

Theme 2

BECOMING A NATIONALLY RECOGNIZED RESEARCH INSTITUTION



Theme 2: Becoming a Nationally Recognized Research Institution directly responds to the *Pro Futuris* aspiration to become a Research University classified at a very high level of research activity (RU/VH), led in large part by the STEM fields, as recognized by the Carnegie Foundation. Increased faculty scholarly productivity through grant awards, doctoral production, and technical and post-doctoral staffing are crucial for achieving this goal and for advancing Baylor's reputation and distinct Christian mission. Compelling scholarship will enhance Baylor's long-standing tradition of great teaching, while further engaging Baylor's faculty and students in national discussions as central and vital as politics, religion, business, health, and the arts.

Acts of Determination

- 1 – DEVELOPING TOP-TIER TENURE AND PROMOTION GUIDELINES
- 2 – INCREASING RESEARCH AND CREATIVE ACTIVITIES IN THE HUMANITIES AND SOCIAL SCIENCES
- 3 – IMPROVING DOCTORAL PRODUCTIVITY IN ARTS & SCIENCES STEM DEPARTMENTS
- 4 – ACQUIRING NEW FACULTY IN ARTS & SCIENCES STEM DEPARTMENTS
- 5 -- INCREASING STAFF SUPPORT FOR ARTS & SCIENCES STEM DEPARTMENTS
- 6 – CREATING AND ENHANCING RESEARCH CENTERS IN ARTS & SCIENCES STEM
- 7 – PLANNING FOR MASTERS PROGRAMS

Theme 2 -- Act of Determination 1: Developing Top-Tier Tenure and Promotion Guidelines

ACTION STEPS:

1.1 By Fall 2014 departments wishing to improve the likelihood of receiving new and replacement faculty lines, particularly in the STEM fields, should provide a strategic plan to the Dean that includes revisions of departmental tenure and promotion guidelines that are consistent with those listed in Appendix 2C.

ACCOMPLISHMENTS

- All nine STEM departments submitted revised tenure guidelines that represented moderate to substantial enhancements beyond the expectations of the earlier guidelines. The tenure documents expressed extramural funding expectations as amounts adequate to support a sustained research program (including graduate students), as amounts to exceed institutional start-up funds, or as amounts commensurate with third or second quintiles in Academic Analytics of faculty in that discipline nationwide. Publication expectations addressed both quality and quantity.
- The Department of Chemistry & Biochemistry provided a well-considered strategic plan.

NEXT STEPS

- In 2010 the Carnegie Foundation classified Baylor University as a Research University with high research activity (RU/H) and the Provost's Office appointed a Very High Research (VHR) Taskforce in 2012. Provost Dr. Ed Trevathan will meet with the VHR taskforce during the fall 2015 semester to discuss the tenure guidelines and this discussion will inform future meetings of the STEM chair committee.
- The Dean's office will review the draft tenure guidelines and either request revision by the department or forward them to the Provost's Office for review and approval.
- Strategic plans will be requested from departments that have not already submitted them.

1.2 Department chairs will assess progress in grant expenditures in relation to release time and research space allocation for both tenure-track and tenured faculty and will provide an annual report to the Dean by no later than May each year, beginning in 2015.

NEXT STEP

- The chairs will include a section that addresses grant expenditures in relation to release time and research space allocation for both tenure-track and tenured faculty as part of the annual report on departmental activities.

1.3 By Summer 2015 the Dean, working with the Council of Chairs, will establish protocols for assessing progress toward promotion to Full Professor.

ACCOMPLISHMENT

- Three departments provided guidelines for promotion to full professor: Chemistry & Biochemistry, Environmental Science, and Geology.

NEXT STEPS

- Provost Dr. Ed Trevathan will meet with the VHR taskforce during the fall 2015 semester to discuss the promotion guidelines and this discussion will inform future meetings of the STEM chair committee.
- Departments that have not yet developed guidelines for promotion to full professor will be asked to provide these for Arts & Sciences review.
- The Dean will work with the Council of Chairs to establish protocols for assessing progress toward promotion to Full Professor.

Theme 2 -- Act of Determination 2:

Increasing Research and Creative Activities in the Humanities and Social Sciences

ACTION STEPS:

2.1 By Fall 2014 the Dean will appoint a committee of representative department chairs from the Humanities and Social Sciences to encourage those departments with graduate programs to submit plans for increasing research activities, including in such plans hiring practices and the number of graduate students successfully completing the program in a timely fashion. These discussions will be based on best practices regarding start-up needs, space needs, infrastructural support, and release time for faculty to conduct research at Carnegie RU/VH levels.

ACCOMPLISHMENTS

- Departments in the humanities and social sciences are currently revising their tenure guidelines to clarify the need for stronger research expectations.
- The review of promotion guidelines by the departments revealed the need for more specificity and consistency among documents from all departments:
 - departmental requests for new faculty submitted for the June faculty review can be strengthened by including information on strategic needs aligned with goals articulated in A&Spire; and
 - the research area of graduate programs requires strengthening research productivity, improving graduate student mentoring by faculty, increasing faculty publications with graduate students, and increasing the graduation of doctoral students in a timely manner.
- The committee emphasized the need for space for departments, faculty offices, and graduate programs.

