

Academic Senate meeting
October 17, 2007

UNAPPROVED AND UNCORRECTED MINUTES

These minutes are disseminated to provide timely information to the Academic Senate. They have been approved by the body in question, and, therefore, they are the official minutes.

ACADEMIC SENATE MEETING October 17, 2007

PRESENT: Mark Anderson, Indranil Bardhan, James Bartlett, Duane Buhrmester, John Burr, Cy Cantrell, R. Chandrasekaran, Gregg Dieckmann, Juan Gonzalez, Jennifer Holmes, Mustapha Ishak-Boushaki, Joe Izen, Surya Janakiraman, Melinda Kane, Marilyn Kaplan, Robert Kieschnick, Murray Leaf, Xinchou Lou, Paul Macalevey, Dennis Miller, Steve Nielsen, Simeon Ntafos, Ravi Prakash, Ashutosh Prasad, Tim Redman, Lawrence Reitzer, Young Ryu, Nancy van Ness, Liz Salter

ABSENT: Titu Andreescu, Gail Breen, Sean Cotter, Kevin Curtin, Gregory Earle, John Gooch, Warren Goux, John Hoffman, Homer Montgomery, Nils Roemer, Mary Urquhart, Wang Yunzeng

VISITORS: Abby Kratz, Felicity Lenes, Robert Nelsen, Hobson Wildenthal

1. CALL TO ORDER, ANNOUNCEMENTS AND QUESTIONS

Dr. Daniel called the meeting to order. There was a quorum.

Dr. Daniel reported that he will be involved in the new Formula Funding meetings in the upcoming months. It is very complex.

Dr. Daniel is focused on Enrollment Services. All or most of the problems with graduate enrollment have been addressed and are fixed. There have been mailers sent out to recruit undergraduate students. This was the first time that UTD has bought the SAT and PSAT list to mail out.

This year's General Faculty meeting will have a little more than in the past. There will be graphs of the strategic plan so that every one can see where UTD is headed in the future and how we are going to get there.

Dr. Daniel extended an invitation to the Senate to tell him how he and the Provost can better serve the Faculty. He suggested that possibly there should be one on one meeting with faculty groups, the Provost and the president.

2. APPROVAL OF MINUTES OF PREVIOUS MEETING

A motion to approve minutes as circulated was made by Cy Cantrell and seconded by James Bartlett. The motion carried.

3. SPEAKER'S REPORT

4. UT SYSTEM FACULTY ADVISORY COUNCIL REPORT

This was the first meeting of the FAC for the year, so a portion of the time was taken up in introducing new members and forming the committees. There are four committees: Health Affairs, Faculty Quality, Governance, and Academic Affairs. Marilyn is one of the two co-chairs on the Faculty Quality Committee; I am a co-chair of the Governance committee. Jim Bartlett is continuing as Secretary.

The single most important issue in terms of time and attention was the continuing discussion of compensation plans for the Health Campuses. The guidelines proposed by the FAC to involve the governance bodies in the process of designing compensation plans has morphed into a discussion of a set of guidelines for compensation plans per se, produced by the new health lawyer in the office of the OGC, with Vice Chancellor Shine's apparent support and concurrence. Essentially, these would make the revenue producing faculties of the health campuses into corporations with a highly authoritarian corporate structure in which the President is the CEO, the principle academic/clinical heads are the Board of Directors, and the rest of the administrative structure is management. So that unlike a business corporation, in which the President is appointed by the Board, in this organization the Board consists of people who are appointed by and otherwise report to the President. The only guarantee of a faculty voice, as such, is that 2/3 of the members must approve the plan. The first version received a substantial amount of adverse comment from members of the FAC, which were responded to in the second, which was discussed at this meeting. VC Shine has promised at least one other iteration, so we will see. The implications for the academic campuses are unclear but probably remote. A major thrust is to define "base salary" in order to be clear that this is the portion guaranteed by tenure, so there is a clear personal commitment on the part of VC Shine (and the Chancellor) to the idea that tenure and salary are linked, but it was not clear in the document itself.

5. GUEST SPEAKER

Dr. Magalay Spector, the new Vice President of Diversity and Community Engagement addressed the Senate and provided a little background information about herself as well as her vision on where she sees UTD.

6. REPORT on PROGRAM EVALUATIONS

Program evaluations were completed for Biology, Chemistry, Computer Science (Graduate) Geo Sciences, Math, Physics, and Science/Math Education. The results from NS&M programs included the following:

- Undergraduates have improved
- Research has improved
- Curriculums have not changed much

Recommendations have been made to deans to be used for budgeting. Written reports went to the faculties of the programs and faculty were able to write rebuttals. Reports and rebuttals went to the provost and the president.

Suggestions from the reports include:

- More funding for the programs
- Hire more faculty
- Improve recruiting
- Hold grant writing seminars
- There is not enough interdisciplinary work
- Hire new chairs
- Decision making was not critical enough on some tenure decisions
- Increase graduate student stipends
- Narrow program focuses
- Fill the needs of the marketplace
- Better monitoring of dissertations
- Track graduates
- Work more closely with advising
- Outside advisory committees are needed

7. APPROVAL of AMENDMENTS of BYLAWS of EPPS

SCHOOL OF ECONOMIC, POLITICAL AND POLICY SCIENCES BY
LAWS ON
GOVERNANCE AND ORGANIZATION
(August 31, 2007)

1.0 THE SCHOOL OF ECONOMIC, POLITICAL AND POLICY SCIENCES.

The School of Economic, Political, and Policy Sciences (hereafter “The School”) is an academic and administrative unit of The University of Texas at Dallas (hereafter “The University”). The mission of the School is the development of innovative programs that shape it into a unit having widespread recognition for multidisciplinary approaches to research and to top-tier graduate education as well as for outstanding undergraduate instruction and public service.

The School offers undergraduate degree programs in Criminology (BA), Economics (BA, BS), Geography (BA), International Political Economy (BA, BS), Political Science (BA), Public Affairs (BS), and Sociology (BA). The School also offers Master’s degrees in Criminology (MS), Economics (MA, MS), Geographic Information Science (MS), International Political Economy (MA, MS), Public Affairs (MPA), Public Policy (MPP), and Applied Sociology (MS). The School is further authorized to offer the Doctor of Philosophy in Criminology, Economics, Geospatial Information Science, Political Science, Public Affairs, and Public Policy/Political Economy. This set of degree programs may be amended or extended through proposals made by the School’s faculty in the manner described by these By-Laws and on approval by the University, the University of Texas System, and the State of Texas Higher Education Coordination Board.

2.0 THE FACULTY

The faculty of the School consists of tenured and tenure-track professors (the “voting faculty), non-tenured clinical and research professors, senior lecturers, lecturers, adjunct professors, and fellows appointed to positions in the School.

The faculty are appointed to the School, with specific roles and rights as specified by the University’s Faculty Handbook and these By-Laws. Faculty are self-assigned to programs for a minimum period of three years except in those cases when specific recruitments were conducted to rectify program staffing needs or when program course delivery, professional accreditation or national ranking would be undermined. In the event that a member of the faculty wants to change a program assignment, s/he may do so with the approval of the Dean on the advice of the Executive Committee and the program faculty. Such requests for reassignment typically will not be considered before the three years of a current assignment have expired.

2.1 Responsibilities of The Faculty

The faculty collectively, and each individual member thereof, are responsible for the maintenance of high standards of scholarship and teaching and for the conscientious performance of their assigned duties and observance of the regulations and policies established by the Regents of the University of Texas System. Each member of the faculty accepts the obligation to treat students and colleagues with courtesy and dignity, and to accept a fair share of responsibility for the conduct of the affairs of the School and the University by service to the institution, to the discipline or profession of which he/she is a member, and to the public.

Consistent with the policies of the University, the faculty shall establish and/or approve: (a) educational policy for the School, including approval of academic programs, curricula and requirements for degrees or certificates offered by the School; (b) standards and procedures for the appointment, promotion, and tenure of faculty; (c) the strategic plan of the School; and (d) other procedures and policies as may be necessary or desirable, from time to time, for School governance.

2.2 Meetings and Voting

All members of the faculty may participate in discussion at faculty meetings, but only members of the tenured/tenure-track faculty may vote on matters within the cognizance of the faculty of the School or the University.

The faculty shall meet in general session at least once each semester, at the request of the Dean. The Dean may request a meeting of the faculty at any time on 48 hours' notice. The Dean also may call a special meeting of the faculty on petition by one third of the voting faculty. All faculty meetings shall be open except in cases involving personnel or other matters authorized by law to be discussed in executive session. The Dean may convene, in executive session, a sub-unit of the faculty consisting solely of tenured professors and associate professors or tenured professors, respectively, for the purpose of reviewing and voting on a recommendation for tenure and/or promotion of a member of the faculty.

The agenda for a faculty meeting shall be published at least 48 hours prior to the meeting, except in cases when notice and publication of an agenda are not feasible due to the urgency of the occasion or the purpose is solely to provide information as quickly as possible. Except as otherwise provided in these By-Laws, *Robert's Rules of Order* shall be used in conducting the business of the faculty.

All meetings of the faculty shall be meetings of record. The Office of the Dean shall maintain an open record of these meetings, including the

agenda and actions taken at each meeting. Minutes also will be maintained in the Office of the Dean.

3.0 THE DEAN AND THE ADMINISTRATION OF THE SCHOOL

The Dean of the School is appointed by and serves at the pleasure of the President of the University (Regents Rules Series 20102, Section 1). The Dean reports to the Provost/Vice President for Academic Affairs and is a tenured member of the faculty with rank of professor.

The Dean is responsible for enhancing the quality of the School's programs of instruction and research, for enriching the School's resources and reputation, and for establishing a stable environment of planning and decision making. The Dean is further responsible for the administration of the School, including preparation and execution of the budget; approval of all personnel actions; scheduling of courses and assignment of duties to members of the faculty; appointment, discipline, and removal of staff and administrators within the school; recommendation to the Vice-President/Provost of *ad hoc* committees for review of tenure and promotion cases; annual review of the performance of faculty; and representation of the interests of the School both within the university and externally. Under provisions of Regents' Rules Series 20102, Sec. 2 and University Policy Memorandum 96-III 30-68 rev. September 16, 1999 Section II A1, the Dean may delegate responsibilities to other officers of the school, including the Associate Deans and the Program Heads. The appointment of the Program Head, who will have the rank of professor or associate professor, is made by the Dean after consultation with the program faculty. The Dean may appoint additional administrative officers as determined to be useful in the management of the School. These may include directors of centers and various members of the Administrative Services Staff.

4.0 THE PROGRAMS OF THE SCHOOL

The programs are academic and administrative units of the School of Economic, Political, and Policy Sciences at the University of Texas at Dallas. They are responsible for developing and implementing instructional and research plans capable of positioning the School at the frontiers of science, delivering coursework and related aspects of education associated with approved degree programs, and providing the primary administrative base and a source of intellectual community for faculty. More specifically, these responsibilities may include providing intellectual leadership for program faculty, assistance to the Office of the Dean in annual review and periodic performance evaluations of the

faculty, administration and oversight of the program budget and accounts of program faculty, and the discharge of graduate and undergraduate program scheduling and, as appropriate, admissions, advising, and monitoring of student, especially graduate student, performance.

Under the leadership of the Program Head, the academic program faculty is responsible for : (a) maintenance of the academic quality of the program that is consistent with standards of the relevant accrediting body; (b) approval of lecturers employed to teach courses in the program; (c) development and maintenance of an appropriate schedule of courses; (d) recommendations to the Program Head and thereby to the Dean for improvements in the structure, operation, and development of the program; and as appropriate; (e) selection of students in the program for special awards.

5.0 STANDING COMMITTEES OF THE FACULTY

Standing committees of the School of Economic, Political, and Policy Sciences may be established pursuant to University rules, by action of the faculty, or by action of the Dean, as provided herein. The Standing committees are:

5.1 The School Executive Committee

The School Executive Committee is chaired by the Dean and consists of, the Associate Deans and Program Heads. The duties of the Committee, which normally meets fortnightly throughout the academic year, include, but are not limited to: (a) providing advice to the Dean on matters of educational and faculty policy and practice; (b) providing assistance to the Dean in strategic planning for the School; (c) ensuring effective coordination of practices and maintenance of standards among the academic programs, including, but not limited to, those involving cross-program activities; (d) approving committee membership other than those committees provided for in these Bylaws; (e) providing assistance to the Dean on matters pertaining to day-to-day management of the School.

The Executive Committee also may act as a subcommittee chaired by an Associate Dean to provide: (a) recommendations on conformity with regulations of the university; (b) advice on the admission of students and the monitoring of their performance, as well as appointment and assignment of graduate assistantships; (c) recommendations on improvements in the structure, operation, courses, and development of the academic programs; (d) coordination of course schedules; (e) selection of students to receive School-wide awards or student nominees for University or national scholarship competitions. Suggestions for such

awards or such nominations may be forwarded to the subcommittee by relevant program faculty.

5.2 The Program Committees

Each program shall have a Program Committee chaired by the Program Head. The Committee shall consist of not less than three program faculty, the majority of whom normally must hold tenure and one of whom may hold the rank of assistant professor. Clinical faculty and Senior Lecturers may be invited to participate by majority vote of the tenured/tenure track faculty.

Program Committee members shall be nominated by election of the program faculty. The term of office shall be two years, renewable. The election result shall be forwarded to the Dean, who will appoint the Committee members. The Dean may decline to appoint a faculty member who has been nominated by election, but may not appoint a faculty member who has not been so nominated.

Eligibility for Committee membership and for voting for Committee members shall be extended to faculty who have declared the program to be their administrative home and/or have declared that at least 50% of their demonstrable intellectual and teaching interests reside within it. These program faculty may choose, by majority vote, to extend voting privileges to additional faculty members who have declared less than 50% of their intellectual or teaching interests to reside within it.

Program Committees shall meet at least once per semester. Program faculty as a whole shall meet at least once per semester with the Program Head and the Program Committee.

