QUANTIFYING ACADEMIC FACULTY
WORKLOADS

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Summary

Recently there has been a ground swell of persons demanding more accountability at public colleges and universities. Members from the Board of Education and legislators are asking administrators and departments to justify and explain how faculty time is being spent. During the 1993-94 academic year, the Construction Management and Engineering Department at Boise State University undertook an assignment to address these issues and to develop a useful formula to access the workload of individual faculty members in the department.

The Construction Management and Engineering Department consisted of ten faculty members teaching the courses in a well-established 2 to 3-year Engineering Transfer program and a Construction Management Bachelors Degree program. Since 1993-94 the Engineering offerings at Boise State University have grown. We now offer full 4-year B.S. Degrees in Civil, Mechanical and Electrical Engineering. The 25 current faculty are divided by degree program into 4 separate departments under a new College of Engineering Dean. Faculty workload priorities have changed somewhat. There are indications that faculty members may be asked to devote a larger percentage of their time to research.

Boise State University has a liberal arts community college history and has traditionally emphasized undergraduate teaching rather than graduate programs and/or research. In 1993-94 the official standard teaching load was understood to be 12 credits of teaching with some service and research also required for faculty promotion or tenure. This is not a very clear definition. Large enrollment classes are more work per credit than those with small enrollment. Required lab sections may be listed as zero credit with students getting credit for the lab as part of the lecture class credit. Standard traditional classes have well-structured textbooks that are easy to teach from, while newer specialized classes may have no good textbook available. Teaching several sections of the same course is much easier than teaching several different courses. Some faculty questioned whether the work was being fairly divided. The workload formula was developed to be consistent with established practice and translate the actual workload accounting into easier to understand units, hours per week and equivalent work credits. Developing and testing the workload formula was the collaborative effort of all 10 faculty members in the 1993-94 CM&E Department. Debating issues consumed many, many faculty-hours at department meetings but the finished formula was unanimously approved. That 1993-94 workload formula is presented and explained in this paper.

<u>Introduction</u>

The mission of educational institutions is an intellectual one. Faculty members are the individuals whose job it is to carry out this mission. The educational community generally describes the responsibilities of faculty as teaching, scholarly activity and service. Close examination of assigned responsibilities is required to define clearly the relationships between activities and workload. Each faculty member's workload assignments are, by necessity, different from other faculty members' assignments. Each department is different and each college is different. This diversity, coupled with the need to provide contemporary intellectual teaching and research, can make development of a basis for comparison between assignments of faculty members a complex task.

A faculty member's workload depends upon numerous work-hour related activities that fall within the main categories of teaching, scholarly activities and service. Through considerable discussion based on our faculty's experience and our departmental goals, we identified as carefully as possible the important qualitative and quantitative factors that make up the teaching process. We then put these together into a workable formula that allowed for the variety of factors involved and weighting of those factors. The basis or benchmark used for a full time workload was 40 hours per week. We also used an "Equivalent Work Credit" defined to equal 3 hours of work per week in our formula. Each faculty member tested the formula on his own workload. Refinements and simplifications were made.

We have developed a relatively simple formula, which satisfies our workload factors and accurately estimates workloads. We believe that it is workable, understandable and accurate. It will probably require future "tweaking", but it is solidly based.

<u>Background and Objectives</u>

Faculty workloads in public education are increasingly coming under closer scrutiny by state legislatures. We understand the need for and support such close scrutiny. However, it is quite difficult to compare the assigned activities and responsibilities of one faculty member with another because of the diversity of their assignments.

The workload of an academic faculty member consists of a great deal more than meeting with students in a classroom and presenting lecture material. Faculty members must prepare course materials and provide for appropriate testing; grade students' work, provide motivational feedback; tutor and advise students, not only in coursework, but in their career; initiate, follow through and develop creative and scholarly activities, such as research and instructional development; provide support and take an active service role in professional societies and act as liaison with industry; participate in active service to the university by serving on committees and working on special projects, such as advising student clubs or working as a volunteer for activities.

Other institutions may have made similar efforts to quantify academic workload but we are unaware of them. We've independently tackled and completed the complex task of identifying, itemizing and quantifying the many and varied activities that define the workload of a faculty member. Our primary objective in this paper is to provide, for those interested, a useful formula which can estimate the average hours per week that a faculty member would normally work in order to satisfy the time requirements of the above mentioned activities.

