

University of Colorado at Boulder

Request for Differentiated Workload Weighting

Michael Main, Associate Professor (main@colorado.edu)
Department of Computer Science
April 2004

As you read my five-year professional plan, you'll see my passions, my commitments, and my best chance at contributing to our college excellence—all of which lie in teaching our undergraduates. I'd like to supplement that plan with some information that may help you grant my request for a differentiated workload weighting of 70% (teaching), 10% (research), and 20% (service).

I've taught a mixture of small-to-medium classes (sometimes under 30 students) and large classes (often over 100 students, sometimes more than 200). Even with the largest classes, I strive to give each student the experience of a small class through the way that the lectures are conducted, through time spent in the lab, and through an open office door. I try to identify each student's individual needs as much as possible, although in the largest classes, I can only do so by relying on my TAs. I aim for innovative and interactive lectures in which each student knows that he or she needs to not only give me an answer when I call, but that I'll also expect them to tell me why the answer is correct. I encourage participation that requires both knowledge from assigned work and new reasoning in the classroom.

It's rewarding giving a lecture when everything goes just right; it's fun having a noisy group of students in my office, all talking with me and talking to each other. These are two reasons why I'm happy to have teaching as a large part of my work. However, I also want to mention that requesting a larger-than average teaching load also has a difficult side for me. Being in a large lecture or having more than a couple students in my office at once—these are situations in which I'm never truly at ease; my energy can be quickly drained. Solitary activities are much calmer for me. Even so, I'm asking for a differentiated workload because I feel that teaching students is the important thing that I'm called to do, it's the thing that I do well, and it's my best opportunity to contribute to our college's excellence.

I understand that you may have concerns about granting my request, in part because of the possible precedent that it may set, and in part because of your own vision of what a faculty member needs to be. I appreciate your consideration and hope that this information may contribute to your decision-making process.

Teaching Data for Spring 1997 through Fall 2003

Course	Number of Sections (*)	Average Enrollment	Average of Accessibility FCQ (*)	Average of Course FCQ (*)	Average of Instructor FCQ (*)
CSCI 1300	9 sections by Main	142	3.92 (Main)	3.30 (Main)	3.56 (Main)
	35 sections by others	95	3.27	3.09	3.27
CSCI 2270	6 sections by Main	73	4.00 (Main)	4.10 (Main)	4.10 (Main)
	28 sections by others	65	3.23	2.97	3.02
CSCI 3155	4 sections by Main	106	3.92 (Main)	3.52 (Main)	3.82 (Main)
	11 sections by others	87	2.63	2.21	2.42
CSCI 3434	2 sections by Main	34	4.00 (Main)	3.15 (Main)	4.00 (Main)
	10 sections by others	64	3.57	2.53	2.97
Special Topics	2 sections by Main	24	4.15 (Main)	3.15 (Main)	4.15 (Main)
	These particular special topics were not taught by anyone else.				

Notes for the Teaching Data

(*) The data came from <http://fcg.colorado.edu/> (see spreadsheet at <http://www.cs.colorado.edu/~main/teaching.xls>). During this time, Michael Main taught 12 semesters, and was on unpaid leave for 2 semesters. The average fcq scores were calculated by counting an A+ course average as 4.3, an A as 4.0, and A- as 3.7 and so on.

Student Credit Hours

Including the current semester (Spring 2004), I have taught 26 sections in 13 semesters, generating an average of 746 student credit hours per semester. From figures provided by Karl Winklmann, this level of teaching is about 12.6% of the total 2002/03 computer science credit hours produced by 25.91 tenure-track faculty, 2 instructors and 4 ICS faculty. (The actual percentage over the full period since 1997 is probably lower, since our enrollment was higher in the earlier years.)

Other Teaching Accomplishments

- I have written three textbooks (two of which were co-authored with Walter Savitch). Although I don't anticipate writing a fourth book, one of the books is now undergoing its second revision, and another is likely to be revised during 2005.
- Outstanding College Advisor Award.
- BFA Teaching Excellence Award in 1998
- College of Engineering Outstanding Teacher Award in 1998
- Academic Life Teaching Award in 2002

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Faculty Professional Plan

(A public document under the Open Records Act)