A Program Committee, as chaired by the Program Head, is responsible for: (a) matters of educational policy and practice that affect a program's undergraduate and/or graduate instructional responsibilities; (b) matters of graduate program and student career development; (c) improvements in the research activities of the program faculty; (d) other aspects of program development and administration and operations, including, but not limited to, graduate admissions.

5.3 The Faculty Advisory Committee

The membership of the Faculty Advisory Committee shall consist of not fewer than six members. Its size may increase, at the discretion of the Dean, to accommodate growing needs and demands of the School. Two-thirds of its members shall be elected in an at-large procedure involving all voting faculty, and one-third shall be appointed by the Dean. Associate

Deans and all chaired Professors of the School serve as ex-officio members.

The Committee is chaired by the Dean. It shall meet at least once each Fall and each Spring term to discuss: (a) ways by which the School and the University can construct and maintain a more effective instructional, research and service presence in the North Texas region; (b) activities that may increase the School's instructional and research reputations both nationally and internationally; (c) methods for undertaking highly productive community outreach and resource development projects that enhance the excellence of the School and the University of which it is a part; (d) actions that provide an effective process for the review and equitable resolution of faculty contentions, including informal and formal procedures that shall involve the Program Head, this Committee, Associate Deans, the Dean, and the Provost in a manner consistent with University Policy Memorandum 92-111.21-54 rev. March 21, 2006; (e) such other functions that may be necessary for ensuring the peace, order, and good governance of the School.

5.4 The Faculty Personnel Review Committee

The Faculty Personnel Review Committee carries out the responsibilities outlined in the University Policy Memorandum 75-III. 22-3 rev. April 6, 2006. The committee may be chaired by the Dean or an Associate Dean. It consists of four tenured faculty appointed by the Dean with approval by majority vote of the faculty. The term of office is two years, and two members rotate each year. The duties of the Committee include: (a) review of the files of all associate professors annually to determine whether to recommend that *ad hoc* committees be appointed to consider promotion of any associate professor to professor; (b) advice to the Dean concerning appointments to *ad hoc* committees for third-year review of assistant professors, promotion and tenure of assistant professors to associate professors, and promotion of associate professors to professors; (c) review the qualifications of opportunity hires nominated by members of the faculty; (d) review of the qualifications of non-tenure-track special appointments and research associate appointments as provided for in procedures adopted by the faculty; (e) advice to the Dean regarding selection of faculty for faculty development leaves; and (f) assistance to the Dean in providing advice to faculty on progress toward tenure and promotion. The Dean may undertake to consider such recommendations and advice in consultation with one or more Heads of affected programs.

5.5 The School Peer Review Committee

The School Peer Review Committee (SPRC) is established pursuant to University Policy Memorandum 97-III.22-79 amend March 21, 2006. It

consists of 6 tenured faculty selected by the tenured faculty by secret ballot and plurality vote. The term of office is two years, with three members rotating each year. The Committee reviews and advises the Dean on the periodic performance evaluation (PPE) of tenured faculty. The SPRC is separate from the Faculty Personnel Review Committee that is required by Policy Memorandum 75-III.22-3, but members of one may serve as members of the other.

5.6 The Committee on Effective Teaching

The Committee on Effective Teaching is mandated by Policy Memorandum 96-III.21-70 amend. September 1, 2000. Its membership shall consist of no more than seven members of the tenured/tenure track faculty appointed by the Dean in consultation with the School Executive Committee. The Associate Dean of Academic Programs serves as chair of the Committee.

The Policy Memorandum requires that the Committee develop and administer a teaching evaluation procedure; that it use written objective standards for evaluating teaching performance, including course evaluations, teaching load contributions, consideration of the diversity of courses taught along with course development, and consideration of thesis and dissertation supervision. The Committee shall also develop procedures for collection of reliable and verifiable information related to teaching performance that includes periodic classroom visits to gather direct information that supplements information taken from sources such as course syllabi and course evaluations. Finally, the Committee shall develop mechanisms for faculty to comment on their evaluations and to provide information they feel is pertinent to the teaching evaluation process.

5.7 Other Faculty and Functional Committees.

Such other committees as may be needed to carry out faculty or other functions not assigned to the committees established herein may be established or modified as needed by the Dean with the approval of the Executive Committee. The Dean will maintain and post a complete list of such committees, their charges, and their membership in the administrative offices. Such committees may include committees to administer graduate examinations, to advise on the renovation and construction of facilities, to manage institutes or centers, or to supervise computer or other infrastructural facilities.

6.0 AMENDMENTS.

These By-laws may be amended by two-thirds or more of those present and voting at any regular meeting of the faculty, provided that full notification of the proposed amendment has been circulated to the entire faculty of the school not less than two weeks in advance of the meeting. These By-Laws will take effect upon a favorable vote by two-thirds or more of those tenured/tenure-track faculty members present and voting at a regular faculty meeting.

Approved by the faculty of the School of EPPS, 31 August 2007

A motion to approve the updated bylaws was made by R. Chandrasakeran and seconded by Robert Kieschnick. The motion carried.

8. APPROVAL of AMENDMENTS of BYLAWS of NS&M

***School of Natural Sciences & Mathematics
Bylaws***

Preamble

1. **Purpose:** The purpose of this document is to provide the governance framework for the School of Natural Sciences and Mathematics and defining the organizational framework of the School. It provides a framework into which Bylaws of the departments within the School must fit.

Faculty

2. **Faculty:** The Faculty of the School is defined as persons having at least a 50% appointment for nine months at the rank of Professor, Associate Professor, Assistant Professor, and Senior Lecturer. All members of the Faculty are entitled to attend and participate in School and Departmental faculty meetings. Faculty members with joint appointments may vote only in the Department in which they have the largest fractional appointment or, in the case of equal splitting, in the Department in which they choose to be enfranchised. At the start of each Fall semester, the Senior Lecturers in each department shall meet to elect voting representatives equal to 10% of the Professors, Associate Professors, and Assistant Professors in the department, rounded to whole numbers. These elected representatives join all Professors, Associate Professors and Assistant Professors to form the Voting Faculty and may vote in matters that come before the Department and/or School.
3. **Meetings:** The Faculty of the School will meet in general session at least once each academic year, at the call of the Dean. Meetings must be announced at least one week in advance of the meeting and a written agenda must be distributed at least two days in advance. Items may be placed on the agenda

upon petition by at least two members of the Voting Faculty. The Dean will chair faculty meetings.

The Dean may call a special meeting of the Faculty at any time on two-working-day notice and shall call a special meeting upon petition by one third of the Voting Faculty. The agenda of a meeting called by petition must specify at least one topic to be placed on the agenda.

For purposes of voting, a quorum is defined as 50% of the Voting Faculty. Except as specified elsewhere in these Bylaws, all business in the School will be conducted in accordance with Roberts Rules of Order. Minutes of the meetings shall be taken by the Secretary of the Faculty, as defined herein, and maintained by the Dean's office, and are to be accepted by the Voting Faculty at the next meeting. The Secretary of the Faculty will act as parliamentarian. It will be in order to amend any matter brought before the Faculty to request a written electronic vote. Such amendments must be accepted by a supermajority (60%) of those attending the meeting. The result of the subsequent email ballot will be binding.

Officers of the School

4. **Dean:** The Dean of the School of Natural Sciences and Mathematics serves at the pleasure of the President of the University of Texas at Dallas and reports directly to the Provost. The Dean is a tenured member of the faculty of the School with the rank of Professor.

The Dean has responsibility for the administration of the School in accordance with these Bylaws, including responsibility for preparing and managing the School budget, approving all personnel actions and, in consultation with Department Chairs, assigning duties to the members of the faculty. The Dean will consider the recommendations of the faculty regarding curricular matters, appointments, promotions and tenure decisions.

The Dean may appoint faculty members to committees that he/she determines to be useful to the effective management of the School, and will recommend to the Provost the composition of ad hoc committees for faculty reviews and promotions. The appointment of an Associate Dean of Undergraduate Studies or an Associate Dean of Graduate Studies requires approval of the School Executive Committee as described in Section 9. All administrative officers serve at the pleasure of the Dean.

The Dean will represent the School, both within and outside the Campus. At

the Fall semester faculty meeting, the Dean will report on the State of the School.

5. **Associate Dean of Undergraduate Education:** Appointed by the Dean with the approval of the Voting Faculty, the Associate Dean for Undergraduate Education has responsibility for training and supervising undergraduate advisors and ensuring that students receive timely, accurate academic advice. He/She has the final faculty authority on School and Departmental policies on undergraduate degree programs and works with the Dean of Undergraduate Education. The Associate Dean represents the School on the Council for Undergraduate Education and as a member of the School Committee for Effective Teaching. He/She has responsibility for the accuracy of catalog listing and assisting the departments with course scheduling. The Associate Dean manages the summer advising program and takes part in campus recruiting efforts.
6. **Associate Dean of Graduate Education:** The person appointed by the Dean to this position must be a tenured faculty member and must be approved by the Voting Faculty. The Associate Dean coordinates the advanced degree programs within the school including assisting with catalog entries and scheduling of courses, exams, and thesis defenses. The Associate Dean will assist in the development of proposals for graduate fellowship support, and will administer School-wide Graduate Fellowships. He/she will serve on the Graduate Council, and will provide close coordination with the Dean of Graduate Studies.
7. **Department Heads:** The Dean appoints Heads of the academic departments in the School in consultation with the faculty of that Department and with the approval of the Provost. The Head is the chief administrative officer of the unit and serves as the liaison between the faculty and the higher administration. The Head is expected to provide leadership in the department while managing the day-to-day administration of the unit. In accordance with Departmental Bylaws, the Head will appoint faculty committees, oversee faculty recruiting, promotion and retention, perform annual evaluations of faculty and staff, provide teaching assignments to faculty and lecturers, manage the scheduling of courses, and manage course evaluation and accreditation. In accordance with University policy, the Dean will conduct an evaluation of the Head by the faculty every five years the results of which will be made available to the Head and used by the Dean in evaluating the overall performance of the Head.
8. **Other Officers:** With the approval of the Provost, the Dean may appoint other members of the faculty to administrative positions such as Center Director, Program Head, and Program Coordinator to administer research and interdisciplinary programs as opportunities arise. Such officers serve at the pleasure of the Dean and are subject to annual performance reviews by the Dean in consultation with the appropriate Department Head.

STANDING COMMITTEES

9. **Faculty Personnel Review Committee:** This (FPRC) Committee is mandated by UT Dallas Policy Memorandum 75-III.22-3. This Committee is chaired by the Dean, and is composed of one member, elected annually in the Spring by secret ballot, to represent each Department. The members must be tenured faculty members and are appointed for two year terms. Upon adoption of these Bylaws, three departments will be chosen at random to elect members for only a single year, the others to elect members for full terms. Members of the Committee may succeed themselves only if no other tenured faculty member in the department is available to serve. Each Department should select an alternate to serve in the event the elected member is unable to serve a full term. The Committee will select one of its members to serve as Secretary of the Faculty whose duties were described in Section 3.

The Committee will conduct Periodic Performance Evaluations of Tenured Faculty as described in Policy Memorandum 97-III.22-79 as revised and amended. Associate Professors on the Committee do not participate in the evaluation of Professors. The Provost's Office will provide the Committee with the files of those faculty members selected for review. The Dean will consult with the FPRC on third-year reviews of untenured faculty members and will consider the comments of the Committee in the review process. The Dean will consult the FPRC on requests for Faculty Development Leave.

The FPRC will serve as the School's elected Executive Committee and will advise the Dean on matters of curriculum, degree programs, and accreditation matters as needed. The approval of a majority the Executive Committee is required for the appointment of the Associate Dean of Undergraduate Education and the Associate Dean of Graduate Education.

10. **School Council:** The School Council consists of Department Heads, Directors, and Associate Deans in the School and serves as its administrative committee. The Council will meet regularly to discuss administrative matters and to bring issues affecting the departments to the attention of the Dean. The School Financial Officer will serve ex officio as the Council Secretary and will prepare an agenda in advance of each meeting and provide minutes of the previous meeting for approval.
11. **Committee on Effective Teaching:** This committee is mandated by Policy Memorandum 96-III.21-70. The Associate Dean for Undergraduate Education serves as chair. It has the responsibility for oversight of the teaching evaluation within each Department. It will ensure that uniform procedures are in place that include student course evaluation, peer evaluation through classroom visits,

and take account of course load, course development, and dissertation supervision. Each Department will appoint a member of the Committee, typically the Associate Head for Undergraduate Studies. Non-voting student members will be appointed as described in Section 14. The Committee will provide input into nominations for teaching awards.

12. **Dean's Student Advisory Committee (DSAC):** Departments may name one undergraduate and one graduate student to serve on this Committee. This Committee will elect among its members a graduate student and undergraduate student to serve as non-voting members of the Committee on Effective Teaching. The Dean will convene this Committee at least once each semester to consult with students about policies and procedures in the School. DSAC members may request additional meetings with the Dean as the need arises.

HIRING AND PROMOTION

13. **New Hires:** Each Department will conduct open searches for faculty positions, whether at the junior or senior level, through the efforts of ad hoc search committees. Each search committee will be appointed by the Department Head and charged with advertising the position, collecting nominations and evaluating applications. In consultation with the Head, the search committee will invite prospective candidates to campus, arrange for public seminars, and ensure that the candidates meet with as many faculty members as possible. The Committee will recommend to the Department Head a ranked list of acceptable candidates. The Department Head will recommend candidates to be hired to the Dean, including salary, start-up costs, and space needs in the recommendation. In the case of hiring into a tenured position, an ad hoc committee, which may be the search committee, should prepare a report based on the candidate's record and recommendations, voting for or against a tenured appointment. Before an offer can be made, it must be approved by the Dean and Provost. Non-tenure track hiring is the responsibility of the Department Head in consultation with the School's Committee on Effective Teaching and with the approval of the Dean. Draft Policy Memorandum 07-III.22-96 will serve to guide the appointment of senior lecturers before and after its formal adoption.
14. **Promotions:** The Department Head will recommend to the Dean an ad hoc committee to examine the credentials of each faculty member being considered for promotion to tenure or promotion to the rank of professor. The ad hoc committee will prepare a report on the merits of the case under consideration, weighing internal and external reference reports, research output, teaching evaluations, and service to the profession, the University, and the community. Policy Memo 75-III-22-3 will govern promotion procedures within the School.

