackboard, email blasts quick facts for faculty, staff and students</li> </ul>	New layout established and re-designed QEP website updated to include information of plan in development	QEP hot-link on FAU home-page     Rotating stories about QEP on main FAU banner     QEP document placed on website for review (9/12)		
		(	_	.0G0 + SLOGAN				
				rough Discovery slogan adapted s Education Task Force	_			
			nonnois	Graduate student Brittar	ny Shaw in collaboration with Services established logo			
				SHOWCASE STUDENT	AND FACULTY EFFORTS			
				Call for student and faculty interest stories through announce-	Photograph and interview students     Indude student spotlights on QEP website	Undergraduate research display cases on three campuses		2 5
				ments, email blasts,		ESTABLISH QEP VIDEOS		
				Facebook		<ul> <li>Showcase administrators, faculty, and students, and present main goals of QEP</li> <li>Include QEP Kickoff video (and others as they become available) on web playlist</li> <li>Videos played at FAU football games and through digital signage, and QEP website</li> </ul>		Re-tool video for OURI
					H PRINT AND OTHER MARKETING M	ATERIALS		
				University Press news-     12 page advertisement	highlight (1/12) t in Student Handbook (8/12)	<ul> <li>Flash Drives featuring QEP logo with slogan</li> <li>Pens and pencils featuring QEP logo and slogan</li> </ul>	Banners, poster	tional brochures in all cafeteria tables rs and fliers on 3 campuses ough Discovery quick-fact fliers

# Part I. Getting Participants the Basic Knowledge They Need

# MODULE 1: Distinction Through Discovery: Basic concepts and best practices

- 1.1 Defining Distinction Through Discovery: Question. Explore. Pursue.
- 1.2 Review of peer-reviewed literature about best practices in integrating research and inquiry into teaching and learning
- 1.3 Distinction Through Discovery: Creating curricular and co-curricular opportunities for research and inquiry at FAU
- 1.4 Student Learning Goals: What do you want YOUR undergraduate students to look like when they finish?

## Participants will:

- Articulate the value of integrating researchand inquiry-rich learning experiences into their courses
- Define categories of research and inquiry experiences supported by the QEP
- Identify potential curricular revisions to pursue and some associated actions for these (e.g., adding syllabus statements, revising assignment instructions and rubrics, clarifying presentation guidelines)
- Outline an initial set of targeted student knowledge, skills and abilities for their programs (Student Learning Goals)

# Part II. Institutional Best Practices and Resources

# **MODULE 2: FAU Honors Program Case Studies**

- 2.1 Upper-Division honors programs at FAU
- 2.2 Wilkes Honors College at FAU

## Participants will:

- Define features of an upper-division honors program at FAU
- Identify curricular and co-curricular best

- practices of FAU's upper-division honors programs and Honors College toward QEP goals
- Select a set of "honors best practices" that are directly relevant to participants' own programs
- Refine Student Learning Goals and associate specific curricular and cocurricular best practices from this module with those goals

# Part III. Pedagogies, Student Learning and Program Improvement

#### **MODULE 3: Communication**

- 3.1 Using writing in the major
- 3.1 Other forms of communication

## Participants will:

- Identify what types of writing and other forms of communication are important for their programs' goals
- Determine how much writing and communication support (outside of program faculty and staff) may be needed to develop student communication to the level the program would like to see students achieve
- Refine list of Student Learning Goals to incorporate specific communication knowledge and skills

## **MODULE 4: Active Learning Experiences**

- 4.1 Ways to engage students in the curriculum with research and inquiry
- 4.2 Identifying appropriate pedagogies for Exposure, Skill Building and Intensive courses

## Participants will:

- Identify a number of relevant active engagement pedagogies based on research and inquiry
- Produce a "strategy map" that links each of the program's Student Learning Goals with a specific active engagement strategy

## **MODULE 5: Technology**

5.1 Pedagogical tools and course delivery **Participants will:** 

- Define a number of course delivery modes available at FAU and identify which one(s) are most appropriate for the curricular and co-curricular emphases of research and inquiry in their programs
- Develop strategies for integrating technology, where appropriate, into program pedagogies (e.g., how to mine databases and resources for research questions, data mining)
- Identify resources to assist both faculty and students in their use of technologies (e.g., instructional design, library, technical assistance, peer support)

