

DRAFT

Credit Hours: An Initial Proposal/Discussion

Council on Academic Affairs

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The current rules concerning Credit Hours are given below.

A) All courses shall be assigned a number of credit hours in accordance with the procedure outlined in rules 3335-8-02 to 3335-8-04 of the Administrative Code. This may be any number from zero on up; however, in determining the credit hours assigned, the department, school, college and council on academic affairs should use as a guide the following suggested standards:

(1) One credit hour shall be assigned for each three hours per week of the average student's time, including class hours, required to earn the average grade of "C" in this course.

(2) One credit hour shall be assigned for each two consecutive hours of practical or experimental work per week in any department or school.

(3) One credit hour shall be assigned for each three hours of laboratory work per week, when no additional outside work is required. When outside work is required, then the standard in paragraph (A)(1) of this rule shall be applied.

(B) In determining the hours per week required by the course or work, the council on academic affairs may, in appropriate cases, consider the average weekly hours spent during a quarter, semester, or session on the course or work. It should be remembered that the above are guides only and may be deviated from for good cause.

(C) When comparing or combining semester credit hours with quarter credit hours, one semester credit hour shall be the equivalent of one and one-half quarter credit hours. (B/T 7/9/2004)

Discussion Without Consistent Use of Mini-Mesters

The primary assumption on which this part of the document is based is stated below:

Current System: 180 cr hr to Degree over 12 Quarters = Average Load of 15 cr hrs/Qtr.

New System: 120 cr hr to Degree over 8 Semesters = Average Load of 15 cr hrs/Sem

In other words it is assumed that the typical student will not get an appreciable amount of their degree work done in the mini-mesters.

For the purposes of comparison of the "standard" way of defining a credit hour, as in A(1) of the current rule, we restrict ourselves to that one way of getting to a credit hour for now. See below for a discussion on the other possible ways to get to a credit hour equivalent. So for now we consider variations on the rule in A(1) which states some combination of class time and out of class time totals to a weekly work load per credit hour of 3 hrs. In the current system say for comparison that one standard way of getting to this current definition is:

Current System:

One 48 min Class + 2.2 hrs (or 2x1.1 hrs) of outside work = 3 hrs per wk per cr hr

Call the number 1.1 in the above (the value necessary to get to 3 hours including one 48 min class) the out of class work index.

Keeping this index open for now as well as the length of class this gives as a **general definition of this kind of a credit hour in the new system:**

New System:

One CI min Class and 2n hrs of outside work = (?) hrs per wk per cr hr (depends on CI and n)

Where we call n the out of class work index (equals 1.1 for our current system) and CI is the class time. Also a week is defined as 5 instructional days.

Now define the current calendar and three possible new calendars:

- Current: 3 Quarters, 49.33 Instructional Days Each, 48 min Classes
- Model A: 2 Semesters, 65 Instructional Days Each, 60 min Classes
- Model B: 2 Semesters, 70 Instructional Days Each, 60 min Classes
- Model C: 2 Semesters, 70 Instructional Days Each, 48 min Classes

The following table is generated by first calculating the total student work load per year (3 quarters) for the current system for a 15 cr hr load in each quarter with the credit hour rule used above and noting that our average number of instructional days per quarter has been around 49.333 for most past years.

$$\left(1 \frac{cl \text{ hrs}}{wk} \times \frac{48 \text{ min}}{60 \text{ min}} + 2 \times 1.1\right) \times 15 \times \frac{49.333}{5} \times 3 = 1332 \text{ hrs per year}$$

Also with a 3 hr per wk per cr hr definition this gives a weekly work load currently of 45 hours. The rest of the first row of the table then comes from each new model (A, B or C) by finding the value of the out of class work index n which makes the total work load for the year equal to 1332 hrs. The weekly work load is then just the total yearly amount divided by the number of weeks (number of instructional days divided by 5) and then divided by the number of terms (3 or 2). Then the value of n, the out of class work index, is calculated from this weekly work load value for the particular model.