Promotions of senior lecturers to the second level will be guided by Draft Policy Memorandum 07-III.22-96 as adopted.

Grievance Procedures

15. Faculty grievances shall accord with the "Faculty Grievance Procedure" approved by UT Dallas and spelled out in the Faculty Handbook (Policy Memorandum 92-III.21-54). Student grievances shall be in accordance procedures specified in the UT Dallas Handbook of Operating Procedures Title V, Chapter 51.

Adoption of these Bylaws and Amendments to them

16. These Bylaws, after circulation to the faculty for comments and corrections, will be scheduled for a vote of the full faculty. This will be carried out by electronic balloting and must be adopted by a 2/3 vote of the current tenure/tenure track faculty members in the School. After adoption of the Bylaws, they may be amended by placing the amendment on the agenda of a meeting of the faculty for discussion and approval to be placed on a ballot for a vote. A 2/3 majority of the Voting Faculty (vote taken by electronic balloting) is required for amendment.

A motion to approve the updated bylaws was made by XinChou Lou and seconded by Joe Izen. The motion carried.

9. ANNUAL REPORT of CQ

September 21, 2007

To: The Academic Senate

From: John P. Ferraris, Chair of the Committee on Qualifications

Subject: Annual Report (2006-2007) of the Committee on Qualifications

During the 2006-2007 academic year, the Committee on Qualifications consisted of:

Peter Assmann ((BBS) Farokh Bastani (ECS), William Cready (SOM),
Richard Golden

(BBS), John Ferraris (NSM and Chair), Philipos Loizou (ECS), James
Marquart (EPPS)

Zsuzsanna Ozsvath (A&H), Viswanath Ramakrishna (NSM), Chelliah
Sriskandarajah

(SOM), Theresa Towner (A&H and Vice Chair), and Wim Vijverberg
(EPPS).

CQ met regularly from November (2006) through mid-May (2007), frequently on a weekly basis, to review the files of candidates undergoing 3rd year and promotion reviews and to review the files of new hires with tenure. During the summer, CQ availed itself of a new on-line review instrument that was developed by the Provost's office. Two additional files were reviewed as late as August, 2007. In total, CQ conducted 27 internal reviews, including seven 3rd year reviews, ten tenure reviews, and ten full professor reviews. In 25 of the 27 cases the majority vote of CQ supported the recommendations of the Ad Hoc Committees and the Deans. In one case CQ voted to disagree with the recommendation of the Ad Hoc Committee and the Dean and in one case, CQ had a split decision and forwarded no recommendation. In these 25 cases the Provost agreed with the recommendations of CQ. In one case the Provost chose to promote a candidate to full professor (siding with the recommendations of the Ad Hoc Committee and Dean) that CQ had recommended waiting additional time; in a second, the Provost chose to promote the candidate that had received the split decision from CQ.

In accordance with the Procedures for Faculty Promotion, Reappointment and Tenure the Provost met with members of CQ to provide his rationale for the one promotion file for which he disagreed with the recommendation of CQ and, after hearing the Provost's explanation for his actions, CQ decided not to object to the Provost's decision. CQ noted that in this case the candidate already was a tenured member of the faculty and the both the Ad Hoc Committee and the Dean had recommended promotion. CQ also reviewed the files of 12 new hires with tenure, including 8 full professors and 4 associate professors. In all cases CQ supported the recommendations of the Search Committees and the Deans.

CQ discussed the issue of the criteria that should be used in 3rd year reviews since evaluations are often based on estimates of future accomplishments. Since variation in these estimates across Schools is inevitable, the judgments of the Ad Hoc committees, above rank-faculty, and the respective Deans take on special importance. The late arrival of files complicated the work of CQ. Many of the files for tenure, promotion, or reappointment arrived after April 1st, which, although not a strict deadline for the President to send out letters, has been the traditional one. The Provost's insistence that the deadlines for internal reviews be strictly met for this upcoming year should go far to alleviate the extra burden that late files have placed on CQ's workload. In addition, many of the searches for new hires are not being completed until very late in the spring or into the summer, but perhaps this is unavoidable. The new on-line review instrument to evaluate these over the web was tested this past summer and appeared to work well, and CQ was able to deal with these files through e-mail.

As pointed out in the previous year's report, the requirement that members of CQ physically sign each of the reports adds some extra burdens. This mainly becomes an issue for the new hire files that arrive over the summer, since many of the members of CQ are not on campus. We support the recommendation of the previous CQ committee that some alternative to physically signing reports be found.

Finally, CQ, and especially its chair, greatly appreciates the highly professional support we received from Dowla Hogan. A more detailed breakdown by School follows.

2006-2007 TENURE, PROMOTION AND REAPPOINTMENT DECISIONS

Reappointment as Assistant Professor

Seven faculty members were reviewed for reappointment as Assistant Professors. Of those, all seven were reappointed. The Committee on Qualifications (C.Q.), Provost and President agreed on all seven.

Promotion to Associate Professor with tenure

Ten faculty members were reviewed for tenure and promotion to Associate Professor. Eight were promoted, two were terminated. One had a split vote by C.Q. (2 promotion, 2 termination, and 5 abstentions). The C.Q., Provost and President agreed on ten of those.

Promotion to Professor

Ten faculty members were reviewed for promotion to full Professor. Nine were promoted; one was reappointed. The C.Q., Provost and President agreed on seven of those. One was recommended for reappointment by C.Q., but for promotion by all others.

PROMOTIONS AND REAPPOINTMENT BY SCHOOL

Arts and Humanities Management

2 reappointed as Assistant Professor
5 reappointed as Assistant Professors
2 promoted to Associate Professor
1 promoted to Associate Professor
2 promoted to Full Professor

Behavioral and Brain Science

1 was terminated
1 promoted to Associate Professor
Natural Sciences and Mathematics
2 promoted to Full Professor
2 promoted to Associate Professor

Engineering and Computer Science 1 reappointed as Associate Professor

1 promoted to Full Professor
1 promoted to Associate Professor
1 was terminated
2 promoted to Full Professor

Economic, Political and Policy Sciences

- 1 promoted to Associate Professor
- 2 promoted to Full Professor

INITIAL APPOINTMENT DECISIONS

The C.Q. reviewed twelve files for initial appointments; eight at the rank of full professor with tenure, and four at the rank of associate professor with tenure. All twelve were approved by the C.Q

A motion to accept the report by Elizabeth Salter and seconded by John Hoffman. The motion carried.

10. DRAFT QUESTIONS on GOVERNANCE SATISFACTION

GOVERNANCE SATISFACTION SURVEY

By “governance system” we mean the UTD Academic Senate and the Senate and University Committees. Of course all answers are voluntary, and forms will not be linked to people. For the following statements, indicate whether you agree or disagree that they represent your view:

- 1. I am familiar with the governance system at UTD .
definitely agree somewhat disagree somewhat definitely not

- 2. I consider the governance system at UTD to be effective in representing the concerns of the faculty.
definitely agree somewhat disagree somewhat definitely not no opinion

- 3. I consider the governance system at UTD to be effective in developing good academic policies.
definitely agree somewhat disagree somewhat definitely not no opinion

- 4. I consider the governance system at UTD to be effective in assuring that its academic policies are actually followed.
definitely agree somewhat disagree somewhat definitely not no opinion

- 5. There are areas of policy that the governance system should be concerned with that it is not presently concerned with.
definitely agree somewhat disagree somewhat definitely not no opinion
Please explain if you wish:

- 6. There areas of policy that the governance system is presently concerned with that would be best left to the administration.
definitely agree somewhat disagree somewhat definitely not no opinion
Please explain if you wish:

- 7. The faculty at UTD has the authority and autonomy it needs to design the curriculum effectively.
definitely agree somewhat disagree somewhat definitely not no opinion

8. How would you characterize the relationship between the governance system at UTD and the faculties of the several schools?

supportive adversarial not related yes no
unclear or mixed other _____

9. Service on Senate and University Committees is important.

definitely agree somewhat disagree somewhat definitely not no opinion

10. Policies and practices of the UT Dallas governance system exhibit a serious bias against female members of the faculty.

definitely agree somewhat disagree somewhat definitely not no opinion

11. Policies and practices of the UT Dallas governance system exhibit a serious bias against minority members of the faculty.

definitely agree somewhat disagree somewhat definitely not no opinion

12. Are you receiving or getting the news letter?

yes

no

WEBSITE

The Senate website is at <http://www.UTDallas.edu/senate/>

Have you every looked at it before now? yes no

Is the website helpful?

very moderately not very not at all not important to me

Is there any kind of governance-related information you would like to have that is not there, or is not adequate? yes no

Please describe this information:

PERSPECTIVE:

What is your rank?

part-time sr. lecturer other non-tenure-track assist. prof, associate prof, prof

About how long have you been at UTDallas?

What is your gender? _____

Have you ever run for the Senate? _____

Have you ever served on a senate or university committee? _____

A motion to send the survey out to the faculty was made by Marilyn Kaplan and seconded by James Bartlett. There was one objection. The motion carried.

11. CEP RECOMMENDATIONS

Dr. Blanchard presented the Science in Mechanical Engineering degree programs for approval by the Senate.

New Program Request Form for Bachelor and Master's Degrees

Directions: An institution shall use this form to propose a new bachelor's or master's degree program. In completing the form, the institution should refer to the document *Standards for Bachelor's and Master's Programs*, which prescribes specific requirements for new degree programs. Note: This form requires signatures of (1) the Chief Executive Officer, certifying adequacy of funding for the new program; (2) a member of the Board of Regents (or designee), certifying Board approval, and (3) if applicable, a member of the Board of Regents or (designee), certifying that criteria have been met for staff-level approval. Note: An institution which does not have preliminary authority for the proposed program shall submit a separate request for preliminary authority. That request shall address the criteria set in Coordinating Board rules Section 5.24 (a).

Information: Contact the Division of Academic Affairs and Research at 512/427-6200 for more information.

Administrative Information

1. **Institution:** The University of Texas at Dallas

2. **Program Name** – Show how the program would appear on the Coordinating Board's program inventory (e.g., *Bachelor of Business Administration degree with a major in Accounting*):
Bachelor of Science in Mechanical Engineering (BSME)

3. **Proposed CIP Code:** 14.1901.00, Mechanical Engineering

4. **Brief Program Description** – Describe the program and the educational objectives:

The objective of the Bachelor of Science degree program in Mechanical Engineering will be to produce Mechanical Engineering graduates who will be capable of undertaking challenging projects that will require knowledge of the fundamentals of the design of mechanical and thermal systems. The proposed program fits well in the long-range academic plan for The University of Texas at Dallas. The Erik Jonsson School of Engineering and Computer Science was created in 1986 in response to the high demand of local industry for engineering professionals. In a May 2004 report to the Board of Regents of The University of Texas System, the Washington Advisory Group (WAG) recommended Mechanical Engineering as one of the areas in which U. T. Dallas should create new departments and degree programs.

Also in 2004, the American Society of Mechanical Engineers, the leading professional society for mechanical engineering, issued a document titled "A Vision of the Future of Mechanical

Engineering Education”. The document makes the following observation:
“...mechanical engineering is changing from

- ‘The branch of engineering that encompasses the generation and application of heat and mechanical power and the production, design and use of machines and tools’ (Webster’s II New College Dictionary, 2001) to
- ‘One that addresses societal concerns through analysis, design, and manufacture of systems, at all size scales...’ (‘The Case for Renaissance Engineers and Renaissance in Mechanical Engineering Education,’ Adnan Akay, in *The Innovative University*, Carnegie Mellon University Press, 2003)”

Education in mechanical and thermal design on all size scales fits well with the core U. T. Dallas competencies in microelectromechanical systems (MEMS) and nanostructured materials, and with the needs of local industry.

The primary educational objective of the program is to train Mechanical Engineers to meet the design and development needs of local and state industry as well as to educate them to be innovators and policy makers. The proposed B.S.M.E. degree program will provide the necessary training and education for future engineers who can effectively identify new problems and develop innovative solutions, including new manufacturing and fabrication technologies.

5. Administrative Unit – Identify where the program would fit within the organizational structure of the university (e.g., *The Department of Electrical Engineering within the College of Engineering*, *The Department of Mechanical Engineering within the Erik Jonsson School of Engineering and Computer Science* is proposed in conjunction with the degree program requests in Mechanical Engineering. A copy of the Administrative Change Request is forwarded with the related baccalaureate and master’s degree proposals.

6. Proposed Implementation Date – Report the first semester and year that students would enter the program: It is proposed that freshmen enter the program in Fall 2008. Transfer students will be admitted into the program only at, or below, the level reached by the original freshman cohort, in order to provide for the orderly incorporation of new faculty members and staging of new courses. Only one new course will be required in the first year of the program, MECH 1308, Introduction to Mechanical Engineering. In the second year of the program, two more new courses and one new laboratory will be rolled out. All of the courses required in the first two years of the program will be taught by existing tenured/tenure-track faculty and 5 FTE of newly hired senior lecturers. The introduction of seven new upper-level courses and five new laboratories is planned for the program’s third year, after seven new tenured/tenure-track faculty members will have been hired. Eight additional courses, including senior design, will be introduced in year 4, when the program will have ten tenured/tenure-track faculty and a new Department Chair.

7. Contact Person – Provide contact information for the person who can answer specific questions about the program:

Name:

Title:

E-mail:

Phone:

Program Information

I. Need

Note: Complete I.A and I.B only if preliminary authority for the program was granted more than four years ago. This includes programs for which the institution was granted broad preliminary authority for the discipline.