# MODULE 6: Gauging Effective Teaching and Learning

- 6.1 What is assessment and why do it?
- 6.2 "Bringing it home"
- 6.3 LiveText Introduction

## Participants will:

- Produce a curriculum map showing where student competencies are developed within the curricular, co-curricular elements of the program and how these are aligned with QEP Student Learning Outcomes.
- Identify potential "indicators" of student learning goal achievement
- Develop operational definitions for student performance levels (e.g., "competent" vs. "mastery") and benchmarks
- Develop an assessment plan and evaluate its sustainability

## Part IV. Curricular (re)Development

# MODULE 7: Proposal Development and Peer Review



QEP

**Focused Faculty** 

Learning

Community

## **Distinction Through Discovery Student Achievement Rubric**

The minimum number of Student Learning Outcomes (SLOs) assessed in a given course will vary with the level of research and inquiry assigned to it. **Exposure** courses must assess at least three SLOs; **Skill Building** courses must assess SLO 2 plus at least two more SLOs. **Intensive** courses must assess all six SLOs.

<sup>\*</sup> Instructors choose which SLO indicator(s) they wish to assess

SLO	*	Developing	Competent	Exemplary
	Vocab./ Basic Skills	Demonstrates limited and simplified vocabulary or basic skills of the discipline, or vocabulary is used inappropriately	Demonstrates working vocabulary or set of basic skills of the discipline but it is not complex or nuanced and it is used appropriately	Demonstrates a complex or nuanced vocabulary or set of skills of the discipline that is used appropriately in the inquiry. May be used in novel or creative ways
1. Knowledge	Theoretical Frameworks or Genres	Does not recognize key theoretical frameworks or previous works within the discipline for the question or problem to be explored. Unable to differentiate, select, or adapt (to) them, nor associate them with other disciplines	Recognizes key theoretical frameworks, genres, or previous works within the discipline for the question or problem to be explored but cannot differentiate, select, or adapt (to) them, nor associate them with other disciplines	Recognizes and differentiates key theoretical frameworks, genres, or previous works within the discipline for the question or problem to be explored and is able to select, or adapt (to) them, or associate them with other disciplines
	Inform. Literacy/ Sources	Neither distinguishes nor critically evaluates scholarly resources from popular works; or uses inappropriate sources for the inquiry	Differentiates the features of scholarly resources from those of popular works, but does not critically evaluate them nor consistently use discipline-appropriate sources in the inquiry	Differentiates scholarly resources from popular works and consistently uses them as appropriate for the discipline of inquiry, but does not critically evaluate sources.
Questions	Relevant Issues/ Content	Cannot identify, distinguish, nor generate questions, problems, or principles that are within the scope of the discipline of inquiry	Identifies some questions, problems, or principles that are within the scope of the discipline of inquiry but does not generate new ones, nor distinguish these from those that are not within the scope of the discipline	Identifies and consistently distinguishes questions, problems, or principles that are within the scope of the discipline from those that are not. May also generate new questions, problems, or principles
2. Formulate Questions	Rationale	The logic or rationale for exploring the question or problem is incomplete or inadequate, or relies solely on confirmatory evidence or frameworks	The logic or rationale for exploring the question or problem is generally embedded within a scholarly context and relies mostly on confirmatory evidence or frameworks. Contradictory evidence or frameworks are acknowledged but not integrated into the logic or rationale for the inquiry	The logic or rationale for exploring the question or problem is embedded in a clear scholarly context and integrates seemingly contradictory frameworks and evidence, (e.g., confirmatory and contradictory evidence, canonical and unconventional theories, etc.)
3. Plan of Action	Methods of Exploration	Does not recognize, select, apply, nor critically evaluate the basic tools and methods of research and inquiry in the discipline	Recognizes the basic tools and methods of research and inquiry in the discipline but does not select, apply, or critically evaluate those tools consistently to appropriate contexts, nor in novel or complex ways	Consistently recognizes, selects, applies and critically evaluates the research and inquiry tools of the discipline in appropriate contexts. May do so in novel or complex ways