Faculty Name: Michael Main Department: Computer Science

Planning Period: Fall 2004 to Spring 2009

Abstracted from the Administrative Policy Statement: The primary purposes of the Professional Plan are to encourage faculty development and to assure accountability. The Professional Plan is designed to communicate the faculty member's teaching, research/creative work, and service goals and to explain how these goals support the needs of the primary unit. Projections made in the Plan, when compared to the faculty member's progress and achievements, provide one basis for evaluating the faculty member's professional performance, during both annual review and post-tenure review. Professional plans shall be reviewed. The director or chair of the primary unit (or appropriate primary unit committee) must approve any specific teaching and primary unit service assignments defined by the Plan. The director, chair or committee of the primary unit may comment on the adequacy or wisdom of the research/creative work plan, but may not approve or disapprove it. This Plan should be updated annually, as needed. The full text of the University's implementation policy on Professional Plans may be found at www.cusys.edu/~policies/Personnel/plan.html

Workload Weighting:	Teaching,	Research/Creative Work,	Service
Standard (40:40:20) or Differentiated:	<u>70</u>	<u>10</u>	<u>20</u>

TEACHING: Describe in general terms your plan for contributing to your unit's teaching mission over the next five years. Address the areas of classroom teaching, individualized instruction, graduate training, etc. Do not list specific course assignments, as these are determined annually based upon the needs of the unit.

My passion is teaching. My contribution to our college's excellence is in this area.

Over the next five years, I will teach some of our large undergraduate classes and some smaller classes or seminars. I plan to balance these two teaching duties, usually with one larger and one smaller class per semester.

The large classes I will teach are in the difficult areas of data structures and principles of programming languages. These courses are taken by computer science majors, ecen majors, and computer science minors from across the entire campus. Because of the size of these classes, my effort will include significant time planning effective lectures, working with individuals in the labs and in my office, supervising teaching assistants, preparing original online content, preparing/grading assignments and exams—and hopefully connecting with students in a way that gives them some of the advantages of smaller classes.

The smaller classes I will teach include our introductory course for computer science majors, undergraduate and graduate courses in theoretical computer science, and undergraduate/graduate seminars in applied topics.

In addition, I plan to supervise sophomore and junior students who act as mentors for our incoming freshmen. These students will take a one-credit course, Teaching and Mentoring in Computer Science, and will be undergraduate teaching assistants in our introductory courses. Based on the outcome of current discussions in our CSEL (Computer Science Education Lab) committee, this supervisory role might expand to a group of students who will manage the CSEL.

In addition to direct contact with students, I develop a significant amount of online content for classes, some of which is used elsewhere. For example, this summer I will test and finish the implementation of a graphics library that was written for first-semester programming students.

In 6.5 years of teaching since 1997, I have taught 26 classes with an average of 1625 student credit hours per year. Based on the 2002/03 academic year, this is about 14% of the total department credits per year. This is higher than the output that I anticipate in the next five years, but even so, teaching will continue as my primary focus.

RESEARCH/CREATIVE WORK: Describe your plan for contributing to your unit's research/creative work mission over the next five years. Describe work that you intend to conduct and how it will contribute to the overall body of your work. Address the issues of proposed funding, publications, performances, and presentations, as appropriate.

I will develop a significant amount of online content for computer science classes, some of which is used elsewhere. For example, this summer I will test and finish the implementation of a graphics library that was written for first-semester programming students. I will write proposals for funding to support undergraduates involved in this work. I will write papers for appropriate educational journals or conferences.

I will contribute to revisions of my current textbooks.

I will keep up to date with current research in programming languages.

SERVICE: Describe in general your plan for contributing to your unit's, college or school's, and campus' service mission over the next five years. Please address the nature of your service activities at various levels within the University, as well as your service external to the University.

My service will be attached to the undergraduate mission of the department, including:

1. I will be advisor for all study-abroad students. At the moment, we provide advising to these students before and after the study abroad, but we don't have any tracking system in place, so I will create such a tracking system.
2. I will be the transfer evaluator for all incoming transfer students. This also involves maintaining the college list of guaranteed transfer courses from Colorado community colleges.
3. I will serve on the department undergraduate committee.
4. I will chair the department undergraduate awards committee.
5. I will serve on the department CSEL (computer science education lab) committee.
6. I will work with departmental staff to develop web resources concerning opportunities for undergraduates.
7. I will be available as a referee for journals such as the new *Transactions on Algorithms*.
8. I will be available as an occasional reviewer for textbooks and other material for undergraduate curricula.

SIGNATURES: I submit the above information as my Professional Plan. I understand that the contents of my Professional Plan do not necessarily constitute the standards and criteria against which I will be evaluated for purposes of annual merit and/or promotion and/or tenure.

Faculty signature

date

I have reviewed the above Professional Plan and discussed its content with the author, I have provided written advisory comment(s) regarding the teaching, research/creative work, service (circle any that apply) portion(s) of this Plan.

Authorized Primary Unit signature (chair, director, or dean)

date