- A. Job Market Need – Provide short- and long-term evidence of the need for graduates in the job market.

Broad preliminary authority for Engineering at the baccalaureate and master's levels was granted by the Coordinating Board at its April 20, 2006 meeting.

- B. Student Demand – Provide short- and long-term evidence of demand for the program.

- C. Enrollment Projections – Use this table to show the estimated cumulative headcount and full-time student equivalent (FTSE) enrollment for the first five years of the program. *(Include majors only and consider attrition and graduation.)*

The following enrollment estimates are based on:

- a) The enrollment in the U. T. Dallas BSEE program (623 in Fall 2007) and the fact that undergraduate Mechanical Engineering programs generally have an enrollment that is approximately equal to the undergraduate enrollment in Electrical Engineering. For example, in Fall 2006, the undergraduate enrollment in Mechanical Engineering in the U. S. was 80,288, while the enrollment in Electrical and Computer Engineering was 75,302.¹
- b) Interest among our current students who are majoring in engineering disciplines. For example, student interest in design projects related to robotics is very high, as evidenced by an active student Robotics Society, which participates in the annual IEEE Region 5 student robotics competition, and an active team that participates in the Autonomous Underwater Vehicle competition held annually in San Diego, CA under the sponsorship of the Office of Naval Research.
- c) Strong indications of interest from representatives of local industry, including members of the Erik Jonsson School's Industrial Advisory Board such as Raytheon, Lennox, and Texas Instruments.

¹ *Profiles of Engineering Colleges*, American Society for Engineering Education, 2007

- d) Projections of student interest and likely applications provided by Engineering and Computer Science faculty/programs at area community colleges, from which the BSEE program draws approximately two-thirds of its graduates.
- e) The annual number of inquiries we receive from students at area high schools and community colleges concerning the availability of a Mechanical Engineering major at U. T. Dallas.

YEAR	1	2	3	4	5
Headcount	85	125	250	400	600
FTSE	68	100	200	320	480

II. Quality

- A. Degree Requirements – Use this table to show the degree requirements of the program. (*Modify the table as needed; if necessary, replicate the table for more than one option.*)

Category	Semester Credit Hours	Clock Hours
General Education Core Curriculum (<i>bachelor's degree only</i>)	42 ²	
Required Courses	67	
Prescribed Electives	15	
Free Electives	3	
Other (<i>Specify, e.g., internships, clinical work</i>)	(if not included above)	
TOTAL	127	

A

baccalaureate Mechanical Engineering degree requirement of 127 semester credit hours is consistent with the requirements of highly ranked baccalaureate Mechanical Engineering programs in the U. S. For example, Texas A&M University requires 128 SCH for graduation with a baccalaureate degree in Mechanical Engineering, the University of Illinois at Urbana-Champaign requires 132 SCH, and Purdue requires 128 SCH.

² 21 SCH of the General Education Core Curriculum are in courses required for the Mechanical Engineering major.

- B. Curriculum – Use these tables to identify the required courses and prescribed electives of the program. Note with an asterisk (*) courses that would be added if the program is approved. (*Add and delete rows as needed. If applicable, replicate the tables for different tracks/options.*)

Prefix and Number	General Education Core Curriculum	SCH
RHET 1302	Rhetoric	3
ECS 3390	Professional and Technical Communication	3
GOVT 2301	Constitutional Foundations and Political Behavior in the U.S. and Texas	3
GOVT 2302	Political Institutions in the U.S. and Texas	3
HIST (various)	American History	6
ECS 3361	Social Issues and Ethics in Computer Science and Engineering	3
ARTS 1301	Exploration of the Arts	3
HUMA 1301	Exploration of the Humanities	3
MATH 2417	Calculus 1	4
MATH 2419	Calculus 2 (2 SCH are counted in Required Courses; see table below)	2
PHYS 2325	Mechanics	3
PHYS 2125	Physics Laboratory 1	1
PHYS 2326	Electromagnetism and Waves	3
PHYS 2126	Physics Laboratory 2	1
CHEM 1311	General Chemistry 1 (3 SCH are counted in Required Courses; see table below)	1
	Total General Education Core Curriculum	42

Note: Courses with prefixes other than MECH and CS are taught by faculty outside the Erik Jonsson School of Engineering and Computer Science.

Prefix and Number	Required Courses	SCH
MATH 2419	Calculus 2 (2 SCH are counted in the General Education Core Curriculum; see table above)	2
MATH 2420	Differential Equations with Applications	4
CHEM	General Chemistry 1 (1 SCH are counted in the General	2

1311	Education Core Curriculum; see table above)	
CHEM 1111	General Chemistry Laboratory 1	1
CS 1337	Computer Science 1	3
MECH 1308	*Introduction to Mechanical Engineering	3
MECH 2300	Applied Linear Algebra for Engineers (same as EE 2300)	3
MECH 2310	*Static Equilibrium and Rigid-Body Dynamics	3
MECH 2320	*Strength of Materials	3
MECH 2120	*Mechanical Measurements Laboratory	1
MECH 3300	Advanced Engineering Mathematics (same as EE 3300)	3
MECH 3301	*Mechanics of Materials	3
MECH 3101	*Materials Laboratory	1
MECH 3302	*Intermediate Dynamics	3
MECH 3305	*Computer-Aided Design	3
MECH 3105	*CAD Laboratory	1
MECH 3310	*Fluid Mechanics	3
MECH 3110	*Fluid Mechanics Laboratory	1
MECH 3315	*Thermodynamics	3
MECH 3320	*Heat Transfer	3
MECH 3120	*Heat Transfer Laboratory	1
MECH 3341	Probability Theory and Statistics (same as EE 3341)	3
MECH 3350	*Mechanical Component and System Design	3
MECH 3150	*Mechanical Engineering Laboratory	1
MECH 4310	Systems and Controls	3
MECH 4110	*Systems Laboratory	1
MECH 4381	*Senior Design Project 1	3
MECH 4382	*Senior Design Project 2	3
	Total Required Courses Outside the Core	67

Prefix and Number	Prescribed Elective Courses	SCH
	Advanced Electives outside the major	6
	Students must take three of the following five courses:	9
MECH 4330	*Intermediate Fluid Mechanics	
MECH 4340	*Mechanical Vibrations	
MECH 4350	*Applied Heat Transfer	
MECH 4360	*Introduction to Nanostructured Materials	
MECH 4370	*Introduction to MEMS	
	Total Prescribed Elective Courses	15

Prefix and Number	Free Elective Course	SCH
	Free Elective (subject to advisor's approval)	3
	Total Free Elective Courses	3

Total semester credit hours: $42+67+15+3=127$

- C. Faculty – Use these tables to provide information about Core and Support faculty. Add an asterisk (*) before the name of the individual who will have direct administrative responsibilities for the program. (Add and delete rows as needed.)

Name of <u>Core</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program ³	% Time Assigned To Program
Blanchard, Andrew ⁴ Professor	Ph.D. in Electrical Engineering Texas A&M University	MECH 2320	50%
Burnham, Gerald Professor	Ph.D. in Electrical Engineering University of Southern California	MECH/EE 4310	50%
Cantrell, Cyrus Professor	Ph.D. in Physics Princeton University	MECH 2310, MECH 3302	25%
Kim, Moon Professor	Ph.D. in Materials Sciences Arizona State University	MECH 3315	25%
Lee, Jeong-Bong Associate Professor	Ph.D. in Electrical Engineering/MEMS Georgia Institute of Technology	MECH 4370	25%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 2320 MECH 2120	50%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 1308 MECH 3301 MECH 3101	50%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 1308 MECH 3302	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 3305 MECH 3105	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 3310 MECH 3110 MECH 4330	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 3315 MECH 3320 MECH 3120 MECH 4350	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 3350 MECH 3150 MECH 4340	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	MECH 4110 MECH 4381 MECH 4382	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	MECH 4360 MECH 4381 MECH 4382	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	MECH 4370 MECH 4381 MECH 4382	50%
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH 3305 MECH 3105	50%
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH 3315 MECH 3320	50%

³ Courses listed may not all be taught by a faculty member in the same academic year.

⁴ Founding Department Chair, Years 1–3

		MECH 3120 MECH 4350	
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH 3310 MECH 3110 MECH 4330	50%

Name of <u>Support</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program	% Time Assigned To Program
Cho, Kyeongjae Associate Professor	Ph.D. in Physics MIT	MECH 3315 MECH 4340	25%
Gupta, Gopal Professor	Ph.D. in Computer Science University of North Carolina	CS 1337	25%
Hunt, Louis R. Professor	Ph.D. in Mathematics Rice University	MECH/EE 4310	25%
Hu, Walter Assistant Professor	Ph.D. in Electrical Engineering University of Notre Dame	MECH 4360	25%
Kim, Jiyoung Associate Professor	Ph.D. in Materials Science and Engineering, University of Texas at Austin	MECH 3301	25%
Wallace, Robert M. Professor	Ph. D. in Physics University of Pittsburgh	MECH 3301 MECH 3315	25%

D. Library – Provide the library director’s assessment of library resources necessary for the program. Describe plans to build the library holdings to support the program.

1. List any library holdings added in the past three years in anticipation of the program

At present, the University of Texas at Dallas subscribes to 67 (81%) of the 83 academic/scholarly journals in mechanical engineering. The journal collection is respectable because of the University of Texas System Digital Library, which enables component schools to purchase journals consortially. This arrangement provides UT Dallas access to periodicals owned by the System’s components.

2. Describe library holdings specifically relevant to the proposed program, noting strengths and weaknesses. If there are guidelines for the discipline, do current holdings meet or exceed standards? Describe planned actions that would maintain strengths and/or remedy weaknesses.

JOURNALS. The Library used a number of resources to analyze the collection in Mechanical Engineering including Ulrich’s Web and the Journal Citation Reports from ISI. Each title was analyzed with respect to need, availability in the Dallas-Ft. Worth region, and the degree plan.

To support the proposed BSME and MSME programs, the Library will need to subscribe to 20 journal titles not currently in the collection (including the publications of the American Society of Mechanical Engineering), at an annual cost of \$20,200.

ARTICLE DATABASES. The librarians researched access to periodical literature in the field of Mechanical Engineering. The Library retains subscriptions to the Web of Science (Science Citation Index), INSPEC, SCOPUS, ProceedingsFirst, and PhysicsNetBase, a collection of electronic books in physics. U. T. Dallas Libraries have superior database coverage for reviewing the scholarly literature in Mechanical Engineering and no additional purchases are suggested

BOOKS. An analysis using OCLC’s WorldCat Collection Analysis software shows that in the general category of Mechanical Engineering and Machinery, the Library collection includes 1,840 books.

The librarians reviewed the book collections in the field of Mechanical Engineering for two institutions with undergraduate and graduate programs (University of Texas at Arlington and Texas A&M University). U. T. Arlington purchases an average of 67 titles per year, and Texas A&M purchases an average of 153 titles. The U. T. Dallas Library expects to purchase 100 titles per year in Mechanical Engineering at an average cost of \$125 per volume.

3. Describe cooperative library arrangements that would be available to students in this program.

The Libraries of the University of Texas at Dallas are active participants in Interlibrary Loan Services as administered by Amigos-OCLC. As a participant, the Library can borrow materials from other libraries willing to loan their items. In general, the Library can borrow most items for a user for a period of 3 weeks. In addition, the Library provides articles from journals not owned. The article is delivered electronically to an email address.

Secondly, the Library subscribes to thousands of electronic resources through cooperative agreements including the UT System, TexShare (Texas State Library and Archives), Amigos (the OCLC component for Texas libraries), and the local Phoenix library consortium.

4. Provide the Library Director's assessment of library resources necessary for the proposed program.

A significant number of scholarly journals in Mechanical Engineering are already accessible in the McDermott Library; however the monograph collection will need significant enlargement. The following cost estimate applies to the proposed BSME and MSME programs together:

20 additional journals (\$20,200 per year)	\$101,600
80 retrospective books (2002-2007)	\$10,000
100 additional books per year (\$12,500)	<u>\$62,500</u>
Total	\$173,100

- E. Facilities and Equipment – Describe the availability and adequacy of facilities and equipment to support the program. Describe plans for facility and equipment improvements/additions.

Existing classroom, teaching laboratory, and research laboratory space will accommodate the faculty growth and student enrollments projected for the first two years of the program. In years 1 and 2, the need for additional space will be assessed on the basis of actual enrollments and new, possibly revised, projections.

The proposed program will require significant acquisitions of teaching and research laboratory equipment in the new areas of planned faculty hiring. \$10M has been budgeted for these purposes.

In 2007, The University of Texas at Dallas opened the 192,000-square-foot, \$85M Natural Sciences and Engineering Research Laboratory (NSERL). The NSERL was designed for interdisciplinary research. Currently research groups from electrical engineering, materials science and engineering, chemistry, biology and physics have space in the building. Approximately one-third of the space is being held in reserve for future faculty.

The NSERL has leading-edge capabilities for materials characterization and synthesis and MEMS fabrication. These capabilities provide faculty and graduate students with tools uniquely suited to engage in research areas of modern mechanical engineering, especially in the area of materials and MEMS.

- F. Accreditation – If the discipline has a national accrediting body, describe plans to obtain accreditation or provide a rationale for not pursuing accreditation.

The Accreditation Board of Engineering and Technology (ABET) is responsible for accreditation of undergraduate engineering programs in the United States.

ABET requires that “The program must demonstrate that graduates have: knowledge of chemistry and calculus-based physics with depth in at least one; the ability to apply advanced mathematics through multivariate calculus and differential equations; familiarity with statistics and linear algebra; the ability to work professionally in both thermal and mechanical systems areas including the design and realization of such systems.”⁵ U. T. Dallas will request that ABET evaluate the undergraduate Mechanical Engineering Program at the end of its fourth academic year, at the same time as the regular accreditation cycle of the other engineering programs at U. T. Dallas.