SLO	*	Developing	Competent	Exemplary
	Design	Design is incomplete, illogical, irrelevant, or inappropriate for the question/ problem being explored. Does not acknowledge possible threats to the soundness of the work	Design is logical, relevant, comprehensive and appropriate for the discipline. Potential threats to soundness have been identified, but efforts to control or minimize these influences or threats are not fully adequate	Design is logical, relevant, comprehensive and appropriate for discipline. Potential sources of influence or threats to soundness have been identified and effectively controlled
Plan of Action cont'd	Implementation	Implementation does not follow the planned design, or it is incomplete. No acknowledgement of unexpected issues or events that arose during implementation	Implementation is attempted but minor aspects are incomplete or do not follow acceptable practices of the discipline; only significant problems or unexpected events during implementation are identified and corrected	Implementation is complete and consistent with accepted practices of the discipline; most problems and unexpected events occurring during the implementation are identified corrected
3. Plan of Ac	Data, observations, collected works are not relevant to—or insufficiently focused on—the question or problem; extensive extraneous information		Data, observations, collected works are mostly relevant to or sufficiently focused on the question or problem; some extraneous material present; information about data/ observations procedures is missing	Data, observations, collected works are clearly relevant to—or sufficiently focused on—the question or problem without extraneous material; identifies and explains procedures to gather, store, use collected observations
	Technical Skills	Technical skills are insufficient to utilize materials, instrumentation, devices, or props appropriately to effectively implement the project	Technical skills are generally sufficient to appropriately utilize materials, instrumentation, devices, or props in the project design with only a few errors	Technical skills are applied appropriately and consistently throughout the project design with no errors following established convention
	Analysis	Analysis of information, data, observations, work is performed largely inaccurately or incompletely	Analysis of information, data, observations, work is mostly accurate (with some minor errors) and mostly complete (with only a few minor omissions)	Conducts accurate and complete assembly and analysis of information, data, observations, work canonical or standard approaches
ing	Interpretation	Interpretation is not based on the actual results of inquiry, or is inaccurate or inadequate with respect to the context of the inquiry	Interpretation is generally accurate with some errors. Results are only evaluated in the context of what was anticipated	Interpretation is thorough and accurate without errors. Interpretation addresses what had been anticipated as well as any unexpected results that were obtained
Critical Thinking	Sources of Error	Interpretation is clearly influenced by one or more sources of systematic error. The interpretation is biased	There is some effort to identify sources of systematic error or bias in interpretation of the results of the current inquiry, but efforts are not undertaken to minimize/control those identified	There is a clear effort to both identify and control bias or other sources of systematic error in interpretation of the current inquiry
4. Cri	Conclusions	Conclusions merely restate the findings/results; no attempt is made to make generalizations, predictions, recommendations, or plans for future inquiry. Neither weaknesses in the design, nor problems in implementation are mentioned or explained	Conclusions, predictions, generalizations, recommendations, or future plans are stated but are focused solely on the expected results or information that is consistent with the original hypotheses, questions, or problems. Some issues affecting how the design was implemented are included, but are ill-explained or not integrated into solutions for those issues	Conclusions, predictions, generalizations, recommendations, or future plans are stated and focused on the expected results consistent with the original hypotheses, questions, or problems that motivated the inquiry. Information that is inconsistent with these is noted, though it may not be integrated. Some critique of the design or implementation of the inquiry is included but it may be limited



