

Principles of Responsibilities and Workload Policies

for Mechanical Engineering Faculty, COE&IT, UMBC

Revised and updated Spring'09 - March 25, 2009

The Mechanical Engineering (MENG) Department at UMBC has a mission of providing a high quality ABET accredited education in Mechanical Engineering to over 500 undergraduates, as well as a mission of faculty scholarship and advanced education in research for about 80 graduate students per year, about 45 being at the doctoral level. The Department seeks to constantly renew and upgrade its programs so as to provide education for its students that will allow them to meet the challenges of the 21st Century.

UMBC serves a diverse population of students, many of whom carry heavy responsibilities of part time work and many who are seeking to enhance their education by either an internship or a co-op experience. The modern trend of employment of engineering students is enhanced by practical experience as well as a sound education. In order to accommodate this diverse population of students the Mechanical Engineering Department at UMBC must maintain a flexible schedule of course offerings. The mission of the MENG Department requires the full commitment of its 16 tenure track faculty members and 2 lecturers (not all presently on board). Toward that end the Department Faculty accepts the standard workload policy outlined below. This workload policy is based on the following principal faculty activities:

1. **Instruction**
2. **Scholarship and Research Funding**
3. **Service**

The MENG Department as a whole strives to fulfill a program of instruction and scholarship that maintains the goals of a research university as well as meeting the obligations to the students, enumerated above. Individual faculty member's workload may deviate from the standard workload in order for the Department to better utilize special skills and interests that faculty members have developed, but every faculty member will contribute equitably in furthering the mission and goals of the Mechanical Engineering Department, as well as those of the University as a whole.

A. THE STANDARD WORKLOAD POLICY

1. **Instruction 50% Effort:** A primary obligation of the Department is to provide high quality instruction meeting the requirements of both the undergraduate and graduate MENG programs, while maintaining a competitive environment for undergraduate, graduate and faculty research. Since regular faculty members hold their positions specifically because of their expertise and skills in the field of Mechanical Engineering, they have the primary responsibility to provide the instructional activities of the Department. The University System of Maryland (USM) mandates an instructional workload of 5 course units per faculty per year for those faculty active in research.

In keeping with this policy the instructional workload for faculty members in the Mechanical Engineering Department will be **5 course units** per faculty member per year according to the Board of Regents approved formula.

$$\begin{array}{rcl}
 \text{\# of course units} & = & (\text{\# lecture/lab credit hours})/3 \\
 & + & (\text{\#808 + 899 credit hours})/10 \\
 & + & (\text{\#799 credit hours})/13 \\
 & + & (\text{\# 488 credit hours})/21
 \end{array}$$

offer 1/2 of TA support *~ if 50% state supported should not be counted.*

This instructional workload will normally be distributed in the following way:

- (i) Two undergraduate courses per year.
 - (ii) One graduate course per year.
 - (iii) Research instruction and supervision of students enrolled in a number ENME 899 "Doctoral Dissertation Research"; ENME 808 "Advanced Topics in Mechanical Engineering"; ENME 799 "Master's Thesis Research" and ENME 488 "Special Projects" credit hours that are equivalent to a minimum of 2 course units according to the Board of Regents (BOR) standards (See paragraph (e) below for MENG research credit hour policy).
2. **Scholarship, Research and Research Funding 40% Effort:** The UMBC Mechanical Engineering Faculty are scholars who are responsible for the expanding the knowledge in their respective fields. Toward this end, each faculty member must lead an active research group of graduate and undergraduate students which strives to advance the field of Mechanical Engineering. Faculty members, through personal scholarly activities, are expected to provide the leadership, scholarly environment, research instruction and research support of their own research groups. Faculty members are also responsible for the dissemination of their own and their groups' scholarly achievements for the benefit of the Department, the University and the Profession. Accordingly, the standard scholarship and research obligation is the following:
- (i) Lead a research effort that results in the publication by the faculty member and his/her research group of at least one peer reviewed archival journal paper, one conference paper and a presentation of one departmental seminar per year.
 - (ii) Procure funding for the support of the cost of the research and at least 1.5 full GRA positions per year.
3. **Service 10% Effort:** In the spirit of shared governance all faculty members must contribute time and effort to student advising, department operating committees and graduate student as well as peer performance evaluations. It is also expected that faculty members serve the UMBC community as well as the Mechanical Engineering profession. In particular, the active engagement of the Faculty in professional activities such as paper and proposal reviews, and participation in professional organizations brings credit and favorable attention to the Department and the University and ultimately

benefits the students. The standard service obligation is the following:

