Workload Policy for the Department of Structural Engineering

Approved May 2021

Overview

This departmental policy document summarizes the general expectations in terms of teaching, research, and service for tenure-track faculty, teaching faculty, and research scientists in the Department of Structural Engineering. As of the preparation of this policy in 2020-2021, the Department of Structural Engineering has 24 tenure-track faculty members (20 full professors and 4 assistant professors), 1 teaching faculty member, and 1 research scientist. The Department also has 5 emeritus faculty members and 4 adjunct faculty members who occasionally teach courses based on Departmental needs and budget.

The Department would like to emphasize the importance of high quality and impactful contributions to teaching, research, and service over quantitative metrics. Accordingly, the goal of this policy document is not to set a prescriptive set of quantitative requirements in these areas, but to set a baseline to help ensure fair reviews and to make sure that the workload in the Department is properly shared. It is recognized that there are many forms of teaching, research, and service when it comes to an individual's workload. Teaching includes course development, coursework teaching, pedagogical research, graduate and undergraduate student mentoring, and student advising. Research includes soliciting grants to support research projects, performing research with students or post-docs, and publishing and presenting research work to ensure their broad dissemination. Peer reviewed papers in top-level journals are highly prioritized, but peer-reviewed conference papers, book chapters, and reports are also encouraged as appropriate in an individual's research area. Service includes active participation and leadership on Departmental, School, University, and Systemwide-level committees, as well as on external professional committees that bring prominence to the Department and University.

Tenure Track Faculty Workload Guidance

Teaching

The UCSD General Campus teaching workload policy for tenure-track faculty is 4.0 courses per year. It is acknowledged that the workload for every course may not be equal due to the enrollment of the course, and the fact that resources do not permit assigning a teaching assistant until the enrollment is greater than a certain threshold (typically 25 students). The Department actively monitors courses with low enrollments and will typically cancel the course if the enrollment is less than 5 and may encourage a course to be offered every other year to maximize enrollment. However, some courses with small enrollments must be offered for programmatic reasons. A partial workload credit may be assigned by the Chair in the case that a course consistently has low enrollment and must be offered. The teaching workload policy may be modified on an ad hoc basis at the discretion of the Chair to meet programmatic needs. All tenure-track faculty must teach at least one undergraduate course each year unless the needs of the teaching schedule require an exception. The Chair makes final determination on all teaching assignments.

Course relief in the Department is modified on an ad hoc basis at the discretion of the Chair. For example, for the past 10 years it has been common for research-active faculty in the Department to teach 3.0 courses per year. The definition of "research-active" is given as follows, which can be modified at the discretion of the Chair based on an individual faculty member's situation:

1. For tenured Associate or Full Professors, "research-active" can be defined as mentoring at least 3 PhD students who are enrolled full-time within the Department. As of Fall 2020, there is an

average of 3.2 PhD students per advisor enrolled in the Department (note: of the full professors in the department 12 professors have 3 or more PhD students, 2 professors have 2 PhD students, 4 professors have 1 PhD student, and 2 professors have 0 PhD students). It is strongly preferred for PhD students to be enrolled within the Department, as this has a direct impact on the block grant funding that is allocated for Department fellowships. In the first year of appointment, tenured Associate or Full Professors are expected to teach only 2 courses.

2. For tenure-track Assistant Professors, the course load will be 2 courses per year in the first year of appointment followed by 3 courses per year until granted tenure.

Some research-active faculty members may volunteer to teach 4.0 courses per year to ensure adequate course coverage in their area. However, a reduced teaching load in the following year will not be granted unless a faculty member teaches more than 4.0 courses in a year. The Chair may modify service commitments in the case that a research-active faculty member volunteers to teach 4.0 courses. Professors who are not considered research active for more than 2 consecutive years may be requested by the Chair to teach more than 4.0 courses per year. The Chair is entitled to a 2-course reduction and vice-Chairs are entitled to a 1-course reduction for their service roles.