SLO	*	Developing	Competent	Exemplary
	Academic Integrity	Any aspect of the inquiry violates expectations of FAU's Code of Academic Integrity (e.g., citation of sources, completing own work, plagiarism, etc.)	Student acknowledges and generally adheres to FAU's Code of Academic Integrity with reminders, feedback and instructions to do so, but does not recognize not articulate the intellectual value of doing so	Student consistently and independently adheres to FAU's Code of Academic Integrity with little correction, reminding, or feedback; may recognize the intellectual value of doing so, but does not articulate it. Student may articulate the intellectual or social value of doing so
Ethical Conduct	Safety	Student cannot articulate the safety protocols for inquiry; if inquiry is conducted, it is done so in an unsafe manner	The student articulates most appropriate safety protocols; if inquiry is conducted it is generally done so in a safe manner, but some safety practices are not addressed	Student articulates and/or practices all safety protocols fully in the work. Student may articulate the intellectual or social value of doing so
5. Ethical	Ethical Trea <sup>tm</sup>	Inquiry is conducted without consideration or practice of ethical treatment of animals and/or humans (as the objects of inquiry or the audience thereof)	Inquiry appears to generally consider and implement appropriate and ethical practices (humans and animals), but some guidelines are not followed or documentation is missing	Inquiry appears fully considers and implements appropriate and ethical practices with all necessary permissions and documentation. Student may articulate the intellectual or social value of doing so
	Ethical Issues	Student does not identify relevant ethical questions, problems, or issues within the scope of inquiry	Student identifies ethical questions, problems, or issues that are within the scope of inquiry and distinguishes them from those that are not relevant, but does not present ways to addressing them	Student identifies ethical questions, problems, or issues that are within the scope of inquiry, distinguishes them from those that are not relevant and describes potential methodologies for ameliorating or addressing ethical issues
n.	Clarity, Organization	Communication is disorganized, incoherent, vague, or inappropriate	Communication is generally focused, organized and clear with only a few errors that do not detract from comprehension	Communication is completely focused, organized and clear with no errors affecting comprehension
Communication.	Quotation, Attribution, Citation	Quotation, attribution and/or citation fail to follow preferred methods or formats	Student articulates working knowledge of the preferred methods or formats for quotation, attribution and/or citation, but does not consistently follow those practices in the inquiry	Quotation, attribution and/or citation are handled fully, appropriately and accurately according to the preferred methods or formats
9: (	Format, Level	Communication employs incorrect, irrelevant, or inappropriate formatting; it targets the wrong level(s) or audience; or it uses the wrong (scholarly) tone	Generally, the communication follows the correct formatting and is presented at an appropriate level, targets the appropriate audience and uses an appropriate (scholarly) tone with only a few errors	The communication fully follows the correct formatting and is presented at an appropriate level, targets the appropriate audience and uses an appropriate (scholarly) tone without errors

<sup>&</sup>lt;sup>2</sup>Portions of this rubric were adapted from American Association of Colleges and Universities VALUE rubrics as well as on the undergraduate student learning outcomes rubrics from the University of Houston and the University of North Carolina Chapel Hill.



# Alignment of BOG, IFP Outcomes to QEP Learning Outcomes

QEP Student Learning Outcomes		BOG Core General IFP Outcomes				IFP Outcomes for Written Communication						
	Content/ Discipline Knowledge or Skill	Communication	Critical Thinking	Knowledge in several different disciplines	The ability to think critically	The ability to communicate effectively	An appreciation for how knowledge is discovered, challenged and transformed as it advances	An understanding of ethics and ethical behavior	Produce clear writing that performs specific rhetorical tasks	Respond critically to a variety of written materials in order to position their own ideas and arguments relative to the arguments and strategies of others	Use writing not only to communicate but also to think critically and examine assumptions that underlie the readings and their own writing	Demonstrate an understanding of the ethical standards that apply to the use of external sources in one's writing
Knowledge. Students will demonstrate content knowledge, core principles and skills.	X			Х			Х	X	Х	Х		
2. Formulate Questions. Students will formulate research questions, scholarly or creative problems with integration of fundamental principles and knowledge in a manner appropriate to their discipline.	X		X	X	X		X		X	X	X	
<b>3. Plan of Action.</b> Students will develop and implement a plan of inquiry to address research and inquiry questions or scholarly problems.			X	Х	X		Х		Х	X	X	
<b>4. Critical Thinking.</b> Students will apply critical thinking skills to evaluate information, their own work and the work of others.			X		X		X	X	X	Х	X	
<b>5. Ethical Conduct.</b> Students will identify significant ethical issues in research, creative and scholarly activity and/ or address them in practice.	X		X	Х	X			X	Х	X	X	Х
<b>6. Communication.</b> Students will convey all aspects of their research, creative, or scholarly activity (processes and/or products) in appropriate formats, venues and delivery modes based on the conventions of their disciplines.		X		Х	X	Χ			Х	X	X	
BOG Core Competencies												
Content/ Discipline Knowledge or Skill				Х			Х	Χ		X		Х
Communication						Χ			Х			
Critical Thinking					Х		Х	Χ		Χ	X	X