⁵ *Criteria for Accrediting Engineering Programs*, ABET, Inc., 2005

III. Costs and Funding

Five-Year Costs and Funding Sources - Use this table to show five-year costs and sources of funding for the program.

Five-Year Costs		Five-Year Funding	
Personnel ¹	\$7.87M	Reallocated Funds	\$1M
Facilities and Equipment	\$10M	Anticipated New Formula Funding ⁴	\$2.45M
Library, Supplies, and Materials ²	\$0.3M	Special Item Funding	\$0
Other ³	\$0.35M	Other ⁵	\$18.18M
Total Costs	\$18.52M	Total Funding	\$21.63M

- 13 new T/T faculty members, plus a new department chair in years 4 and 5, will be added to support the BSME and MSME programs, at an average annual cost of \$125,000 each (\$140,000 for the department chair in years 4 and 5). A total of 20 FTE-years of senior lecturer/part-time lecturer personnel will be added at an average annual cost of \$65,000, beginning with 5 FTEs in year 1 and declining to 2 FTEs in year 5. Four graduate assistants will be added each year, at a cost of \$25,000 each, reaching a total of 20 in year 5.
- Library: \$173,000; consumable supplies and materials: \$127,000.
- Administrative staff costs (\$0.14M); travel (\$0.06M); accreditation (\$0.15M).
- Indicate formula funding for students new to the institution because of the program; formula funding should be included only for years three through five of the program and should reflect enrollment projections for years three through five.
- Designated tuition and fees, \$8.56M; PUF, \$10M.

The following table provides a detailed summary of personnel expenses and revenues from formula funding and designated tuition and fees:

Year	1	2	3	4	5
AY	2008-09	2009-10	2010-11	2011-12	2012-13
Headcount	85	125	250	400	600
FTE	68	100	200	320	480
Events			ABET ask	ABET visit	
Revenues					
Formula	\$0	\$0	\$435,568	\$435,568	\$1,571,136
Designated T+F	\$498,440	\$733,000	\$1,466,000	\$2,345,600	\$3,511,200
Yearly total	\$498,440	\$733,000	\$1,901,568	\$2,781,168	\$5,092,336
Total revenues					\$11,012,336
Expenditures					
T/T faculty FTE	1	4	7 ⁶	11	14
SL/PTL FTE	5	5	5	3	2
RA/TA	4	8	12	16	20
Technical staff	0	0	1	1	2

⁶ One new T/T faculty FTE is allocated to the MSME program in years 3 through 5. All T/T Mechanical Engineering faculty will be expected to dedicate some of their effort to the MSME program.

Yearly total	\$550,000	\$1,025,000	\$1,565,000	\$2,125,000	\$2,600,000
Total personnel					\$7,865,000

Signature Page

1. Adequacy of Funding – The chief executive officer shall sign the following statement:

I certify that the institution has adequate funds to cover the costs of the new program. Furthermore, the new program will not reduce the effectiveness or quality of existing programs at the institution.

Chief Executive Officer

Date

2. Board of Regents or Designee Approval – A member of the Board of Regents or designee shall sign the following statement:

On behalf of the Board of Regents, I approve the program.

Board of Regents (Designee)

Date of Approval

3. Board of Regents Certification of Criteria for Commissioner of Assistant Commissioner Approval – For a program to be approved by the Commissioner or the Assistant Commissioner for Academic Affairs and Research, the Board of Regents or designee must certify that the new program meets the eight criteria under TAC Section 5.50 (b): The criteria stipulate that the program shall:

- (1) be within the institution's current Table of Programs;
- (2) have a curriculum, faculty, resources, support services, and other components of a degree program that are comparable to those of high quality programs in the same or similar disciplines at other institutions;
- (3) have sufficient clinical or in-service sites, if applicable, to support the program;
- (4) be consistent with the standards of the Commission of Colleges of the Southern Association of Colleges and Schools and, if applicable, with the standards or discipline-specific accrediting agencies and licensing agencies;
- (5) attract students on a long-term basis and produce graduates who would have opportunities for employment; or the program is appropriate for the development of a well-rounded array of basic baccalaureate degree programs at the institution;
- (6) not unnecessarily duplicate existing programs at other institutions;
- (7) not be dependent on future Special Item funding
- (8) have new five-year costs that would not exceed \$2 million.

On behalf of the Board of Regents, I certify that the new program meets the criteria specified under TAC Section 5.50 (b).

Board of Regents (Designee)

Date

New Program Request Form for Bachelor and Master's Degrees

Directions: An institution shall use this form to propose a new bachelor's or master's degree program. In completing the form, the institution should refer to the document *Standards for Bachelor's and Master's Programs*, which prescribes specific requirements for new degree programs. Note: This form requires signatures of (1) the Chief Executive Officer, certifying adequacy of funding for the new program; (2) a member of the Board of Regents (or designee), certifying Board approval, and (3) if applicable, a member of the Board of Regents or (designee), certifying that criteria have been met for staff-level approval. Note: An institution which does not have preliminary authority for the proposed program shall submit a separate request for preliminary authority. That request shall address the criteria set in Coordinating Board rules Section 5.24 (a).

Information: Contact the Division of Academic Affairs and Research at 512/427-6200 for more information.

Administrative Information

1. **Institution:** The University of Texas at Dallas
2. **Program Name** – Show how the program would appear on the Coordinating Board's program inventory (e.g., *Bachelor of Business Administration degree with a major in Accounting*):
Master of Science in Mechanical Engineering (MSME)
3. **Proposed CIP Code:** 14.1901.00, Mechanical Engineering
4. **Brief Program Description** – Describe the program and the educational objectives:

The objective of the Master of Science degree program in Mechanical Engineering will be to produce Mechanical Engineering graduates who will be capable of undertaking challenging projects that will require advanced knowledge of the design of mechanical and thermal systems, especially micro-scale and nano-scale systems. The proposed program fits well in the long-range academic plan for The University of Texas at Dallas. The Erik Jonsson School of Engineering and Computer Science was created in 1986 in response to the high demand of local industry for engineering professionals. In a May 2004 report to the Chancellor and Board of Regents of The University of Texas System, the Washington Advisory Group (WAG) recommended Mechanical Engineering as one of the areas in which U. T. Dallas should create new departments and degree programs.

Also in 2004, the American Society of Mechanical Engineers (ASME), the leading professional society for mechanical engineering, issued a document titled "A Vision of the Future of Mechanical Engineering Education".⁷ The document makes the following observation:

⁷ "A Vision of the Future of Mechanical Engineering Education", American Society of Mechanical Engineers Council on Education, 2004 (<http://files.asme.org/asmeorg/Education/College/ME/7782.pdf>)

“...mechanical engineering is changing from

- ‘The branch of engineering that encompasses the generation and application of heat and mechanical power and the production, design and use of machines and tools’ (Webster’s II New College Dictionary, 2001) to
- ‘One that addresses societal concerns through analysis, design, and manufacture of systems, at a variety of size scales...’ (‘The Case for Renaissance Engineers and Renaissance in Mechanical Engineering Education,’ Adnan Akay, in *The Innovative University*, Carnegie Mellon University Press, 2003)

Education in micro-scale and nano-scale mechanical and thermal design fits well with the core UT Dallas competencies in microelectromechanical systems (MEMS) and nanostructured materials, and aligns with the needs of local industry.

The necessary education and training for immediate competency on the job cannot be imparted in a Bachelor’s-level engineering program, for reasons articulated by the ASME:

“The typical scope of a baccalaureate program (and the increasing emphasis on limiting the baccalaureate degree to four years, particularly in state-supported colleges and universities) cannot accommodate in-depth technical specialization, but can accommodate technical breadth and flexibility and the intellectual skills necessary for life-long learning.”

The primary educational objective of the proposed Master’s program is to train Mechanical Engineers to meet advanced design and development needs of local and state industry in collaboration with mechanical engineers and scientists from other disciplines, as described by the ASME:

“Classical mechanical engineering principles will remain essential for the development of new technologies in, e.g., the life sciences and micro-scale applications. Mechanical engineers must have the intellectual agility to contribute not only their specialized expertise in interdisciplinary collaborations for technology development, but to understand and appreciate the contributions of specialists in other fields as well.”

The proposed MSME degree program will provide the necessary education and immediately applicable skills that will enable both recent baccalaureate graduates and experienced mechanical engineers to develop new manufacturing and fabrication technologies.

5. Administrative Unit – Identify where the program would fit within the organizational structure of the university (e.g., *The Department of Electrical Engineering within the College of Engineering* or *Department of Mechanical Engineering within the Erik Jonsson School of Engineering and Computer Science*) is proposed in conjunction with the degree program requests in Mechanical Engineering. A copy of the Administrative Change Request is forwarded with the related baccalaureate and master’s degree proposals.

7. Proposed Implementation Date – Report the first semester and year that students would enter the program: It is proposed that the first Master’s students enter the program in Fall 2008. This is discussed in I.C below, most of the initial students will be drawn from the ranks of full-time mechanical engineers in local industry. Eight new organized, required or prescribed elective courses are required.

for full implementation of the proposed program. It is expected that a combination of new faculty hires, part-time lecturers (with doctoral degrees in mechanical engineering) and senior lecturers (with doctoral degrees in mechanical engineering) totaling an estimated 8 FTE will be able to staff proposed courses.

7. Contact Person – Provide contact information for the person who can answer specific questions about the program:

Name:

Title:

E-mail:

Phone:

Program Information

I. Need

Note: Complete I.A and I.B only if preliminary authority for the program was granted more than four years ago. This includes programs for which the institution was granted broad preliminary authority for the discipline.

- A. Job Market Need – Provide short- and long-term evidence of the need for graduates in the job market.

Broad preliminary authority for Engineering at the baccalaureate and master's levels was granted by the Coordinating Board at its April 20, 2006 meeting.

- B. Student Demand – Provide short- and long-term evidence of demand for the program.

Broad preliminary authority for Engineering at the baccalaureate and master's levels was granted by the Coordinating Board at its April 20, 2006 meeting.

- C. Enrollment Projections – Use this table to show the estimated cumulative headcount and full-time student equivalent (FTSE) enrollment for the first five years of the program. (*Include majors only and consider attrition and graduation.*)

The following enrollment estimates are based on:

- a) Strong indications of interest from representatives of local industry, including the members of the Erik Jonsson School's Industrial Advisory Board such as Raytheon, Lennox, and Texas Instruments.
- b) Projections of student interest among graduates of the proposed BSME program.
- c) Interest expressed by mechanical engineers working in industry. In the current MSEE and MSCS programs, professional Master's students who work full-time in industry provide much of the enrollment. This trend is expected to continue for the proposed MSME program. Accordingly, the FTE estimates for the early years of the program include both a substantial number of half-time students and a number of full-time students equal to the number of graduate assistants proposed for the BSME program.

YEAR	1	2	3	4	5
Headcount	19	28	37	51	70
FTSE	11	18	24	33	45

II. Quality

- A. Degree Requirements – Use this table to show the degree requirements of the program. (*Modify the table as needed; if necessary, replicate the table for more than one option.*)

Category	Semester Credit Hours	Clock Hours
General Education Core Curriculum (<i>bachelor's degree only</i>)	N/A	
Required Courses	15	
Prescribed Electives	12	
Free Electives	6	
Other (<i>Specify, e.g., internships, clinical work</i>)	(if not included above)	
TOTAL	33	

B.

Curriculum – Use these tables to identify the required courses and prescribed electives of the program. Note with an asterisk (*) courses that would be added if the program is approved. (*Add and delete rows as needed. If applicable, replicate the tables for different tracks/options.*)

Prefix and Number	Required Core Courses (15 SCH)	SCH
MECH 6305	*CAD Technology	3
MECH 6340	*Intermediate Mechanical Vibrations	3
MECH 6301/ MSEN 6310	Mechanical Properties of Materials	3
MECH 6310	*Intermediate Fluid Mechanics	3
MECH/EE 6331	Systems and Control Theory	3
	Total Required Core Courses	15

The proposed MSME program has both thesis and non-thesis options. All full-time, supported students are required to complete a Master's thesis. Other students may elect the thesis option, but are not required to do so. The thesis option requires six SCH of research, a written thesis submitted to the graduate school, and a formal public defense of the thesis. A supervising committee, which must be chosen in consultation with the student's

supervising professor, administers the final public defense.
Research or thesis hours cannot be counted toward completion of a MSME degree plan unless a thesis has been written and successfully defended.

The proposed MSME program will offer two tracks initially: A Microelectromechanical Systems (MEMS) track and a Mechanical Systems Engineering Track. In each track, students must complete 15 SCH of core courses listed above, plus 12 SCH of prescribed electives from one of the two tracks, plus 6 SCH of free electives. Students who complete either track successfully will earn the MSME degree. The proposed tracks may be modified, and additional tracks may be offered, as faculty and student interest warrant.

Track 1: Microelectromechanical Systems

Prefix and Number	Prescribed Elective Courses for the Microelectromechanical Systems (MEMS) Track (12 SCH)	SCH
MECH/EE 6382	Introduction to MEMS	
MECH 6302	*Dynamics of Complex Structures	
MECH 6315	*Advanced Fluid Mechanics	
MECH 6320	*Conductive Heat Transfer	
MECH 6321	*Convective Heat Transfer	
MECH/EE/MSEN 6322	Semiconductor Processing Technology	
MECH/EE 6381	Numerical Methods in Engineering	
MECH 6385	*Computational Modeling of Mechanical Systems Prerequisite: MECH/EE 6381	
MSEN 5300	Introduction to Materials Science	
MECH/MSEN 5310	Thermodynamics of Materials	
MSEN 5340	†Advanced Polymer Science and Engineering	
MSEN 5353	Integrated Circuit Packaging	
MSEN 6310	Phase Transformations	
MSEN 6361	Deformation Mechanisms in Solid Materials	
PHYS 6377	Computational Physics of Nanomaterials	
MECH 7V80	*Special Topics in Mechanical Engineering	
MECH 8V70	*Research in Mechanical Engineering	
MECH 8V98	*Thesis	
Total Prescribed Elective Courses		12

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† Some courses with prefixes other than MECH may be taught by faculty not affiliated with the proposed Department of Mechanical Engineering.