Benchmark and Formula

We chose as our benchmark for full time work, 40 hours per week. Due to their dedication to students and to their profession, most faculty members volunteer to take on a load that is more than 40 hours per week. The formula will not account for the voluntary work hours, but estimates only the average required hours for a set workload.

We also defined a unit called the Equivalent Work Credit (EWC) as equal to three hours of work per week. A common understanding was that for every hour spent in the classroom lecturing, a faculty member will usually spend at least two hours in preparation and grading. Thus, a faculty member assigned to teach a 12 hour load will spend 36 hours a week on those teaching activities. It is reasonable, for such a load, that the faculty member will spend at least four hours a week in his/her office helping students in his/her classes with their coursework. In fact, posted office hours for such student contact is generally required of a faculty member. With those considerations, we also define full time work as equal to 12 EWC's plus four hours of student tutoring for the classes taught.

To quantify the total workload of a faculty member in average hours per week or in number of EWC's, it was necessary to look separately at time spent on his/her three separate, main responsibilities, which are: A) Teaching, B) Creative and Scholarly Activities, and C) Service. The combined time spent on these three activities is the estimated total average time that a faculty member spends at his/her job on a weekly basis. Thus the total workload in hours per week equals the total teaching hours, the creative and scholarly activity hours and the service hours.

Expressed as a formula,

$$TW = TT + CS + SR \quad \text{and} \quad \text{Total EWC's} = TW/3$$

where, for an individual faculty member,

TW = total average workload in hours per week
TT = total average time spent on teaching activities per week
CS = total average time spent on creative and scholarly activities per week
SR = total average time spent on university and community service per week

The next step in the development of the formula was to determine TT, CS and SR.

Determination of Time Spent on Teaching Activities, (TT)

      To arrive at an estimate of "teaching" time, a formula for TT was derived. This formula takes into consideration many of the factors that make one class different from others. We included class type, enrollment, experience of the faculty member, text materials, factors unique to that particular class and help provided by graders and teaching assistants.

      This formula, with its terms and "factors" defined, is shown below in Figure 1.

TEACHING WORKLOAD FORMULAE FOR ACADEMIC FACULTY

T = CN x TS x [(0.5 + 0.5 AE/NS) + FE + UD - TM]

TT = (hour summation of T for all assigned classes) + HS + AA + IT + FM - TA

EWC's for teaching = TT/3

Where:

T   = **the average TIME spent by a faculty member on teaching activities for a particular class or lab section in hours/week**
TT = **the estimated TOTAL TIME spent by the faculty member on teaching activities in hours/week for all sections they teach**
EWC= the EQUIVALENT WORK CREDITS
CN = **the CONTACT HOURS per week**
TS = **the hours of work required per contact hour for the TYPE OF SECTION taught**
AE = **the number of students ACTUALLY ENROLLED in the class section**
NS = **the NORMAL SIZE of the class section**
FE = **the FACULTY EXPERIENCE component**
UD = **the UNIQUE or DIFFIC0ULT class component**
TM = **the TEAM TEACHING component**
HS = **the average hours/week required to HELP STUDENTS with their course work**
AA = **the average hours/week required for ACADEMIC ADVISING**
IT = **the average hours/week for INTERNSHIP and INDEPENDENT Studies**
FM = **the average hours/week required to mentor an adjunct FACULTY MEMBER**
TA = **the average hours/week saved by using a TEACHING ASSISTANT**

Figure 1

More complete descriptions of each of the "factors" used are given in Appendix A. Appendix B shows example calculations that compute the TT, TW and EWC values for several different faculty workload assignments

Determination of Time Spent on Creative and Scholarly Activities, (CS)

The goal of our department is to contribute 15% of the department's aggregate time to non-sponsored creative and scholarly activities. Such activities include, but are not limited to:

  A) Instructional development such as:

      1) Development of new courses
      2) Research of new software for course development
      3) Accreditation
      4) Retention of students
      5) Attending conferences

  B) Preparing grant proposals
  C) Non-sponsored research or unpaid consulting

These activities require specific identification and approval by the department chair with input from the faculty member involved. The amount of work time allocated varies, generally up to a maximum of 9 hours per week (3 EWC's) for any one faculty member per semester.

