

Queen's University Department of Mechanical and Materials Engineering Workload Standard

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Scope / Preamble

This document sets out the workload norm for the Dept. of Mechanical and Materials Engineering, in accordance with Article 37 of the Collective Agreement.

The goal of the Workload Standard document is to describe a mechanism whereby all members of the Department can contribute fairly and to the best of their ability to the activities of the Department. This standard describes an expectation for the “normal” overall contribution of faculty members for teaching, research, and service. This document is intended to define workload, and does not address the issue of merit. The goals of the Department in the context of this document include, but are not limited to: the delivery of a high quality undergraduate education; maintaining a high level of top quality research output (including graduate student education); and delivery of such service activities as enable these.

It is recognised that faculty members will typically be active in all three areas of teaching, research and service, however the balance between these three areas may vary from year to year and over one's career. The workload of any individual should be viewed in light of the strengths and activities of that individual so as to maximise their contribution to the Department, and to ensure a balanced share of the workload required to effectively meet the Department's goals.

To provide flexibility in workload, faculty members are not required to meet the normal workload every term or every year, as long as the total workload over a three-year period is consistent with the standard. That is, it is possible to carry a “credit” or “debit” balance by contributing more or less than the normal workload as long as it all evens up by the end of a three-year cycle. The purpose of such a practice is to provide flexibility and thus provide greater opportunities for unencumbered research time. The flexibility is intended to benefit faculty members and the administration in planning for the short and slightly longer term.

Throughout this standard, where examples are given for workload, a load for a typical faculty member, is described for faculty members who: (i) teach an *average* load, (ii) have established an *average* active continuing research program consisting of external research funding and the supervision of research trainees (including PDF, PhD, MASc, summer research undergrads, etc.), and (iii) perform *average* administrative service duties.

Depending on the level of teaching, research and service activity being carried out by the faculty member for the Department (averaged over the latest three-year cycle), a designation will be given as “Light”, “Average”, or “Heavy” in each category. These designations will be made by the Head in discussion with the faculty member, and will be available for review by all faculty members and can change over time. The interpretation of

terms such as “contributions” and “activities” as well as other wording in this document should be considered in light of what would be acceptable to a reasonable person.

The content of this document should be reviewed by a Department Workload Committee at least every five (5) years. The numbers listed in the Appendix should be updated biennially.

Teaching - Courses

Courses require different time and effort from the faculty member delivering the course, depending on, for example, the number of students in the class, contact hours, laboratory and/or tutorial components, method of delivery (interactive, classroom lecture, or online), the level of course development required (first time course vs. previously taught course) and level of TA support. To reflect this reality, courses in the Department will be described as “Light”, “Moderate”, or “Heavy”. The Curriculum Committee, in consultation with faculty members who have previously delivered the course, and the Head will make such designations for undergraduate courses. The designation of graduate courses will be done by the Graduate Coordinator and the Head in consultation with the course instructor. The designation of courses will be available for review by all faculty members and can change over time.

A typical teaching load (excluding student supervision) varies from 2 to 4 courses per year and is 3 courses for most faculty members. The three courses usually comprise two undergraduate courses and one graduate level course. An example of an average teaching load may be one heavy course, one average course, and one light course, lab instruction, and capstone design project involvement. An example of a light course might be a graduate course with 3 hours/week of lectures with at least 6 students enrolled. An example of a heavy course might be an undergraduate course that has a significant design project content and/or has more than 200 students enrolled. Graduate courses with fewer than 6 students enrolled and/or less than 3 hours per week of contact time may receive a special weighting.

Any courses taught by faculty members for which specific compensation is paid in addition to a faculty member’s annual Queen’s salary (e.g., ADMI or UNENE courses) will not count as part of that faculty member’s Departmental workload.

Teaching Duties:

Typical teaching duties for all faculty members may include, but are not limited to, the following:

- perform assigned teaching duties;
- attend course laboratory and tutorial sessions as required;
- be accessible to students outside of classroom hours;
- be available during midterm and final examinations to answer questions in person;
- interact with teaching assistants to ensure that they perform their duties adequately;
- revise and update course material to ensure that it is current relative to the discipline;
- develop new courses and laboratories as defined by the unit;
- procure new equipment components for course and laboratory development; and
- assist, when called upon, in the development, delivery, and marking of Faculty and/or University wide teaching obligations.

Teaching - Supervision

Supervision includes the supervision of postdoctoral fellows, graduate students, summer research students, undergraduate capstone and design projects, undergraduate independent research projects, and MEng projects, visiting students and researchers. A typical load is defined as the total number of graduate students currently enrolled in the Department (averaged over the 3 most recent years) divided by the number of faculty. It is

recognized that this average number of graduate students will vary over time. Hence, a typical load is defined by the number of students needing supervision with consideration and credit given according to the different commitment for each type of supervision (e.g. PhD student compared to undergraduate research project).