Strategy	Indicators	Baseline	Benchmarks						
Goal 1: Research and Inquiry Rich Curriculum									
	Honors in the Major and Up	per Division Curriculur	n Grants						
	# Honors and Upper Division Curriculum Grant proposals submitted, funded	QEP OURI	Annual	Established AY 2013	Year 1 = 8 ; Year 5 = 40				
	# Honors in the Major Programs	Registrar's Office	Annual	AY 11 = 8; AY 12 = 14	Year 5 = 23 (50% of all programs)				
	# Students in Honors in the major programs	Department Chairs, program faculty	Annual	AY 11 = 1.8%- 475 total	Year 5 = 3% of all undergraduate students				
	# students successfully completing Honors in the major Programs	Department Chairs, Registrar's Office	Annual	AY 2012 = 150	Year 1 = 160; Year 5 = 300				
Honors in the Major and Upper Division Programs	# Honors theses	Registrar's Office	Annual	AY 2012 = 80 per year	Year 1= 10% increase; Year 5 = 50% increase				
Opper Division Frograms	# UD courses that are research and inquiry enhanced	QEP OURI, Registrar's Office	Annual	AY 2012 (Pilot) = 6	Year 1 = 5; Year 5 = 28				
	# UD students registering for research and inquiry enhanced courses	Registrar's Office	Annual	AY 2012 (Pilot) = 50	15% increase in student registrations by Year 5				
	# UD and Honors students completing URI focused internships, practica or clinical experiences	Registrar's Office, Department Chairs, Deans, CDC	Annual	AY 2013	10% increase in student completions by Year 5				
	# UD students successfully completing research and inquiry enhanced courses	Registrar's Office	Annual	AY 2012 (Pilot) = to be determined	10% increase in student completions by Year 5				
	Lower Division LD Freshma	an Learning Community	y (FrLC)	Program					
Lower Division (LD)	# of FrLC research enhanced undergraduate courses	CLASS	Annual	AY 2012 = 8	Year 5 = 16				
	Lower Division L	D Curriculum Grants P	rogram						
	# LD curriculum grant proposals submitted, funded	QEP OURI	Annual	Established AY 2015	Year 3 = 8; Year 5 = 24				
Lower Division Programs	# LD research and inquiry enhanced courses	Registrar's Office	Annual	Established AY 2015	Year 3 = 8; Year 5 = 24				
	# LD students registering for research enhanced courses	Registrar's Office	Annual	Established AY 2016	15% increase in student registrations by Year 5				
	# LD students successfully completing research and inquiry enhanced courses	Registrar's Office	Annual	Established AY 2016	10% increase in student completions by Year 5				
	Goal 2: Opportunitie	s for students who eng	age in l	JRI					
	Undergraduate	Research Grants Prog	1	ı					
Undergraduate Research	# students applying for URG	QEP OURI	Annual	AY 2011 = 84	50% increase by Year 5				
Grants (URG)	# students funded for URG	QEP OURI	Annual	AY 2011 = 59	Year 5 = 95				
Implement Summer	# faculty SURF projects submitted	QEP OURI	Annual	Established In AY 2014	Year 5 = 20 per year				
Undergraduate Research	# student applications for SURF projects	QEP OURI	Annual	Established In AY 2014	Year 5 = 20 per year				
Fellowship	# students awarded SURF projects	QEP OURI	Annual	Established In AY 2014	Year 5 = 10				