NEXT STEPS

- Departments will complete the revisions to their tenure guidelines by the fall of 2015.
- As the number of faculty lines increases in the future, departments will need to request additional clerical staff positions for faculty support.
- Departments will increase fundraising and donor involvement in order to create and fund additional space for departments, faculty offices, and graduate programs.

2.2 By Spring 2016 the Dean, with guidance from the Humanities and Social Sciences committee, will develop a master space plan.

2.3 By Spring 2016 departments in the Humanities and Social Sciences will assess the possibility of establishing a Center for Baptist Studies.

Theme 2 -- Act of Determination 3:

Improving Doctoral Productivity in Arts & Sciences STEM Departments

ACTION STEPS:

3.1 By Spring 2015 the Dean, in consultation with department chairs, will develop a plan to meet the goal of 80 doctoral graduates per year within 10 years. Departments will work toward a goal of contributing one or more doctoral lines through extramural research grants for every two lines committed by the Graduate School.

ACCOMPLISHMENTS

- A committee led by Dr. Lance Littlejohn prepared a report (see [Appendix Theme 2.1](#)) comparing Baylor's current and projected Ph.D. production (2014 – 2024) in STEM, humanities, and social sciences with that of three other universities: University of Oregon, Rice University, and Notre Dame.
- The committee conducted a survey of Baylor's science, math and statistics departments for their projected graduation rates in five years (2019) and in ten years (2024).

NEXT STEP

- Departmental strategic plans will include information on individual research labs and will specify the funding organizations to which individual faculty or teams of researchers will submit proposals, leading to an increase in doctoral lines through research grants [due to the Dean during fall 2015].

3.2 Each department will submit to the Dean's Office a plan to utilize effectively the resources that are provided by the Graduate School for doctoral recruitment.

NEXT STEP

- Departments with doctoral programs will develop and submit to the Dean their plans for utilizing resources provided by the Graduate School for effective doctoral recruiting [during fall 2015].

3.1 Departments with doctoral programs will provide an annual assessment in May of tenured and tenure-track faculty, noting progress toward sufficient grant support for increased doctoral lines.

NEXT STEP

- Beginning in May 2016 the chairs will include this assessment as part of the annual report of departmental activities.

3.4 Departments will strongly encourage all Ph.D. candidates to have at least one peer-reviewed publication prior to graduation.

Theme 2 -- Act of Determination 4:

Acquiring New Faculty in Arts & Sciences STEM Departments

ACTION STEPS:

4.1 By Fall 2014 the Dean, in consultation with department chairs in the Arts & Sciences STEM fields, will determine best practices regarding start-up needs, space needs, infrastructural support, and release time for new faculty to conduct research at Carnegie RU/VH levels.

ACCOMPLISHMENTS

- The taskforce projects that the number of new lines overall for STEM in the coming decade is 4 to 5 per year depending on the need for replacements in a particular year and their associated start-up costs.

NEXT STEPS

- Report on the needed resources based on the departmental strategic plans in the sciences [submitted in fall of 2015].

4.2 By Spring 2015 the Dean will form a taskforce to study different space plans for growth in Arts & Sciences STEM for new and replacement faculty hires.

ACCOMPLISHMENT

- The Dean, after discussion with the STEM chairs during the spring 2015, submitted a plan for space needs to Baylor facilities (see [Appendix Theme 2.3](#)). The BSB is projected to be completely full within the next five years.

NEXT STEP

- Baylor facilities will use the information from this taskforce in their planning processes.

Theme 2 -- Act of Determination 5:

Increasing Staff Support for Arts & Sciences STEM Departments

ACTION STEPS:

5.1 By Fall 2014 the Dean, with assistance from Human Resources and the Office of the Vice Provost for Research, will develop an employee classification system that allows staff who support research to be counted and accurately reported to the National Science Foundation (NSF) and other critical agencies.

ACCOMPLISHMENTS

- The employee classification system has been completed with the assistance of the VHR taskforce, the Office of Sponsored Programs, and the Grants Accounting Division of the Baylor Budget Office. This work increased our research staff count towards Carnegie RU/VH goals.
- A central metric in the Carnegie RU/VH is the research staff count. Due to the efforts of this taskforce and University departments, our reporting of the research staff count continues to improve.

5.2 By Spring 2015 the Dean will consult with department chairs to examine current staffing and to determine the potential additions of clerical and technical lines needed to support Carnegie RU/VH research.