Tenure-track faculty who have challenging life situations may decide to take a leave of absence after consultation with the Chair, which can lead to modified duties and an appropriate reduction in teaching load following university and UCSD Academic Senate guidelines.

Teaching seminar courses (SE 190 or 290) or independent study courses (SE 199 or 299) do not incur teaching credit but provide an opportunity to host prominent researchers or practitioners which helps boost the reputation of the Department. The Chair may modify service commitments for these efforts.

In the evaluation of teaching performance, faculty should follow guidelines in the Academic Personnel Manual (APM) and should submit at least two forms of teaching evaluation. While Course and Professor Evaluations (CAPES) are collected for every undergraduate course and are by default included in an evaluation file, faculty may choose to include alternative forms of teaching evaluation. It is critical to consult with the Chair and the Departmental Student Affairs office prior to using these alternative forms of teaching evaluation to ensure that they meet APM guidelines.

Research
It is critical for tenure-track faculty to be active in performing high quality research. Research performance is evaluated based on published peer-reviewed journal papers, conference papers or reports, presentations at prominent conferences or workshops, and graduating students working on research projects. Other forms of creative contributions may be considered in the evaluation (databases, standards, etc.), but their submission should be carefully described by the faculty, including statements on peer review, degree of involvement. Assistant Professors are expected to demonstrate research independence by publishing journal papers together with their students and collaborators but independently of their previous advisors or mentors. While research funding may be necessary to have a robust research program, it is not a requirement in the evaluation process. Nonetheless, it is critical that faculty report their percentage contribution to each research funding and ensure that any collaborators agree with this reported percentage. Although not a requirement in the evaluation process for Assistant Professors, research funding may help demonstrate that an Assistant Professor can independently support their research program.

The number of peer-reviewed journal published per year varies widely in the Department. Faculty in the Department are expected to publish 2-3 peer-reviewed journal papers per year in the top journals in their field. The top journals in the field may be determined based on either their impact factor or their standing as the main journal for a learned society in their field (i.e., ASCE, ASME, etc.). Peer-reviewed conference papers are encouraged due to their value in disseminating research and training student researchers but are not expected to take the place of archival journal papers. Books and book chapters are often useful educational tools in a research field and are also encouraged. Research reports must be peer reviewed to count toward research productivity, but non-peer reviewed reports to funding agencies are acknowledged as necessary parts of funded research projects. Faculty are expected to contribute actively to their publications by forming the concept for the work, contributing to the data collection or analysis, and preparing or reviewing the manuscript and subsequent revisions. Faculty are strongly encouraged to publish with their graduate students. Large collaborative projects may result in papers with several co-authors, so it is important to explain the contribution to a paper during the review process. This is particularly important in the case that the number of journal publications is below average expectations and when an acceleration or other non-normative advancement is being requested or recommended.

Over the course of their careers, faculty members in the Department published an average of 3.7 journal papers per year, 0.4 book chapters per year, and 4.7 conference papers per year. However, all faculty show fluctuations in the number of publications from year to year based on the time required to start projects, mentor students, write papers, and go through the peer-review process. Accordingly, the expectation of 2-3 journal papers per year was selected to account for these fluctuations. Expectations for publishing journal papers also evolve with rank. Most faculty in the Department had a ramp-up period at the beginning of their careers, so the expectations for peer-reviewed journal papers per year may be relaxed at the discretion of the ad hoc review committee and Chair for Assistant Professors in the first few years of appointment. The Committee on Academic Personnel (CAP) notes that the expectations for advancement at higher steps for full professors may be greater than the average expectations listed here, so the expectations may be tightened at the discretion of the Department ad hoc review committee and Chair for full professors at higher ranks.

Some faculty members publish fewer journal papers per year, but their work has high impact. In this case, it would be useful for an individual faculty to help justify the impact. For example, citations of published works from well-curated sources may help an individual to justify the importance of their research work. Incorporation of research papers into standards or design codes is another way to justify impact. Finally, awards from learned societies may also help to justify the importance or prominence of a research contribution.