Exclusive from our 15% goal, a faculty member may obtain sponsored research or consulting. These sponsored activities include work in which the faculty member receives grant funds or other funds from sources outside the department, where the budget for those funds includes replacement salary costs that allow an appropriate reduction in teaching load for the faculty member. Sponsored activities include, but are not limited to:

  A) Externally funded research grants such as from government sources
  B) Internally funded research grants such as those from University funds
  C) Consulting
  D) Contract or cooperative teaching.

The amount of time for sponsored research and consulting activities is approved in advance and in writing by the department chair with input from the faculty member involved. The amount is generally limited to 9 hours per week (3 EWC's) for any one faculty member per semester.

A faculty member working on any of the above non-sponsored or sponsored activities is accountable to meet the goals and objectives of his/her activity and is expected to deliver a report, either written or oral, to the department on the work performed. Written reports are

circulated to all department faculty and the dean, and filed with the department. Oral reports are given at a department faculty meeting with a written synopsis delivered to the dean and filed with the department.

Determination of Time Spent on Service, (SR)

Departmental services include the following four activities:

A)	The department chair's responsibility, defined as 18 hours per week, (6 EWC's), per semester + 1.2 hours per week per FTE over 10 FTE's.
B)	The program coordinator's administrative workload, defined as 9 hours per week, (3 EWC's), per semester.
C)	Other special assignments which may arise from time to time. These are specifically identified by the department chair and are limited to 9 hours per week, (3 EWC's), for any one faculty member per semester.
D)	Departmental meetings and committees.
E)	Faculty advising of student engineering clubs

In addition, the goal of our department is to dedicate 10% of the department's aggregate time to other university and community service.

Services outside the department include but are not limited to activities such as:

A)	University Committees
B)	Professional service organizations
C)	City, state, national and international service organizations

These non-departmental activities will be identified by the faculty and coordinated with the department chair. The amount of time spent on these activities will generally be limited to a maximum of 6 hours per week, (2 EWC,s) for any one faculty member per semester.

Conclusions

The workload formula we developed has been defined, tested and revised a number of times. We believed in 1993-94, that the formula was workable and that it accurately estimated the workloads of the faculty members then teaching in the Department of Construction Management and Engineering. Readers of this paper are invited to test the formula at their institutions. The formula is about as "user friendly" as we could make it. Engineering faculty have no trouble understanding and using a mathematical formula but faculty in the non-mathematics based disciplines will probably feel uncomfortable using it. To make using the workload formula even more "user friendly" we developed a spreadsheet computer program that has documentation and instructions imbedded. Entering the individual workload information is easy and straightforward and the program prints out a finished summary sheet that is ready to be

added to an annual performance review file.

Once there is confidence that the formula provides a reasonably accurate faculty workload estimate the question shifts to how it might best be used to aid in department administration? Our Engineering and Construction Management Programs at Boise State University have recently gone through tremendous change, adding many new upper division engineering classes, dividing into 4 separate departments and adding about 15 new faculty. It is not clear yet where and how the workload formula may be used in administration of the separate departments. Two of the departments plan to incorporate using the formula into their procedures for assigning and/or annually evaluating faculty work. The other two departments have not indicated any plans to use it but these policies are still not firm in all departments.

The original intent for developing the academic workload formula was to assist in fairly assigning classes for individual faculty to teach and in helping to resolve any conflicts that may arise. These conflicts can be

- between faculty who feel the grass is greener on the other side of the teaching load fence

- between departments and upper administration regarding the need to add or lose faculty positions or

- between upper administrators and non-academic critics outside the university who feel teachers don't work hard enough.

The situations envisioned may be similar to the car owner who is irate over being charges by the auto repair shop for 7 hour of work to replace the his or her car's clutch. The auto repair industry has produced a "book" that lists the average time it takes for a reasonably skilled and experienced mechanic to replace the clutch on any particular make and model car. It is hard to argue with the "book" when you question whether your repair bill is fair. If university faculty could refer to a "book" like the one in this example conflicts might be easier to fairly resolve.