Track 2: Mechanical Systems Engineering

Prefix and Number	Prescribed Elective Courses for the Mechanical Systems Engineering Track (12 SCH)	SCH
MECH 6302	*Dynamics of Complex Structures	
MECH 6315	*Advanced Fluid Mechanics	
MECH 6320	*Conductive Heat Transfer	
MECH 6321	*Convective Heat Transfer	
MECH/EE 6332	Advanced Control Prerequisite: MECH/EE 6331	
MECH/EE 6336	Nonlinear Control Systems Prerequisite: MECH/EE 6331	
MECH/EE 6381	Numerical Methods in Engineering	
MECH 6385	*Computational Modeling of Mechanical Systems Prerequisite: MECH/EE 6381	
MSEN 6310	Phase Transformations	
MSEN 6361	Deformation Mechanisms in Solid Materials	
PHYS 6377	Computational Physics of Nanomaterials	
MECH 7V80	*Special Topics in Mechanical Engineering	
MECH 8V70	*Research in Mechanical Engineering	
MECH 8V98	*Thesis	
	Total Prescribed Elective Courses	12

Free Electives

Prefix and Number	Free Elective Courses	SCH
(various)	Free Electives (subject to advisor's approval)	6
	Total Free Elective Courses	6

Total semester credit hours: 15+12+6=33

C. Faculty – Use these tables to provide information about Core and Support faculty. Add an asterisk (*) before the name of the individual who will have direct administrative responsibilities for the program. (Add and delete rows as needed.)

Name of <u>Core</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program⁸	% Time Assigned To Program
Blanchard, Andrew ⁹ Professor	Ph.D. in Electrical Engineering Texas A&M University	MSEN 6301	25%
Cantrell, Cyrus Professor	Ph.D. in Physics Princeton University	MECH/EE 6381	25%
Kim, Moon Professor	Ph.D. in Materials Sciences Arizona State University	MSEN 5310	25%
Lee, Jeong-Bong Associate Professor	Ph.D. in Electrical Engineering/MEMS Georgia Institute of Technology	MECH/EE 6382	25%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 6310 MSEN 6361	50%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 6301	50%
New Faculty in Year _2_	Ph.D. in Mechanical Engineering	MECH 6302	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 6305	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 6310 MECH 6315	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 6320 MECH 6321	50%
New Faculty in Year _3_	Ph.D. in Mechanical Engineering	MECH 6340 MECH 6385	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	MECH 6332 MECH 6336 MECH 6385	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	PHYS 6377	50%
New Faculty in Year _4_	Ph.D. in Mechanical Engineering	MECH/EE 6382	50%
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH 6305	50%
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH/MSEN 5310	50%
New Faculty in Year _5_	Ph.D. in Mechanical Engineering	MECH 6310 MECH 6315	50%

⁸ A faculty member may teach not all courses listed in the same academic year.

⁹ Founding Department Chair, Years 1–3

Name of <u>Support</u> Faculty and Faculty Rank	Highest Degree and Awarding Institution	Courses Assigned in Program¹⁰	% Time Assigned To Program
Cho, Kyeongjae Associate Professor	Ph.D. in Physics MIT	PHYS 6377	25%
Gnade, Bruce Professor	Ph.D. in Nuclear Chemistry Georgia Institute of Technology	MSEN 5353	25%
Hunt, Louis R. Professor	Ph.D. in Mathematics Rice University	MECH/EE 6331 MECH/EE 6332 MECH/EE 6336	25%
Hu, Walter Assistant Professor	Ph.D. in Electrical Engineering University of Notre Dame	EE 6322	25%
Kim, Jiyoung Associate Professor	Ph.D. in Materials Science and Engineering, University of Texas at Austin	MSEN 5300 MSEN 6310	25%
Wallace, Robert M. Professor	Ph. D. in Physics University of Pittsburgh	MSEN 6361	25%

¹⁰ A faculty member may teach not all courses listed in the same academic year.

D. Library – Provide the library director’s assessment of library resources necessary for the program. Describe plans to build the library holdings to support the program.

5. List any library holdings added in the past three years in anticipation of the program

At present, the University of Texas at Dallas subscribes to 67 (81%) of the 83 academic/scholarly journals in mechanical engineering. The journal collection is respectable because of the University of Texas System Digital Library, which enables component schools to purchase journals consortially. This arrangement provides UT Dallas access to periodicals owned by the System’s components.

6. Describe library holdings specifically relevant to the proposed program, noting strengths and weaknesses. If there are guidelines for the discipline, do current holdings meet or exceed standards? Describe planned actions that would maintain strengths and/or remedy weaknesses.

JOURNALS. The Library used a number of resources to analyze the collection in Mechanical Engineering including Ulrich’s Web and the Journal Citation Reports from ISI. Each title was analyzed with respect to need, availability in the Dallas-Ft. Worth region, and the degree plan.

To support the proposed BSME and MSME programs, the Library will need to subscribe to 20 journal titles not currently in the collection (including the publications of the American Society of Mechanical Engineering), at an annual cost of \$20,200.

ARTICLE DATABASES. The librarians researched access to periodical literature in the field of Mechanical Engineering. The Library retains subscriptions to the Web of Science (Science Citation Index), INSPEC, SCOPUS, ProceedingsFirst, and PhysicsNetBase, a collection of electronic books in physics. U. T. Dallas Libraries have superior database coverage for reviewing the scholarly literature in Mechanical Engineering and no additional purchases are suggested

BOOKS. An analysis using OCLC’s WorldCat Collection Analysis software shows that in the general category of Mechanical Engineering and Machinery, the Library collection includes 1,840 books.

The librarians reviewed the book collections in the field of Mechanical Engineering for two institutions with undergraduate and graduate programs (University of Texas at Arlington and Texas A&M University). U. T. Arlington purchases an average of 67 titles per year, and Texas A&M purchases an average of 153 titles. The U. T. Dallas Library expects to purchase 100 titles per year in Mechanical Engineering at an average cost of \$125 per volume.

7. Describe cooperative library arrangements that would be available to students in this program.

The Libraries of the University of Texas at Dallas are active participants in Interlibrary Loan Services as administered by Amigos-OCLC. As a participant, the Library can borrow materials from other libraries willing to loan their items. In general, the Library can borrow most items for a user for a period of 3 weeks. In addition, the Library provides articles from journals not owned. The article is delivered electronically to an email address.

Secondly, the Library subscribes to thousands of electronic resources through cooperative agreements including the UT System, TexShare (Texas State Library and Archives), Amigos (the OCLC component for Texas libraries), and the local Phoenix library consortium.

8. Provide the Library Director's assessment of library resources necessary for the proposed program.

A significant number of scholarly journals in Mechanical Engineering are already accessible in the McDermott Library. However, the monograph collection will need significant enlargement. The following cost estimate applies to the proposed BSME and MSME programs together:

20 additional journals (\$20,200 per year)	\$101,600
80 retrospective books (2002-2007)	\$10,000
100 additional books per year (\$12,500)	<u>\$62,500</u>
Total	\$173,100

- E. Facilities and Equipment – Describe the availability and adequacy of facilities and equipment to support the program. Describe plans for facility and equipment improvements/additions.

Existing classroom, teaching laboratory, and research laboratory space will accommodate the faculty growth and student enrollments projected for the first two years of the program. In years 1 and 2, the need for additional space will be assessed on the basis of actual enrollments and new, possibly revised, projections.

The proposed program will require significant research startup packages for new faculty. \$7M has been budgeted for these purposes.

In 2007, The University of Texas at Dallas opened the 192,000-square-foot, \$85M Natural Sciences and Engineering Research Laboratory (NSERL). The NSERL was designed for interdisciplinary research. Currently research groups from electrical engineering, materials science and engineering, chemistry, biology and physics have space in the building. Approximately one-third of the space is being held in reserve for future faculty.

The NSERL has leading-edge capabilities for materials characterization and synthesis and MEMS fabrication. These capabilities provide faculty and graduate students with tools uniquely suited to engage in research areas of modern mechanical engineering, especially in the area of materials and MEMS.

- F. Accreditation – If the discipline has a national accrediting body, describe plans to obtain accreditation or provide a rationale for not pursuing accreditation.

Accreditation in engineering disciplines is not performed at the Master's level if an undergraduate program exists in the same area of engineering at the same institution. The accompanying BSME proposal provides for accreditation review of the baccalaureate program in mechanical engineering on the regular accreditation cycle for other engineering disciplines at U. T. Dallas.

III. Costs and Funding

Five-Year Costs and Funding Sources - Use this table to show five-year costs and sources of funding for the program.

Five-Year Costs		Five-Year Funding	
Personnel ¹	\$1.33M	Reallocated Funds	\$0.4M
Facilities and Equipment	\$7M	Anticipated New Formula Funding ³	\$0.54M
Library, Supplies, and Materials	\$0.1M	Special Item Funding	\$0
Other ²	\$0.15M	Other ⁴	\$8.17M
Total Costs	\$8.94M	Total Funding	\$9.11M

- 13 new T/T faculty members, plus a new department chair in years 4 and 5, will be added to support the BSME and MSME programs, at an average annual cost of \$125,000 each (\$140,000 for the department chair in years 4 and 5). A total of 20 FTE-years of senior lecturer/part-time lecturer personnel will be added at an average annual cost of \$65,000, beginning with 5 FTEs in year 1 and declining to 2 FTEs in year 5. Four graduate assistants will be added each year, at a cost of \$25,000 each, reaching a total of 20 in year 5. Startup costs for the new T/T faculty are included in this proposal; other laboratory and equipment costs are included in the accompanying BSME proposal.
- Current staffing for Mechanical Engineering for graduate studies is adequate. However, as the undergraduate program grows, a new position will be created for handling UG affairs, as requested in the accompanying BSME proposal. The requested funds provide for travel and additional staff costs associated with graduate admissions in years 3 through 5.
- Indicate formula funding for students new to the institution because of the program; formula funding should be included only for years three through five of the program and should reflect enrollment projections for years three through five.
- Sources of other funding include PUF allocations, designated tuition and fees, the Jonsson School Enrichment Fund and a combination of interest income and general, non-state institutional funds on hand.

The following table provides a detailed summary of revenues from formula funding and designated tuition and fees, as well as expenditures for academic personnel:

Year	1	2	3	4	5
AY	2008-09	2009-10	2010-11	2011-12	2012-13
Headcount	19	28	37	51	70
FTE	11	18	24	33	45
Revenues					
Formula	\$0	\$0	\$141,315	\$141,315	\$259,000
Tuition	\$66,000	\$108,000	\$144,000	\$198,000	\$270,000
Yearly total	\$66,000	\$108,000	\$285,315	\$339,315	\$529,000
Total revenues					\$1,327,700
Expenditures					

T/T faculty FTE	0.5	0.5	1.5 ¹¹	2	2
SL/PTL FTE	2	2	1	1.5	1.5
Yearly total	\$192,500	\$192,500	\$252,500	\$347,500	\$347,500
Total personnel					\$1,332,500

¹¹ One new T/T faculty FTE is allocated to the MSME program in years 3 through 5. All T/T Mechanical Engineering faculty will be expected to dedicate some of their effort to the MSME program.

Signature Page

1. Adequacy of Funding – The chief executive officer shall sign the following statement:

I certify that the institution has adequate funds to cover the costs of the new program. Furthermore, the new program will not reduce the effectiveness or quality of existing programs at the institution.

Chief Executive Officer

Date

3. Board of Regents or Designee Approval – A member of the Board of Regents or designee shall sign the following statement:

On behalf of the Board of Regents, I approve the program.

Board of Regents (Designee)

Date of Approval

3. Board of Regents Certification of Criteria for Commissioner of Assistant Commissioner Approval – For a program to be approved by the Commissioner or the Assistant Commissioner for Academic Affairs and Research, the Board of Regents or designee must certify that the new program meets the eight criteria under TAC Section 5.50 (b): The criteria stipulate that the program shall:

- (1) be within the institution's current Table of Programs;
- (2) have a curriculum, faculty, resources, support services, and other components of a degree program that are comparable to those of high quality programs in the same or similar disciplines at other institutions;
- (3) have sufficient clinical or in-service sites, if applicable, to support the program;
- (4) be consistent with the standards of the Commission of Colleges of the Southern Association of Colleges and Schools and, if applicable, with the standards or discipline-specific accrediting agencies and licensing agencies;
- (5) attract students on a long-term basis and produce graduates who would have opportunities for employment; or the program is appropriate for the development of a well-rounded array of basic baccalaureate degree programs at the institution;
- (6) not unnecessarily duplicate existing programs at other institutions;
- (7) not be dependent on future Special Item funding
- (8) have new five-year costs that would not exceed \$2 million.

On behalf of the Board of Regents, I certify that the new program meets the criteria specified under TAC Section 5.50 (b).

Board of Regents (Designee)	Date
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**Request for Preliminary Authority
To Develop a Doctoral Degree Program in Mechanical Engineering**

**Erik Jonsson School of Engineering and Computer Science
The University of Texas at Dallas**

The Erik Jonsson School of Engineering and Computer Science seeks preliminary authority to submit a proposal for a Ph.D. degree program in Mechanical Engineering (CIP Code 14.1901.00). This degree is required to meet the needs of the community served by The University of Texas at Dallas. It will support a research program for the faculty to be hired for the initial baccalaureate and Master's degree programs proposed in an accompanying document. A new Department of Mechanical Engineering is also proposed. These proposals are fully aligned with the recommendations made by the Washington Advisory Group in 2004: "The School of Engineering should expand the number of departments over the next 10 years. Because of the requirements of the surrounding industry, and the UTD designated foci, the following areas should be considered: Industrial Engineering and Manufacturing Systems, Mechanical and Materials Engineering, Chemical and Bioengineering. This expansion of the engineering mission would give the College a modern and comprehensive look and a more realistic base from which to achieve its stated goals." The rationale for this expansion follows.