Research productivity is also evaluated in the number of PhD and MS-thesis option students graduated per year. On average, faculty members in the Department graduate one PhD student every other year. Several faculty members in the Department do not advise MS-thesis option students so faculty are not expected to advise MS-thesis option students. However, on average, faculty members in the Department also graduate one MS student every other year.

Service
Proper functioning of the Department relies upon active service by faculty on Departmental committees. All tenure-track faculty are expected to serve on Department standing committees (or subcommittees) and ad-hoc review committees and are strongly encouraged to participate on student's examination committees. Service assignments for the standing committees is at the discretion of the Chair in consultation with the vice-chairs with the goals of having representation from the different areas in the

Department. At the end of each academic year, the Chair will consult with the chairs of the Department standing committees to assess whether the committee members participated actively in meetings and other committee tasks.

Associate or Full Professors are expected to serve on 1-2 standing committees and at least 1 ad hoc committee per year. They are also expected to take a leadership role on a standing committee or ad hoc committee. Assistant Professors are expected to serve on at least one Departmental committee per year, with the goal of gaining experience in how the Department functions and are not expected to serve on ad hoc review committees. Most faculty serve on 3-4 student exam committees per year (qualifying, senate, and PhD exams).

All faculty are expected to engage in external service with professional societies or journals. External service helps establish prominence in an individual's field, which is important for promotion and advancement through barrier steps. Faculty are expected to balance their external service with University workload expectations.

It is important to note that CAP values service commitments that are commensurate with rank. Higher ranks are expected to take on Campus-wide and System-wide service. This includes service on Academic Senate Committees, along with service on College committees and campus-level search committees. As full professors progress through Step VI, CAP likes to see candidates taking on leadership roles in Campus-wide and System-wide committees. Faculty members must be proactive in finding ways to participate in Campus-wide and System-wide service.

Teaching Faculty Workload Guidance

Teaching of Exceptional Quality
The campus teaching workload policy for teaching faculty is up to 6.0 courses per year. This policy may be modified on an ad hoc basis at the discretion of the Chair to meet programmatic needs. The Chair makes final determination on all teaching assignments. Course relief for teaching faculty is at the discretion of the Chair and may be modified to account for educational and outreach contributions, leadership on Departmental committees, and TA training and mentoring. Demonstrated teaching excellence includes creation of innovative courses, leadership in department outreach to undergraduates, mentorship of student groups, interdisciplinary teaching, teaching awards, peer faculty evaluations, student letters for career review, TA training and professional development, and other pedagogical and curricular accomplishments. Teaching should reflect excellence in pedagogy, be inclusive and promote the success of all students, and demonstrate a thoughtfulness on the part of the Teaching Faculty of their own teaching effectiveness. Excellence should be measured using additional criteria beyond CAPE scores. Continual growth as a teacher is expected. Teaching Professors may earn bonus or acceleration for exceptional contributions to teaching in terms of impact, leadership, or breadth of teaching contribution.

Professional Research and Creative Activity
Teaching faculty professional and/or scholarly activities and achievement can be related to the structural engineering discipline or pedagogy and can be demonstrated in many ways including (but not limited to) educational materials, pedagogy, or curriculum development that reach beyond the faculty member's class, educational program administration and/or development, independent research, and pedagogy leadership within or beyond the UC San Diego community. The normative expectation for teaching faculty is that they will be continuously active in scholarship that goes beyond their classroom which can include materials designed to improve learning outcomes, scholarly or professional publications, and/or

invitations to present seminars or lectures. Expectations for recognition and impact both within and beyond the university increase with rank. Teaching Professors may earn bonus or acceleration through exceptional scholarly impact or productivity during the review period.