APPENDIX A
Teaching Workload Formulae for Academic Faculty

This appendix provides a detailed explanation of the terms and components that make up the workload formulae.

$$T = CN \times TS \times [(.5 + .5\left(\frac{AE}{NS}\right)) + FE + UD - TM]$$

TT = sum of all sections (T) + HS + AA + IT + FM - TA

EWC's for teaching = TT/3

Putting appropriate values into the above equations allows calculation of an estimate of the number of hours per week, TT, required by a particular professor to perform his teaching duties.

The terms and components are defined as follows:

T is the <u>average time</u> spent by a faculty member on teaching activities for a particular section in hours/week.

TT is the estimated <u>total</u> <u>time</u> spent by the faculty member on teaching activities in hours/week.

EWC is the number of <u>equivalent work credits</u>. (1 EWC = 3 hours/week)

CN is the number of <u>contact hours</u> for the particular class section per week.

TS is the hours of work required per contact hour for the <u>type of section</u> taught. For section types in our department, 3.0 is used for lecture sections and 2.0 is used for laboratory sections.

The constant **0.5** and subsequent **0.5 multiplier** of (AE/NS) provide the 50-50 division between work which is independent of enrollment and work that increases in proportion to enrollment.

AE is the <u>actual number</u> of students in the class section as of the official university tenth day count.

NS is the <u>normal size</u> for the class section. The value used is based on teacher and department experience. When NS = AE, the 50-50 balance described above is achieved.

For our normal lecture class sections, NS = 25
For our normal laboratory sections, NS = 12
For non-normal classes, special NS values are assigned as follows:
    EN 100 - 75
    EN 100L - 36
    EN 102 - 60 (with a teaching assistant)
    EN 108 - 20
    CO 235 - 12
    CO 475 - 20
    Video course transmitted or recorded for students off campus - 10

FE is the <u>faculty experience</u> component that accounts for the experience and preparation of the instructor in teaching and developing curricula for a course: (Only one value is selected).

+0.6 New course for the instructor
+0.4 Second semester the instructor teaches the course
+0.4 First section of a course taught before, but not during previous semester
+0.2 First section of a class that was taught during the past semester, and at least one other previous time
+0.2 First section of a class using a new textbook
-0.2 Second section of a course taught during same semester

UD is the <u>uniqueness/difficulty</u> component that accounts for extra time requirements of specialized courses:
(All values that apply are added up to a maximum of 1.0)

+0.0 Course using a standard published text
+0.2 Course involving two or more field trips or industry events each semester
+0.4 First section of a unique course with over 50% of the reading materials and homework prepared by the instructor
+0.2 First section of a course with 20% to 50% of the reading materials and homework prepared by the instructor
+0.4 Video recorded and transmitted course presented for the first time
+0.2 Video recorded and transmitted course, subsequent times
+0.3 First section of a course with over 20% computer usage or video preparation

TM is the component that accounts for <u>team teaching</u>.

    0.0   For no team teaching
    0.3   For two instructors
    0.4   For three or more instructors

The following terms are added in after the class section summation has been completed.

HS is the time required for a professor to <u>help students</u> with their course work and is

    0.11 x [sum of all sections (T)]

AA is an estimate of the average hours per week for <u>academic advising</u> of students during the semester. This component is proportional to the number of advisees the professor has and is determined as follows:

    AA = (Number of advisees)/10

    The activities of the student Construction Management Association are considered by this department to be an integral part of the constructor's education; therefore, the academic advising of this organization is considered by the department to be a part of teaching at a level of 6 to 12 hours/week (2 to 4 EWC's).

IT is the average hours per week for <u>internships, independent</u> studies and graduate student advising. Our estimates are that 5 internship students require 3 hours of work per week (1 EWC), that a student doing an independent study of 3 credit hours requires up to 1.5 hours of work per week (0.5 EWC), and that a graduate student advisee requires up to 2 hours of work per week (0.7 EWC).

    IT_1 = (Number of internship students) x 0.6
    IT_2 = (Number of independent study student credit hours) x 0.5
    IT_3 = (Number of graduate student advisees) x 2

FM is the time required for a professor to mentor an adjunct <u>faculty member</u> and is

    0.15 x T of an inexperienced adjunct faculty member, or
    0.05 x T of an experienced adjunct faculty member.

TA is the time saved by having a grader or a <u>teaching assistant</u> and is 0.5 hours for each hour per week of time a teaching assistant works.