- (i) Each faculty member participates in mentoring and advising (for matters of curriculum planning, registration and professional preparation) of about 10-20 students per year.
- (ii) Each faculty member is expected to serve on at least two departmental Operating committees per year. Each of these committees is chaired by a regular faculty member.
- (iii) Each faculty member is expected to serve on qualifying examination committees as well as serve on thesis and dissertation committees each year.
- (iv) Each faculty member must serve the Profession by engaging in reviews of papers and proposals when called upon by Journal Editors and Government Funding Agencies and occasionally serving as a professional advisor to local, state and national governmental agencies.

Notes: The standard workload with regard to research, instruction and supervision of graduate students, as well as funding obligations incorporates the following policies:

- (a) Faculty members who are not active in the scholarship levels of the standard workload must assume an increased instructional and service workload as determined by the Chair. In order to maintain a high level of teaching quality no faculty member will normally teach more than 6 courses per year.
- (b) Since teaching is a fundamental purpose of a University, under none but the most unusual circumstances (such as sabbatical leaves) will a faculty member's course teaching responsibilities be reduced below 2 courses per year (one course per semester).
- (c) Although the standard workload applies to all faculty members, tenured faculty members are expected to assume leadership roles in at least one of the three components of the workload.
- (d) Participation in teaching, advising and service in inter-departmental activities such as the Honors College will be credited towards the workload.
- (e) All doctoral **candidates** in the MENG Department must enroll in 1-4 credit hours of ENME 899 in each semester of residence. Faculty members are encouraged to enroll undergraduate students in their research program through ENME 488 "Special Projects" credits. A maximum of 4 research credits (799 or 899) per student per semester is counted towards the Departmental instructional workload of each faculty member.

B. EXCEPTIONS TO THE STANDARD WORKLOAD

Because of the multitude of demands on the MENG Department the following exceptions to the standard workload may be made. These exceptions are intended to accommodate demands of the Department and for the Department to benefit from various faculty members' extraordinary talents and abilities in teaching, research or service.

1. **Instructional Exceptions:** The following alternative increased instructional activities constitute increased workload:

- (i) The development of instructional infrastructure of substantial value. For example, the development and procurement of the funding for major new undergraduate laboratory equipment, for enhancement and permanent inclusion in the curriculum.
- (ii) Teaching a laboratory course counts as a full course unit even though it may not be a full three credit hours.
- (iii) Activities leading to major curriculum development. For example, the development of a new course and concomitant enhancement of related courses in the curriculum.
- (iv) Providing leadership and supervision to a major undergraduate group project. For example, the leadership of a team of students entered in a national technical design competition.
- (v) A class of very large enrollment, determined by the Chair, taking into account the level of GTA support provided.
- (vi) Extensive instruction in distance education over ITV or WN networks.

2. **Department Administration:**

- (i) The Chair's administrative duties constitute 60% of his/her workload. The Chair will teach from 2 to 3 course units per year, depending on his/her level of scholarship and research activity.
- (ii) The special needs of The Mechanical Engineering undergraduate students require an administrative workload of 20% of effort from the Undergraduate Coordinator. This will normally be accommodated by a reduction of one course unit of instruction or a reduced research effort from the standard workload. In no circumstance will the undergraduate coordinator teach fewer than two courses per year.
- (iii) The Graduate Coordinator is responsible for administering the MENG graduate program. In view of the special programmatic needs of graduate students (e.g., comprehensive exams, defenses, teaching monitoring, selection and termination of students, etc.) the Graduate Coordinator workload is deemed to be 20% administrative. The rest of the Graduate Coordinator's workload is constituted similarly to the Undergraduate Coordinators.

Note: Both the Undergraduate and Graduate Coordinators will be compensated for part of the summer because their administrative duties substantially extend into the summer months.

3. **Externally Funded Research and Service Activities:**

- (i) Faculty members who provide funding for the full support of at least 2 GRA's per year may,

upon additionally providing to the department 15% of their own academic year salary, reduce their course Workload by one course in order to devote to research and professional service the released teaching time.

- (ii) Faculty members who perform externally funded service to Federal Agencies (such as IPA service) or to approved state agencies or to the USM will have their workload reduced commensurately to the salary funds provided.