University and Public Service

Service expectations increase with seniority, and service is required through standing committees related to the educational mission of the department, the university and the professional community. At the junior level (pre-security of employment) teaching faculty are expected to actively serve on one to two departmental committees and be active in service to the professional community such as serving as editor, on editorial boards, manuscript and grant proposal reviewer, conference organizer, society president, and K-12/Community outreach. Post-security of employment, active service is expected at both the department level and within the broader university as well as to the professional community and more leadership is expected. Candidates may earn bonus or acceleration through exceptional service in terms of leadership, impact or scope.

Research Scientist Workload Guidance

Teaching

Research scientists are not expected to teach but are welcome to teach courses as needed based on their interests. In the case that they do teach, their appointment level will be adjusted accordingly.

Research

Research scientists are expected to follow the same research expectations as tenure-track faculty, although they are not required to work with students. Accordingly, the are expected to publish 2-3 peer-reviewed journal papers per year.

Service

Research scientists are not expected to provide service to the Department or University. However, they are encouraged to participate in laboratory leadership roles or serve on relevant research- or laboratory-related committees. Research scientists must be engaged in service, but this may be either university service or external service as noted in the UCSD academic personnel guidelines.

Adjunct Faculty Workload Guidance

Adjunct faculty may have an adjustable appointment in teaching, research, and service at the discretion of the Chair. During review, they are expected to contribute to the success of the Department and University. Depending on the balance of their appointment in teaching, research and service, they will be held to the same expectations as tenure-track faculty. For example, if an Adjunct Professor is 100% appointed to work on research, they are expected to publish 2-3 peer-reviewed journal papers per year. If they are 100% appointed to work on teaching, they are expected to teach 4.0 courses per year. Adjunct faculty are not expected to provide service to the Department or University unless this is defined in their role, but they are expected to engage in external service.

Expectations for Assistant Professors at Tenure

At the time of tenure, Assistant Professors are expected to demonstrate the ability to lead a high-quality and independent research program, have developed a consistent track record of teaching at the graduate and undergraduate level, have a track record of advising graduate students in research, and have a record of Departmental service. It is anticipated that Assistant Professors will have a ramp up period in their first year, and they are expected to form a research group that will lead to research that will result in high quality journal papers and other research contributions. Although research funding is not a criterion for review of an Assistant Professor, it is important to demonstrate the ability to independently fund their research program. The Department and University have expectations for strong reference letters from external referees at the time of tenure. Assistant Professors are strongly encouraged to discuss expectations associated with tenure with their mentor and to strategize on ways to demonstrate independence in research. As our Department has faculty from a wide range of backgrounds, Assistant Professors are also encouraged to interact with as many colleagues as possible to understand different perspectives across the Department.

It is important to note that the quality of publications is equally important to quantitative metrics. An analysis was performed on the quantitative metrics of faculty in the Department at the time of tenure. Due to the range of backgrounds and research areas in the Department, it is difficult to develop a clear set of quantitative expectations for Assistant Professors at the time of tenure. Of the 20 tenured professors in the Department, four had unconventional careers (e.g., initial appointment at Associate or Full Professor, initial part of career in another country, etc.) that made it difficult to establish metrics for these professors. Of the other 16 tenured professors, 6 were promoted from Assistant to Associate Professor at UCSD, 4 received tenure and promotion when moving from another university, and 6 received tenure at another university before moving to UCSD. It was not possible to obtain the exact metrics at the time of tenure for all the professors, so metrics in the year preceding tenure were provided if they were not known. A summary of the minimum, average, and maximum numbers in the number of journal papers, book chapters, conference papers, PhD students graduated, and MS students graduated is summarized in Table 1 below for these 16 professors at the time of tenure. Although the ranges in each metric are relatively large, the averages are generally representative of the productivity of most professors in the Department at the time of tenure.

Table 1: Metrics of professors in the SE Department at the time of tenure

	Journal Papers	Book Chapters	Conference Papers	PhD Students	MS Students
Minimum	11	0	2	0	0
Averages	22	2	27	2	4
Median	19	1	22	2	2
Maximum	57	5	75	5	15