(a) Criteria. In reviewing an institution's request for additions to its Table of Programs for preliminary authority, the Board shall consider:

(1) The demonstrated need for a future program in terms of present and future vocational needs of the state and the nation:

Data from the Bureau of Labor Statistics of the U. S. Department of Labor, presented in Chart 1, shows that 16% of all employed engineers are mechanical engineers. If the BSME and MSME degree program proposals are approved, and if this request for preliminary authority for a doctoral program in Mechanical Engineering is approved, U. T. Dallas can participate in addressing the educational needs of 43% of the engineering workforce.

U. S. Engineering Employment, 2004

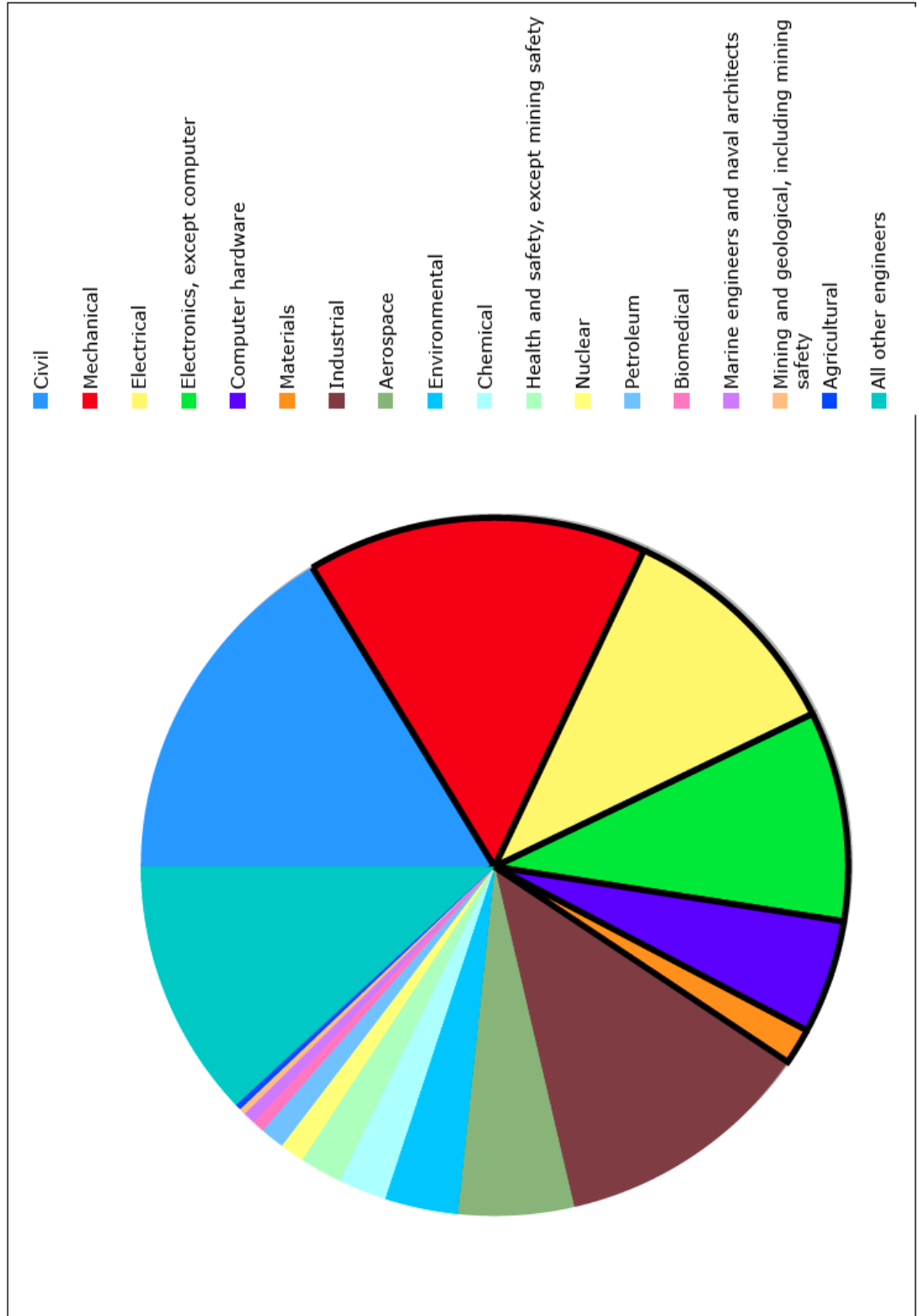


Chart 1. U. S. Engineering employment in 2004.

The fraction of engineers who practice Mechanical Engineering in the Metroplex is larger than in the U. S. as a whole because of the presence of some of the Nation's largest

defense manufacturing and systems integration companies. A significant fraction of these companies are in close proximity to The University of Texas at Dallas. Most engineering jobs in these companies require U. S. citizenship or permanent residence. In several of these companies, more than 50% of the engineering workforce is over 50 years of age. Success in supplying new engineering graduates to replace those who will retire between 2007 and 2020 will profoundly affect the continued vitality of some of the largest employers of engineers in the State of Texas.

The leadership for sustaining and refreshing engineering jobs comes in part from Ph.D. level personnel. The interplay between a high-technology cluster and a local, research-oriented university is an essential element of long-term economic health. Because of the dominance of Mechanical Engineering in defense-related industries in the Metroplex, it is strategically imperative to increase the production of Ph.D. graduates in areas of Mechanical Engineering that will help maintain and improve the competitive position of local defense-related companies.

Both engineering Ph.D. production and, commensurately, Federal research funding levels, must be raised in the Dallas/Fort Worth region. Statistics from the American Society for Engineering Education, as well as Federal economic data, describe an important need for engineering Ph.D. production in the DFW area. The state of Texas accounts for 7.6% of the U.S. population and contributes 7.6% to the U.S. GDP. However, despite excellence in the defense and medical sectors of the economy, Texas garners only 6.2% of Federal engineering research funding. The shortfall in the DFW area is even worse. The DFW area has 2% of the U.S. population and contributes 2.4% of the U.S. GDP. However, the DFW area produces only 1% of engineering Ph.D.s and only 0.4% of Federal engineering research funding. The region could see a factor of 2 increase in the production of Ph.D.s and a factor of 5 increase in Federal engineering research funding. U. T. Dallas is in an excellent position to contribute to a significant reduction in this shortfall.

(2) Whether the proposed addition would complement and strengthen existing programs at the institution:

The Ph.D. level authority requested here will significantly enrich the educational opportunities for Jonsson School students at all levels in part by providing a broader, multidisciplinary experience. The envisioned emphasis on a modern micro-mechanical and nano-materials foundation in the proposed Mechanical Engineering Ph.D. program will complement and build on strength in these areas in the existing graduate programs in electrical engineering, chemistry and physics. New Mechanical Engineering faculty with expertise in heat transfer will significantly strengthen the existing academic and research programs in Electrical and Computer Engineering, because thermal issues are key system-level problems in modern microelectronics and digital systems. The addition of Mechanical Engineering faculty with expertise in computational modeling will create synergy with the Computer Science Department, in accordance with the recommendations made by a distinguished review panel in a 2007 study of the graduate programs in Computer Science and Software Engineering at U. T. Dallas. Finally, Mechanical Engineering faculty with expertise in novel materials and MEMS will substantially strengthen the doctoral and Master's programs in biomedical engineering, for which U. T. Dallas has received preliminary authority.

(3) Whether a future program would unnecessarily duplicate other programs within the region, state, or nation:

The Ph.D. program in Mechanical Engineering envisioned in this request will add to and complement existing programs in the region and the state. The U. T. Dallas emphasis and research thrusts in Mechanical Engineering will include MEMS and nanostructured

materials and will ideally complement the program at U. T. Arlington. This will allow teams of researchers from both campuses to collaborate on proposals for Federal engineering research. Thus, duplication will be avoided and DFW students will have a broader base of expertise and opportunities from which to draw.

(4) Whether a critical mass of students and faculty is likely to be available to allow the program to be offered at a high level of quality and to become self-sufficient on the basis of state funding:

Ph.D. enrollment and graduation in the Erik Jonsson School has increased dramatically over the past 10 years. In 2006, the Erik Jonsson School of Engineering and Computer Science conferred 55 Ph.D.s, an all-time maximum for the School. This is due to improved quality, size and research activity of the academic program, as well as whole-hearted support from the region's high-technology companies. All of these Ph.D. graduates are in demand from industry, and several of them are becoming junior faculty at other universities across the nation. In addition, the Erik Jonsson School is successfully recruiting exceptional faculty researchers and graduate students of the highest quality, and this activity will increase in scale and scope.

(b) Additional information required for requests for doctoral programs:

(1) A demonstrated regional, state, or national unmet need for doctoral graduates in the field, or an unmet need for a doctoral program with a unique approach to the field:

Because of its high technology economic sector, there is a dramatic shortfall of doctoral engineering graduates in the Dallas/Fort Worth area, and, to a lesser degree, across Texas. As indicated above, the Dallas/ Fort Worth region should see a factor of 2 increase in the production of Ph.D.s and a factor of 5 increase in Federal engineering research funding. Correcting this shortfall is an important reason for this request. The combination of globally recognized university researchers, doctoral education, federal funding and industry in close proximity is a productive economic engine.

The proposed doctoral program in Mechanical Engineering is unique in Texas in terms of its focus on microelectromechanical systems (MEMS), nanostructured materials, and mechanical engineering systems. This focus will support future defense technologies. For example, future tactical aircraft may make use of nanostructured materials such as carbon nanotubes, and will employ MEMS in sensor and other applications.

(2) Evidence that existing doctoral programs in the state cannot accommodate additional students (or accessibility to these programs is restricted), or that expanding existing programs is not feasible or would not best serve the state;

As discussed above, there will be substantial needs for mechanical engineers at all levels to replace engineers who will retire from Metroplex defense industries between 2007 and 2020. Also as discussed above, most full-time engineering employees of defense companies must be U. S. citizens or permanent residents. The Erik Jonsson School has hired an assistant dean for recruiting, who is building a concerted effort to attract top domestic students to enter doctoral programs at U. T. Dallas. In support of this effort, the Jonsson School has developed a suite of highly competitive graduate fellowships. This effort will be enlarged and refined as we gain experience.

The following table, prepared from data published by the American Society for Engineering Education (ASEE), shows that both the Metroplex and the entire State of Texas are underserved in terms of Ph.D. graduates in Mechanical Engineering. The number of U. S. citizen Mechanical Engineering Ph.D. graduates produced in the Metroplex is very far below the number needed to replace expected retirements in local defense industries between 2007 and 2020.

Institution	2005–2006 PhDs in Mechanical Engineering ¹²	U. S. Citizens
Rice University	3	1
Southern Methodist University	5	0
Texas A&M University	27	3
Texas Tech University	3	0
The University of Texas at Arlington	4	1
The University of Texas at Austin	12	3

(3) If appropriate to its mission, the institution has self-sustaining baccalaureate- and master's-level programs in the field and/or programs in related and supporting areas;

The Erik Jonsson School of Engineering and Computer Science has successfully and rapidly grown over the past 20 years by carefully focusing on selected areas that coordinate well with the needs of the local community and the State of Texas. Current B. S. and M. S. enrollment in the School is 2,429.

Enrollment projected in the Erik Jonsson School baccalaureate and Master's programs in Mechanical Engineering, proposed in accordance with the broad preliminary authority for engineering at the baccalaureate and Master's levels granted on April 20, 2006, is expected to grow to over 600 by 2012.

(4) The program has the potential to obtain state or national prominence and the institution has the demonstrable capacity, or is uniquely suited, to offer the program and achieve that targeted prominence;

National prominence in the envisioned Mechanical Engineering doctoral program will be driven by the following important factors:

Existing faculty excellence in microelectromechanical systems (MEMS) and Materials Science and Engineering;

The Erik Jonsson School Enrichment Program (Project Emmitt), which will provide the resources to recruit additional eminent faculty in Mechanical Engineering;

The proposed baccalaureate and Master's programs in Mechanical Engineering;

Synergy with existing, highly ranked engineering programs at U. T. Dallas, as discussed in (5); and

Close proximity to a vibrant industrial base that needs our Ph.D. graduates and can provide the expertise to translate research gains into product development.

(5) Demonstrated current excellence of the institution's existing undergraduate and graduate degree programs and how this excellence shall be maintained with the development and addition of a high quality doctoral program; measures of excellence include the number of graduates and graduation rates that match or exceed those at peer institutions;

The Erik Jonsson School of Engineering and Computer Science has seen continued growth in size and prominence over the past two decades by emphasizing high-quality, relevant research focused in carefully chosen areas, excellence in teaching, and developing close partnerships with some of the world's best companies.

¹² *Profiles of Engineering Colleges*, American Society for Engineering Education, 2007

In a 2004 report to the U. T. System Board of Regents, the Washington Advisory Group assessed the Jonsson School's academic programs as follows:

"The concentrated strength of the College of Engineering in two disciplines makes the academic performance in each one of these departments competitive with top ten engineering schools. Specifically, UTD is fifth in the country in BS degrees awarded in ECE/CSE and third in the number of MSEE degrees awarded. Among Texas' graduate engineering schools, UTD is third in the number of total awarded Ph.D. degrees after TAMU and UT Austin. The School is fifth in the state in research expenditures per faculty member (after TAMU, UT Austin, Rice, and U of Houston) and last in terms of the mix of engineering disciplines, with only two areas of specialization. ..."