4. Department Supported Research:

- (i) Faculty members are expected and encouraged to continually seek external research funding. This activity is part of a faculty member's ongoing research enterprise, as stated in Part A2. However, faculty members whose funding levels have diminished may be exempted (or one year the concomitant increase in course instruction required to maintain the 5 course unit instructional workload) if they are actively developing major new research and funding proposals and funding opportunities.
- (ii) Faculty members who temporarily find themselves backlogged with an unusually large writing and publishing load may be exempted from one course unit of instructional workload. Faculty members may request such an exemption for the semester in which they expect to complete these scholarly activities and reduce their backlog.
- (iii) Besides the normal opportunity for faculty members to pursue new and/or extended research objectives by way of a sabbatical leave, faculty members may be granted a course unit reduction in instructional workload (e.g. cost sharing obligations for a funded project), to devote extra effort on new research initiatives that hold promise for long term sustained scholarship and funding.

5. Department Supported Service:

The MENG Department values faculty members' extra service to the Department, University and the Profession (the amount being left to the discretion of the Chair and negotiated with the faculty member, taking into account department resources and obligations). Accordingly, the Department makes allowances with regard to the standard workload for the following activities that go beyond the normal service load:

- (i) Service to the Profession, such as editing a scholarly journal, serving as a national officer of a professional society or a similar activity.
- (ii) Service to the University such as serving on the UFRC, serving as an officer in the Faculty Senate or heading a major policy committee.

C. MEASUREMENT OF WORKLOAD AND PERFORMANCE

The annual assessment of a faculty member's accomplishments will be based on a 3 year

average of the current year plus the immediately preceding 2 years. The performance measure will include both quantitative and qualitative factors. For example, teaching quality will be measured (in accordance with the faculty member's desires) by either a combination of the SCEQ's, peer review and interviews with students or by the SCEQ's alone. Research quality will be measured by the stature of the research journals published in, faculty and student reactions to the seminars presented and opinions of external collaborators and colleagues.

Merit salary adjustments will be based on the extent to which the faculty member's performance has exceeded the standard workload by both qualitative and quantitative measures.

D. GOVERNANCE

Faculty member's yearly performance reviews and determination of workload will be undertaken in the following manner:

- (i) In conjunction with the Faculty Annual Report, each faculty member will submit to the Department Chair written statement of his/her expected activities, aside from teaching, in the upcoming year. Each faculty member is encouraged to avail her/himself of the counsel of the Department's Faculty Development Committee (FDC) in order to realistically assess her/his prior performance and to establish her/his goals for the upcoming year. In particular, the FDC should be consulted by faculty members in need of corrective action of performance deficiencies.
- (ii) Based on the expected research and service activities for the upcoming year, an equitable teaching assignment will be determined by the Chair.
- (iii) In the event of disagreement between a faculty member and the Chair on the prior year's performance and upcoming year's workload assignment and expectations, the FDC may be consulted for a recommendation to the Chair and the faculty member on the matter. In the event the disagreement is not resolved, the faculty member is entitled to avail him/herself of the University grievance procedures.
- (iv) Exception from the standard workload policy will be arrived at by mutual agreement between the Chair and the faculty member requesting the exception. In the event of a failure to agree, the FDC will rule on the matter.

Workload Policy for Lecturers Mechanical Engineering Department

The Lecturer in the ME Department will have a workload equivalent to teaching 8 courses per year (4 courses per semester). In that context, a course will be defined in terms of course sections of two types: type 1 – lecture, with an enrollment of at least 30 students and type 2 - a course section which also has a laboratory or design component with an enrollment of 20 students required as a baseline. For such course sections (type 2), a GTA assignment will be made: 0.5 GTA (10 hrs/wk) per section, to assist the Lecturer with the course delivery, but will be under his/her supervision. In each case, the Lecturer will address the instructional needs of at least 120 students (360 SCHs) each semester.

As an example of a teaching assignment for a given semester, the Lecturer could be assigned a high demand required large enrollment course like ENME 110 – Statics, with at least 120 students (type 1 - lecture) and one additional ME course section (e.g. ENME 360 – Vibrations) or a required lab course (type 2), like ENME 332L or ENME 482L (with 3-4 sections of 20 students each), also in high demand, and two more ME course sections (type 1).

In addition to the above teaching assignments, the Lecturer will be involved in advising ME students, either as an academic advisor, advising student organizations or directing extra curricular projects, as assigned by the ME Chair. The Lecturer will also take part in assessment and learning outcomes procedures, related to the ABET accreditation process.