Supervising fewer students than the Departmental average is considered light and may result in an increase in other duties.

Research

Evidence of research activity includes, but is not limited to: successful grant and contract funding; conference presentations; journal papers; books, and book chapters, technical reports, patents, management of research infrastructure; participation in professional organizations in a research or scholarly capacity, and international collaborations. It is expected that the output will include scholarly, peer reviewed publications. Funding is expected to be at a level sufficient to support graduate student training. Data on the current levels of research productivity in the Department is provided in the appendix.

Publishing fewer than the Departmental yearly average number of scholarly, peer reviewed papers per FTE faculty member in the Department may be considered a light load and may result in an increase in other duties. For each individual faculty member, the average number of publications over the most recent three year period will be used in this determination. It is recognized that the number of peer reviewed papers is a coarse indicator of research activity; a case can always be made for research activity being different from that indicated solely by a comparison of such numbers.

It is recognised that a heavy research load may be accompanied by a reduced load in other areas.

Service

Service includes both administrative and professional service. At the nominal 'typical' 20% service level, each faculty member would be spending approximately 1 day per week on administrative duties. This includes administration related to their profession, their research portfolio, service to the Department, the Faculty and the University. The expectation in this Department is that typically at least half of service time be devoted to service at the Departmental level.

Service includes: formal **roles** in the Department (e.g. Head, Associate Head, Undergraduate Chair, and Graduate Coordinator, year advisor, group coordinators); **committee work** (e.g., Appointments, Curriculum, Space); **support** of teaching and research activities (e.g., comprehensive exams, thesis examining committees, assisting with Open House Days or recruitment events, attendance at Department meetings); **participating** at events (e.g. MECH banquet); **advising** competition teams (where it is recognised that the effort required by the team advisor depends on the specific team).

An average annual service load might include attending 80% of the Department meetings, one faculty board meeting, attending 2 Departmental social events, participating on one committee, filling one admin role (i.e. year advisor, team advisor, group representative), two thesis defences, 3 comprehensive exams, and three Departmental events.

A heavy service load might include the above as well as one of the following appointed positions in the Department (head, assoc. head, undergraduate chair, or graduate coordinator) or other Departmental duties with significant time commitments.

A light service load might include attending 80% of the Departmental meetings, and a combination of other duties that amounts to less than ½ day per week on administrative duties for the Department.

It is recognised that a heavy service load may be accompanied by a reduced load in other areas. This is normally the case for the roles of Head, Associate Head, Graduate Coordinator, and Undergraduate Chair. It is further recognised that a heavy service load at the Faculty or University level, or externally (grant evaluation committee work) may result in lower service expectations at the Department level.

All faculty members are expected to:

- perform assigned administrative duties such as Chair of Undergraduate Studies, Coordinator of Graduate Studies, Undergraduate Year Advisors, Group Coordinators;
- participate in Departmental meetings, internal and external thesis examination committees, PhD comprehensive examinations, seminars, Faculty Board meetings;
- participate in a variety of University, Faculty and Departmental events such as, but not limited to
 - First year orientation
 - open house
 - alumni weekend
 - annual banquet
 - Iron ring ceremony
 - Dean's scholar reception
 - convocation
 - fall preview;
- participate in assigned University, Faculty, and Departmental committees;
- respond to requests for information and assistance on Department matters in a timely fashion;
- provide service to the profession (reviewing scholarly material and grants, conference organization, professional organizations, external program and tenure and promotion reviews); and
- be responsible for maintaining safe and functional office and laboratory spaces as per the Departmental and University safety guidelines.

Appendix

The numbers used in this document are collected from faculty annual review reports and are averaged over the latest 3 year period, and should be updated biennially.

Teaching - Supervision

The average number of MSc and PhD students supervised by each faculty member is 4 (based on the average number of graduate students per FTE). The median is 3.5. Therefore, a light supervision load is supervising 2 or fewer graduate students. An average supervision load is from 3 to 5 and a heavy supervision load is 6 or more.

Currently the average number of capstone design projects per FTE in the Department is 1. Over the past 3 years this has varied between 0.8 and 1.3. Therefore, a light supervision load is less than 1, an average supervisory load is 1, and a heavy supervisory load is more than 1.

Research

For the past 3 years the average number of peer reviewed journal publications per FTE per year is 3.2 and the average number of peer reviewed conference publications per FTE per year is 4.7. Based on the average number of publications per faculty member per year: for journal publications - an average level may be 2-5, a light level may be 1 or below, and a heavy level may be above 5; for conference publications - an average level may be 4-6, a light level may be 3 or below, and a heavy level may be above 5.