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Strategy	Strategy Indicators		Cycle	Baseline	Benchmarks
	Student Diss	semination Opportuniti	es		
Spring Research Symposium	# students participating by college and by partner campus	QEP OURI	Annual	AY 2011 = 49; AY 2012 = 54	Year 5 = 96
Increase internal student authorships FAU Research Journal	# students submitting, publishing to the FAURJ, by college and program	QEP OURI	Annual	Established in AY 2012	Year 5 = 20% increase in submitted manuscripts
Student Travel funding	# students applying, funded for research- based travel funding, by college and program	Student Government Travel Data	Annual	AY 2011 = 8	Year 5: 20% increase in submitted applications and 10% increase in awards
	Goal 3: Support and reco	gnition for Faculty and	Student	s in URI	
	Faculty Su	upport and Recognition			
QEP -focused Faculty Learning Communities	# faculty participants, by college and department	Scholarship of Teaching Office	Annual	AY 2012 = 16	24 faculty per year, all subsequent years.
Faculty Workshops and Programs	# & types of opportunities for professional development and # of faculty in attendance	QEP OURI and partner programs	Annual	Established AY 2013	5 faculty opportunities each year by year 5
Offer faculty travel funding opportunities	# faculty awarded travel monies for external professional development related to URI, by amount, college and program	QEP OURI	Annual	Established AY 2012	10 faculty supported per year for travel related to URI
Master Research and	# faculty mentor programs, by college	Master Mentors	Annual	Established 2014	Year 5 = 10 Master Mentors
Inquiry Mentors	# professional development opportunities implemented	Master Mentors	Annual	Established 2014	Year 5 = 1 faculty event, 1 student event per mentor per year
Implement Faculty Award program	# Distinguished Undergraduate Research and Inquiry Mentor of the Year awards	QEP OURI	Annual	Established 2013	Year 5 = 3 per year
	Student St	upport and Recognition			
Host student research training program	# student participants, by college, department and program	QEP OURI, Division of Research	Annual	Established AY 2013	2 each year
Professional development workshops and support	# of workshops offered	QEP OURI	Annual	Established AY 2013	5 each year
	# University Center for Excellence in Writing (UCEW) consultations by URI students	UCEW	Annual	Established AY 2013	TBD
Student Club, CSI	# student participants, by college and program	QEP OURI	Annual	AY 2012 = 39	Year 5 = 50, all colleges represented
Implement Peer Mentor Program	# students participants, by college, department, campus	QEP OURI	Annual	Established AY 2014	Year 5 = 10 per year all colleges
	# students attending mentor sessions, by college, department, program and by partner campus	QEP OURI	Annual	Established AY 2014	Year 5 = 10% increase in consultations
Student Undergraduate Research Award	# students awarded by college, department, program and by partner campus	QEP OURI	Annual	Established AY 2013	Year 5 = 8 per year, all colleges
Implement program for URI Certificate Program	# students earning certificate by college, department, program and by partner campus	QEP OURI	Annual	Established AY 2016	Year 5 = 5% increase

Strategy	Indicators			Baseline	Benchmarks
		and Strengthen URI cli raduate Research and l			
Develop website	# hits to website	OURI	Annual	Established AY 2013	Year 1 = 20% increase from baseline; Year 5 = 50% increase from baseline
	Undergraduate Resear	ch and Inquiry Steering	g Comm	ittee	
Implement URI Steering Committee plans	# colleges represented on QEP subcommittees	QEP Steering Sub- committee Chairs	Annual	Established AY 2013	Year 5 = all colleges, campuses and partner programs represented
	Overall (	QEP Program Review	'		
Annual Assessment of Achie	vement of Student Learning Outcomes	QEP Assessment & Curriculum Sub-committees, Curriculum Grant Programs	Annual	Established AY 2012 (Pilot)	Increasing annual trends; Year 5 = statistically significant increases in "Competent," "Exemplary," and "Mastery" achievement across all levels of the research and inquiry taxonomy
NSEE Trend Analysis	IEA, QEP Steering Sub-committees	Annual	2010 NSSE data	Increasing annual trends; Year 5 = match levels for Carnegie Classification	
	tudent Perception of Teaching Survey, Student lental Dashboard Indicators (DDIs)	IEA, Deans, Department Chairs, QEP OURI	Annual	Established AY 2013 (UD, Honors), 2015 (LD)	Increasing annual trends; Year 5 = statistically significant increases in positive responses on all measures from baseline
Survey URI students and Fac	IEA, QEP Steering Sub-committees	Semi- annual	Established AY 2013 (UD, Honors), 2015 (LD)	Increasing annual trends; Year 5 = statistically significant increases in positive responses on all measures from baseline	
Participation survey of all graparticipants	IEA, QEP Steering Sub-committees, partner programs	After each event	AY 2013	Increasing annual trends; Year 5 = statistically significant increases in positive responses on all measures from baseline	
Climate Survey of all grant re participants supported by the	ecipients, event/opportunity attendees and QEP	IEA, QEP Steering Sub-committees	Annual	AY 2014	Increasing annual trends; Year 5 = statistically significant increases in positive responses on all measures from baseline
Overall Assessment of Goals Processes	IEA, QEP Steering Sub-committees, QEP OURI	Annual	Established Summer, 2013	Annual report presented to FAU community	

APPENDIX N



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