ACCOMPLISHMENTS

- The Divisional Dean for the Sciences, Dr. Ken Wilkins, in cooperation with the Human Resources Office, conducted interviews with all of the science chairs to determine current and projected departmental needs for office staff in terms of skill sets and number of positions.
- The Human Resources Office conducted interviews of the administrative staff in the science department offices, particularly the office managers to identify concerns.
- Based on the information from these interviews, the science chairs and office staff identified these concerns:
 - technology skill set;
 - need for better definition of staff responsibilities; and
 - challenges conducting the array of post-awards activities associated with granting.
- A post-awards grant manager has been hired to assist departmental staff in activities related to awarded grants.

NEXT STEP

- Arts & Sciences will continue to work with STEM department chairs and Human Resources to support office staff in meeting Carnegie RU/VH goals.

5.3 The Dean will present to the Provost's Office hiring needs for staffing in the Arts & Sciences STEM fields.

NEXT STEPS

- With the assistance of the Office of Human Resources, the Dean will propose a series of changes in departmental staff structure in relation to the particular needs of each department as the University strives toward Carnegie RU/VH status. The Dean will present this proposal to the Provost during the fall of 2015.
- Departments will submit completed strategic plans by the fall of 2015. Each department's future direction, as defined in the strategic plan, will guide further discussion of the needed technical staffing for Carnegie RU/VH aspirations.

Theme 2 -- Act of Determination 6:

Creating and Enhancing Research Centers in Arts & Sciences STEM

ACTION STEPS:

6.1 The Dean will determine current levels of activity, productivity, and financial support by requesting that each center director develop and submit an annual report.

ACCOMPLISHMENTS

- Arts & Sciences formally recognizes three core facilities in the Baylor Sciences Building (BSB) that report to the Arts & Sciences Dean's office through Dr. Craig Moehnke, Director of BSB Facilities: Center for Mass Spectrometry (staffed by Dr. Alejandro Ramirez), Center for Molecular Biosciences (MBC, directed by Dr. Michelle Nemec), and the Center for Microscopy and Imaging (CMI, directed by Dr. Bernd Zechmann).
- Arts & Sciences identified several entities dedicated to research, instructional, or technical support that do not qualify as core facilities for research instrumentation:
 - a collection of nuclear magnetic resonance instruments (NMRs), supervised by Dr. Moehnke;
 - the Center for Reservoir and Aquatic Systems Research (CRASR);
 - the Baptist Studies Center for Research;
 - the Writing Center;
 - the Language Acquisition Center; and
 - the Arts & Sciences Technology Center.
- Arts & Sciences developed a standard format and formalized the requirements for annual activity report by each of the core facility centers.
- The Center for Microscopy and Imaging began a phased-in implementation of charges for services provided, a widespread "best practice" in the academic research world, with the charges outlined as an expected budget item in research funded by granting agencies.

NEXT STEP

- Assess the levels of usage for each center and justify resource allocation according to this information.

6.2 The Dean, in consultation with the department chairs, will identify centers that are inactive and determine how best to reallocate those resources, identify new capabilities that existing centers will need to better serve faculty and student research and instruction, assess a possible user-fee structure, and identify new centers needed to facilitate faculty and student research.

ACCOMPLISHMENT

- Evaluated the activities of the animal facility in the BSB and determined its status as a core research facility due to increasing demand in light of the anticipated growth of the Health Sciences faculty.

NEXT STEPS

- Expand the practice of charging for services provided to include the Molecular Biosciences Center and the Mass Spectrometry Center.
- Identify which, if any, centers have become inactive and decommission them.
- Reallocate resources from decommissioned centers to support active centers and to establish new centers as required by new directions in research.
- Based on the departmental strategic plans, the Dean, in consultation with the STEM chairs, will identify the need for new instrumentation and additional core facilities centers.
- Pursue the gradual enhancement of the animal facility in the BSB, with the goal of achieving accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) and the U.S. Department of Agriculture within five years.

Theme 2 -- Act of Determination 7:

Planning for Masters Programs

ACTION STEP:

By Spring 2015 the Dean will request that all departments with masters programs provide a self-assessment for future decisions on the various pathways these programs may take for sustainability. Appendix 2F lists criteria to consider in these program evaluations.

ACCOMPLISHMENTS

- The Dean's Office surveyed the graduate program directors regarding all Masters programs offered by departments in Arts & Sciences: current number of students enrolled; five-year average of number of students enrolled; degrees awarded per year for the past five years; funding (i.e., whether students receive a University stipend); type of degree, either professional or research; and graduation requirements (i.e., thesis or project, publications, or grant proposals).
- The Masters programs were classified as follows (see [Appendix Theme 2.4](#)):
 - departments with a PhD that do not recruit for the master's;
 - departments with a PhD that award the master's independently of the PhD;
 - departments with master's degrees considered terminal degrees in the field; and
 - departments with only a master's degree in which the master's is not the terminal degree.

NEXT STEPS

- In consultation with the Dean of the Graduate School, beginning in the fall of 2015, conduct a more in-depth assessment of those programs in groups two, three and four, requesting that the departments with current masters programs in these groups to provide five-year projections on enrollment, resources required, sustainability, and benefit to the university.
- Request relevant information from departments that do not currently have a graduate program but may wish to add one.