APPENDIX B

The faculty workload formula developed estimates hours per week of work and thereby can be used to compare and/or predict the time requirements of faculty assignments that exhibit wide varieties of teaching, research and service components. The formula accounts for differences in faculty experience, student enrollment, type of class, and other factors that affect the hours per week a faculty member spends in teaching a course. The work hours and EWC's calculated by using the formula are an estimate of the time it takes to deliver high quality education to students.

We present in this Appendix sample calculations for five examples that illustrate significantly different faculty assignments. Example 1 is a simplified benchmark (40 hour/week) workload that assumes an experienced professor teaching two sections each of two different three credit lecture courses, each course requiring standard text material and having normal enrollments. It is possible to teach 12 credits of class in a 40 hour work week. It is to be noted in this example, however, that the assignment contains ONLY TEACHING activities and has NO time allotted for CREATIVE and SCHOLARLY ACTIVITIES or to SERVICE. Thus, such an assignment would NOT meet the minimum requirements for Tenure or Promotion. Examples 2 through 6 show application of the workload formula to a variety of different teaching, research and service loads including non-standard things more typical of the individual faculty member loads in our department.

Example 1: (Benchmark Full Time Teaching Assignment - Experienced Professor) - A fully experienced professor teaches two sections of EN XX1 and two sections of EN XX2. Both are three credit lecture courses. This four class load has a total of 12 lecture hours each week and represents 12 catalog credits worth of classes. The enrollments in each class are 25 students, which is the normal size for the department's lecture classes. Both courses are standard and the teaching/homework schedules follow good published texts. There are no unique or difficult components and no grader is used. The professor keeps adequate office hours for helping students but is not required to advise students, perform research or other scholarly activity, or serve on departmental or other University committees. Determine the professor's weekly workload.

Classes   Teaching work in hours/week $T = CN \times TS \times [0.5 + 0.5(AE/NS) + FE + UD - TM]$

EN XX1-1: $T = 3 \times 3 \times [0.5 + 0.5(25/25) + .2 + 0 - 0] = 10.8$ HRS/WK (3.6 EWC)

EN XX1-2: $T = 3 \times 3 \times [0.5 + 0.5(25/25) - .2 + 0 - 0] = 7.2$ "   (2.4 EWC)

EN XX2-1: $T = 3 \times 3 \times [0.5 + 0.5(25/25) + .2 + 0 - 0] = 10.8$ "   (3.6 EWC)

EN XX2-2: $T = 3 \times 3 \times [0.5 + 0.5(25/25) - .2 + 0 - 0] = \underline{7.2}$ "   (2.4 EWC)

            Work sum for all classes taught (Sum T) $= 36.0$ HRS/WK (12.0 EWC)

Total Teaching $TT = SUM\ T + HS + AA + IT + FM - TA$

$$TT = 36.0 \quad + 4.0 + \ 0 \ + 0 + 0 \ - \ 0 \quad = 40.0 \text{ HRS/WK (13.3}$$
EWC)

Total Work $\quad TW = TT \quad + CS + SR$

$$TW = 40.0 + \ 0 \ + \ 0 \ \ = 40.0 \ \textbf{Total Average hours/week} \ = \ \textbf{(13.3}$$

EWC)

Example 2: (New Professor) - A newly hired professor was hired to teach three 3 credit courses : EN 001, Sections 1 and 2, as well as EN 002, Section 1. There are 20 students in each one of the lecture sections. EN 001 is a unique class where over 50 percent of the reading materials and homework are prepared by the professor. EN 002 is a standard course which uses a new textbook. This professor has a grader to help grade papers in all the sections, and the grader works 6 hours per week. The professor has 26 advisees and will dedicate 2 hours per week to creative and scholarly contributions and 1 hour per week to service. Determine the professor's weekly workload.