"UTD currently has a high quality faculty cohort in the School of Engineering and it has been able to attract active research groups in materials, nanotechnology, and electronic communications. Their research is narrowly focused on electronic-related applications and on some specialized but significant biomedical-related projects performed in collaboration with the UTSWMC. The School's research base is respectable and its faculty members are involved in high quality research and are publishing in top scientific journals. But the School must broaden its scope to achieve its objectives and serve the region's economic development needs. Because of the requirements of surrounding industries' and UTD's designated research foci, the following examples should be considered: Industrial Engineering and Manufacturing Systems, Mechanical and Materials Engineering, Chemical and Bioengineering. This expansion of the engineering mission would give the School a modern and comprehensive look and a more realistic base from which to achieve its stated goals."

In the 2008 edition of the online edition of "America's Best Graduate Schools", USNews.com ranked the Erik Jonsson School, and its degree programs in Electrical Engineering and Computer Engineering, fourth in Texas, behind U. T. Austin, Texas A&M University, and Rice. The following table demonstrates that the Jonsson School and its EE and CE degree programs are ranked among the top 50 graduate engineering programs in public universities in the U. S.:¹³

Entity	Public ranking	Private and public ranking
Erik Jonsson School	47	77
Electrical Engineering	44	73
Computer Engineering	39	63

The average annual production of Ph.D. graduates by Jonsson School faculty members is approximately 0.5, which is consistent with the national average for top-tier engineering schools.

The number of Ph.D. graduates supervised by faculty in the Erik Jonsson School has grown dramatically in the past decade. Chart 2 shows that the Jonsson School has achieved top-tier performance by producing approximately 50 Ph.D. graduates each year, roughly equally divided between Computer Science and Electrical Engineering supervising professors. The rapid growth in Ph.D. production since 1996 is the result of increasing the number of tenured/tenure-track faculty from 31 in 1996 to 78 in 2003 and 94 in 2007, as well as high research activity on the part of all faculty.

Since the residence time of a doctoral student is normally four to five years, we expect that the Ph.D. production of the proposed Mechanical Engineering doctoral program by the first faculty hired will gradually increase to approximately .5 to 1 per faculty, per year during the first five to ten years of the program.

¹³ *America's Best Graduate Schools*, 2008 edition, <http://www.usnews.com/>

Importantly, all of the undergraduate degree programs in the Jonsson School that existed in 2005 were reviewed successfully for ABET accreditation. The baccalaureate program in Computer Engineering, which was approved in 2006, will be reviewed in 2011, at the same time at which the engineering programs that are already accredited will be reviewed for re-accreditation. There is continued enrollment growth in the School, and graduates are in demand by companies in every high technology area in the U.S., and globally. The presence of a new Ph.D. degree program in Mechanical Engineering will further strengthen the existing Ph.D. programs. Through research opportunities, all engineering Ph.D. programs provide a richer experience for the undergraduate students in the Erik Jonsson School.

The results of the 2007 Association for Computing Machinery (ACM) International Programming Contest illustrate the excellence of the U. T. Dallas programs in Computer Science and Software Engineering. In the final round of the contest, which was held in Tokyo, the U. T. Dallas team of three students tied for 14th in the world. The only U. S. universities whose teams placed higher than the U. T. Dallas team were MIT and Cal Tech.¹⁴

¹⁴ <http://icpc.baylor.edu/icpc/Finals/Results-2007/standings-2007.htm>

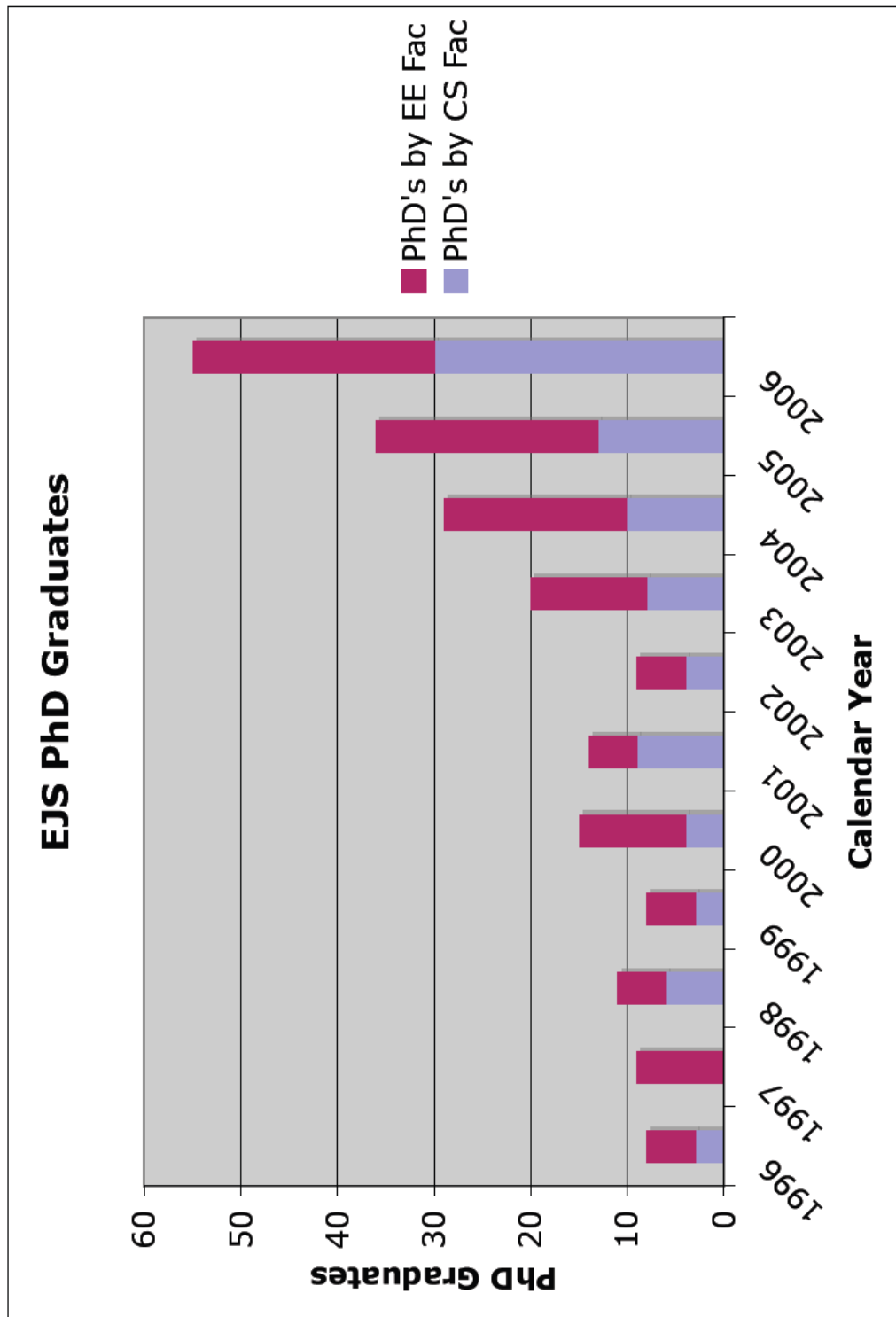


Chart 2. Recent PhD production by Jonsson School faculty.

(6) Satisfactory placement rates for graduates of the institution's current doctoral programs, with comparison to peer group placement rates when available;

Graduates of the Ph.D. programs in the Erik Jonsson School of Engineering and Computer Science are highly sought after by local, and national companies. Placement rates of nearly 100% for domestic students are typical for the School's Ph.D.s.

Importantly, an increasing number of doctoral graduates are earning faculty positions at other universities, where they successfully compete for federal funding.

(7) How the program will address Closing The Gaps by 2015; and

The Mechanical Engineering doctoral program envisioned in this request for preliminary authority will address "Closing the Gaps by 2015" in a number of ways, including:

By supporting the goal to "Increase the number of students completing doctoral degrees to 3,350 by 2010, and to 3,900 by 2015";

By submitting research proposals to support the goal to "increase the level of federal science and engineering research and development obligations to Texas institutions to 6.5 percent of obligations to higher education institutions across the nation";

By designing and developing research programs to support the goal to "increase research expenditures by Texas public universities and health-related institutions from \$1.45 billion to \$3 billion by 2015 (approximate 5 percent increase per year); and

By demonstrating how an urban environment allows graduate education and research to build close ties to industry and a working population. UTD is successfully executing on this synergistic approach today.

(8) Institutional resources to develop and sustain a high-quality program.

The Erik Jonsson School of Engineering and Computer Science is currently expanding its set of degree offerings in accordance with the recommendations of a 2004 report by Washington Advisory Group to the U. T. System. The expansion of the Jonsson School since 2004 has been funded by a \$300M program known as Project Emmitt. This carefully designed and executed plan is providing the resources to create, improve and sustain doctoral engineering programs of national prominence. Specific examples of investing these funds towards excellence in engineering include:

A new, 192,000-square-foot Natural Science and Engineering Research Laboratory building (completed in December 2006);

Start-up laboratory facilities to recruit top faculty researchers and provide additional competitive advantages to researchers in MEMS, nanostructured materials, and other areas of modern Mechanical Engineering;

An innovative program of providing seed funding to faculty based on panel reviews of proposals submitted to the National Science Foundation; and

Graduate student support at nationally competitive levels to provide excellent human resources for the Texas economy.

Kathy Lingo presented the Non-Academic Certificate for Public Information Officer program for the Senate to approve.

White Paper: Public Information Officer Certificate
June 7, 2006

Purpose and Rationale

Public Information Officers, or PIOs, are primarily responsible for sharing and disseminating information and also for helping market and “brand” their organization or municipalities. Furthermore, they are called upon in crisis situations to communicate effectively with various constituencies, including the media and also the general public. PIOs may work for many different public, and possibly private, organizations including municipal governments, police and fire departments, non-profit agencies, and independent school districts. According to Leigh Hornsby, Public Information Officer for Collin County, approximately 275 counties in the United States, including five Texas counties, employ PIOs. Experts [SOME AUTHORITY OR BODY -- WE DON'T KNOW WHO YET – LEIGH SHOULD GET BACK TO US W/MORE INFO.] have indicated that the profession will grow in the upcoming years; however, many individuals who are called upon to act as public information specialists have received no formal training in the communication skills necessary for effectively executing this job. Although leaders in local government have expressed interest in training and education opportunities for PIOs, universities in the DFW metroplex and surrounding area currently offer no such certificate programs. Therefore, UTD can take advantage of an opportunity to meet a demand for academic training as well as an opportunity for community outreach.

The Public Information Officer Certificate Program will represent a collaborative effort between the School of Social Sciences and the School of Arts and Humanities at UTD. Specifically, the Communication and Public Affairs programs will collaborate to create a certificate program that will enroll both current UTD graduate students and working professionals in the DFW metroplex and surrounding area. The Public Information Officer Certificate Program will also augment and enhance existing programs in the Schools of Arts and Humanities and Social Sciences by adding new graduate courses and increasing student enrollments.

Target Student Populations

The certificate program will target two specific student populations. First, it will be designed to meet the needs of working professionals. Second, the certificate program will be made available to students currently enrolled in the Master of Public Affairs (MPA) and Doctor of Philosophy in Public Affairs programs. It is also possible that other UTD graduate students may wish to enroll in courses as part of their academic programs.

Courses

The certificate program will require graduate students to complete 5 courses (15 credit hours) in media relations, public speaking, interpersonal communication, writing and editing for the World Wide Web, and risk communication. UTD will cross list each course as both “COMM” and “PA” (“Communication” and “Public Affairs”).

Media Relations

A media relations course will teach students how to engage and work with the media for disseminating information. Because most people will receive information from various media channels (e.g., television, radio, Internet), it becomes imperative that the PIO communicate well with representatives from local and national news channels and newspapers.

Public Speaking

Students will complete a graduate level public speaking course emphasizing effective preparation, organization, and delivery of speeches. Because many situations require the PIO to communicate with audiences on very short notice, the course will also assist students in developing the skills necessary for impromptu speaking.

Interpersonal Communication

A graduate-level interpersonal communication course will emphasize the dynamics of communication between individuals. Such a course stresses both appropriate and effective verbal and nonverbal communication, both of which are imperative for PIOs. Situations, particularly crisis situations, necessitate that the PIO communicate effectively one-on-one with other individuals because people form perceptions and attitudes based on this type of interaction.

Writing and Editing for the World Wide Web

Because public information officers rely considerably upon the World Wide Web for dissemination of information, the writing for the Web course will help these students become more proficient communicators for this medium.

Risk Communication

Public agencies and private companies make decisions that directly affect the populace in a given locale. These decisions consistently involve varying degrees of risk – risks that public information officers must communicate to different constituencies. Failure to communicate appropriately and effectively these risks can result in detrimental impacts for the PIO's organization or municipality.

Personnel/Faculty Needs

Additional personnel are needed for the graduate-level courses required for the Public Information Officer Certificate Program. Some current UTD faculty can teach courses in this curriculum, but the Schools of Arts and Humanities and Social Sciences should hire additional qualified faculty. A possible pool of qualified persons exists in both the private and public sectors, and these persons can teach courses on an adjunct/part-time basis. Qualified members from journalism and public relations can also teach courses for the program.

Student Enrollment

Program administrators will project student enrollment at a later date.

Participating Faculty

Ted Benavides, Executive in Residence, Public Affairs
School of Social Sciences

John Gooch, Communication
School of Arts and Humanities

Shelley Lane, Communication
School of Arts and Humanities

Kathy Lingo, Director of Communication
School of Arts and Humanities

Douglas Watson, Director of Graduate Programs, Public Affairs
School of Social Sciences

12. PARKING & TRANSPORTATION COMMITTEE CHANGE – this was tabled until the January meeting.

13. MARKETPLACE of COURSES – this was tabled until the January meeting.

14. NOVEMBER MEETING CHANGE

Dr. Cy Cantrell moved to not to have a meeting in November and to vote electronically for the candidates for graduation and Dr. Timothy Redman seconded the motion. The motion carried.

15. ADJOURNMENT

Dr. Marilyn Kaplan moved to adjourn the meeting and Dr. Timothy Redman seconded the motion. The motion carried.

APPROVED: _____
Speaker of the Faculty

DATE: _____