Classes $\quad$ Teaching work in hours/week $\quad T \ = \ CN \ x \ TS \ x \ [0.5 + 0.5(AE/NS) + FE + UD - TM]$

EN 001-1: $\quad T = 3 \ x \ 3 \ x \ [\ 0.5 + 0.5 \ (20/25) + .6 \ + \ .4 - \ 0 \ ] \ = \ 17.1 \text{ HRS/WK } (5.7$
EWC)

EN 001-2: $\quad T = 3 \ x \ 3 \ x \ [\ 0.5 + 0.5 \ (20/25) - .2 \ + \ 0 - \ 0 \ ] \ = \ 6.3 \quad " \quad (2.1$
EWC)

EN 002-1: $\quad T = 3 \ x \ 3 \ x \ [\ 0.5 + 0.5 \ (20/25) + .6 \ + \ 0 - \ 0 \ ] \ \underline{= \ 13.5 \quad " \quad (4.5}$
EWC)

$\quad\quad\quad\quad$ Work sum for all classes taught (Sum T) $\ = \ 36.9 \text{ HRS/WK } (12.3$

EWC)

Total Teaching $\quad TT = SUM \ T + HS + AA + IT + FM - TA$
$$TT = \ 36.9 \quad + 4.1 + 2.6 \ + \ 0 \ + \ 0 \ - \ 3 \quad = 40.6 \text{ HRS/WK } (13.5$$
EWC)

Total Work $\quad TW = TT \quad + CS + SR$

$$TW = 40.6 + \ 2 \ + \ 1 \ \ = \ 43.6 \ \textbf{Total Average hours/week} \ = \ \textbf{(14.5}$$

EWC)

Example 3: (Experienced Professor) - A professor is teaching one section of a 3 credit course, EN 003, one section of a 4 credit course, EN 004, plus a section of a lab course, EN 005-A. There are 20 students in each lecture section and 10 in the lab. EN 003 is a new course for the professor and EN 004 was taught by the professor the previous semester but requires a new text for the current semester. The lab was taught by the professor the previous semester and requires preparation of 30 percent of the reading materials and homework for the lab because of inadequate published text material. The professor has 28 advisees and a grader who works 10 hours per week. Two hours per week will be dedicated to creative and scholarly contributions and two hours per week to service.

Classes $\quad$ Teaching work in hours/week $\quad T \ = \ CN \ x \ TS \ x \ [0.5 + 0.5(AE/NS) + FE + UD - TM]$

EN 003-1:   T = 3 x 3 x [0.5 + 0.5 (20/25) + .6 + 0 - 0] = 13.5 HRS/WK (4.5 EWC)

EN 004-1:   T = 3 x 3 x [0.5 + 0.5 (20/25) + .4 + 0 - 0] = 15.6   "   (5.2 EWC)

EN 005-A: T = 3 x 2 x [0.5 + 0.5 (10/12) + .2 + .2 - 0] = 7.9   "   (2.6 EWC)

Work sum for all classes taught (Sum T) = 37.0 HRS/WK (12.3 EWC)

Total Teaching   TT = SUM T + HS + AA + IT + FM - TA
                  TT = 37.0   + 4.1 + 2.8 + 0 + 0 - 5   = 38.9 HRS/WK (13.0 EWC)

Total Work   TW = TT   + CS + SR
              TW = 38.9 + 2 + 2 = 42.9 Total Average hours/week = (14.3 EWC)

Example 4: (Department Chair) - A professor is the chair of a department which has 11 full time faculty and 4 part time faculty. The part time faculty are equivalent to 1.5 FTE. The chair is teaching 2 sections of EN 006, a two credit computer programming course which meets for 2 hours of lecture per week. Student enrollments in the two sections are 32 and 28. The chair has taught the course twice before including the previous semester. A teaching assistant will help 8 hours per week. The chair is not performing extra creative or scholarly activities, but does have one student registered for 3 credits of independent studies and 45 student advisees. Extra committee work beyond the chair's normal duties requires an average of 1 hour per week.   Determine the chair's weekly workload.

Classes   Teaching work in hours/week   T = CN x TS x [0.5 + 0.5(AE/NS) + FE + UD - TM]

EN 006-1:   T = 2 x 3 x [0.5 + 0.5 (32/25) + .2 + .3 - 0] =   9.8 HRS/WK (3.3 EWC)

EN 006-2:   T = 2 x 3 x [0.5 + 0.5 (28/25) - .2 + 0 - 0] = 5.2   "   (1.7 EWC)

Work sum for all classes taught (Sum T) = 15.0 HRS/WK (5.0 EWC)

Total Teaching   TT = SUM T + HS + AA + IT + FM - TA
                  TT = 15.0   + 1.7 + 4.5 +1.5 + 0 - 4   = 18.7 HRS/WK (6.2 EWC)

Total Work   TW = TT   + CS + SR
              TW = 18.7 + 0   + 22   = 40.7 Total Average hours/week = (13.6 EWC)

Example 5: (Full Time Adjunct) - An adjunct professor is teaching two sections of EN 009 for 3 credits with 15 and 18 students. The professor has taught the course during the past semester and previous semesters. The professor is also teaching two sections of a 2 credit laboratory/lecture

course, EN 010, each of which meets four hours per week. The enrollments are 10 and 12. The professor has also taught EN 010 in the previous and past semesters. EN 010 is a computer class. The professor has no advisees and no other assignments except to attend departmental meetings, a service activity estimated to require an average of 1 hour per week.

Classes   Teaching work in hours/week $T = CN \times TS \times [0.5 + 0.5(AE/NS) + FE + UD - TM]$

 EN 009-1: $T = 3 \times 3 \times [0.5 + 0.5 (15/25) + .2 + 0 - 0] = 9.0$ HRS/WK (3.0 EWC)

 EN 009-2: $T = 3 \times 3 \times [0.5 + 0.5 (18/25) - .2 + 0 - 0] = 5.9$ "   (2.0 EWC)

 EN 108-1: $T = 4 \times 2.5 \times [0.5 + 0.5 (15/20) + .2 + .3 - 0] = 13.8$ "   (4.6 EWC)

 EN 108-2: $T = 4 \times 2.5 \times [0.5 + 0.5 (18/20) - .2 + 0 - 0] = \underline{7.5}$ "   (2.5 EWC)

                        Work sum for all classes taught (Sum T)   = 36.2 HRS/WK (12.1 EWC)

 Total Teaching $TT = SUM\ T + HS + AA + IT + FM - TA$
                        $TT = 36.2 + 4.0 + 2.8 + 0 + 0 - 0 = 40.2$ HRS/WK (13.4 EWC)

 Total Work $TW = TT + CS + SR$
                        $TW = 40.2 + 0 + 1 = 41.2$ Total Average hours/week = (13.7 EWC)

Example 6: (Research Professor) - A young female professor has been awarded a significant research grant from a Federal agency. Agreements were worked out in advance to where a percentage of her grant funding goes to the department to cover overhead and allow her to spend half her time for doing the research. She has been assigned to teach one 3 credit lecture course, EN 422-1, with 22 students and one section of the 3 hour lab for that course, EN423-A, with 12 students. Both the lecture and lab are standard courses taught by the professor the previous semester and semesters before that. An adjunct faculty or graduate student is to be hired to help her by doing 10 hours per week of her homework or lab grading and to teach the other lab section, EN423-B, with 10 students in it. The research professor will supervise the adjunct professor as a faculty mentor (FM). The professor has 16 advisees and will be spending about 1 hour per week for committee service work.. How many hours per week can the research faculty spend on her research before exceeding the 40 hour per week full load target?

Classes   Teaching work in hours/week $T = CN \times TS \times [0.5 + 0.5(AE/NS) + FE + UD - TM]$

 EN 422-1: $T = 3 \times 3 \times [0.5 + 0.5 (22/25) + .2 + 0 - 0] = 10.3$ HRS/WK (3.4 EWC)

 EN 423-A: $T = 3 \times 2 \times [0.5 + 0.5 (12/12) + .2 + 0 - 0] = \underline{7.2}$ "   (2.4 EWC)

                        Work sum for all classes taught (Sum T)   = 17.5 HRS/WK (5.8

EWC)
 Mentored Faculty
 EN 423-B: T = 3 x 2 x [0.5 + 0.5 (10/12) + .6 + 0 - 0] = 9.1 HRS/WK (3.0
EWC)

 Total Teaching   TT = SUM T + HS + AA + IT + FM - TA
                  TT = 17.5   + 1.9 + 1.6 + 0 + (.15x9.1) - 5 = 17.3 HRS/WK (5.8
EWC)
 Total Work   TW = TT   + CS + SR
                  TW = 17.3 + CS + 1 = 40.0 hours/week full load target = (13.3 EWC)

 Solving for CS: CS = 40.0 – 17.3 – 1 = 21.7 hours per week available for Research

Bilgraphical Information

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