Weekly and Credit Hour Work Loads and Out of Class Work Index to Reach a Specified Total Yearly Work Load

Total Student Work Hours in Academic Year	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index
	Current	Current	Model A	Model A	Model B	Model B	Model C	Model C
1332 (Current)	45.0 (3)	1.10	51.2 (3.4)	1.20	47.6 (3.2)	1.09	47.6 (3.2)	1.19
1400 (5% incr)	47.3 (3.2)	1.18	53.8 (3.6)	1.39	50.0 (3.3)	1.17	50.0 (3.3)	1.27
1467 (10% incr)	49.6 (3.3)	1.25	56.4 (3.8)	1.48	52.4 (3.5)	1.25	52.4 (3.5)	1.35

Looking at the first row we see that the 65 day semester with 60 min classes (Model A) will require an 14% increase in the weekly workload and work load per credit hour, and a 9% increase in the out of class work index compared to the current quarter system. The 70 day semester with 60 min classes (Model B) will require a 6% increase in weekly work load and work load per credit hour, and almost the same out of class work index as currently. The 70 day semester with 48 min classes (Model C) will require a 6% increase in weekly work load and work load per credit hour and an 8% increase in out of class work index.

Per the conversations in the Semester Working Group meeting of April 28 in which it was proposed that we might increase the overall work load of our students, rows 2 and 3 of the table explore the possibility of a 5% or 10% increase in total yearly workload. The consequences in terms of weekly work load and out of class work index are shown. These options (except for the current quarter system) would appear borderline unworkable if you were, for example, to say that the weekly work load should not exceed 50 hrs per week. Also, even at the current annual workload of 1332 hours, Model A gives a weekly work load greater than 50.

Conclusions: In order to define what the workload is for one credit hour in this one possible mode of measuring a credit hour (1 class time unit + the necessary out of class time to reach some desired value) it will be necessary to decide what the length of the semester is in instructional days and what the class length time will be. This is because, as demonstrated above, for any given fixed definition of a credit hour, the weekly workload and workload per credit hour changes dramatically for the same total annual workload depending on these two numbers .

The final conclusion is then that the three decisions on (1) the number of instructional days, (2) the length of class period, and (3) the weekly workload per credit hour should be made together as one decision based on the kind of data given in the above table and what we expect our students to do.

Once we have fixed these three numbers then we can begin to discuss the other possible ways of getting to a credit hour similar to the ways in A(2) and A(3) using the decided upon weekly work load per credit hour of the A(1) type method of delivery as a comparison. For example, considering the A(2) method of delivery, if, say, we decide upon a weekly work load per credit hour of 3.2 for the A(1) type delivery method, then perhaps we could start the conversation by saying that instead of “two consecutive hours of practical or experimental work per week” we consider “2.13 consecutive hours of practical or experimental work per week”. I agree that the number 2.13 appears arbitrary and/or odd, but it is found by comparing 3.2 hours to the existing standard of a weekly work load per credit hour of 3 hours.

Discussion With Consistent Use of Mini-Mesters

The primary assumption on which this part of the document is based is stated below:

Current System: 180 cr hr to Degree over 12 Quarters = Average Load of 15 cr hrs/Qtr.

New System: 120 cr hr to Degree over 8 Semesters and 4 Mini-Mesters =
Average Load of 13.5 cr hrs/Semester and 3 cr hrs/Mini-Mester

In other words it is assumed that a typical student will take one 3 cr hr once a year in a mini-mester. Based on the workloads found below that is the most a student could take and if there are two mini-mesters then this says a typical student will do this one out of two mini-mesters, which seems reasonable. If there is only one mini-mester and it is this length (14 or 15 instructional days) then this is likely an overestimate and the results fall between the above calculations and the ones below.

For the purposes of comparison of the “standard” way of defining a credit hour, as in A(1) of the current rule, we restrict ourselves to that one way of getting to a credit hour for now. See below for a discussion on the other possible ways to get to a credit hour equivalent. So for now we consider variations on the rule in A(1) which states some combination of class time and out of class time totals to a weekly work load per credit hour of 3 hrs. In the current system say for comparison that one standard way of getting to this current definition is:

Current System:

One 48 min Class + 2.2 hrs (or 2x1.1 hrs) of outside work = 3 hrs per wk per cr hr

Call the number 1.1 in the above (the value necessary to get to 3 hours including one 48 min class) the out of class work index.

Keeping this index open for now as well as the length of class this gives as a **general definition of this kind of a credit hour in the new system:**

New System:

One C1 min Class and 2n hrs of outside work = (?) hrs per wk per cr hr (depends on C1 and n)

Where we call n the out of class work index (equals 1.1 for our current system) and C1 is the class time. Also a week is defined as 5 instructional days.

Now define the current calendar and three possible new calendars:

Current: 3 Quarters, 49.33 Instructional Days Each, 48 min Classes

Model A: 2 Semesters, 65 Instructional Days Each, 60 min Classes

Model B: 2 Semesters, 70 Instructional Days Each, 60 min Classes

Model C: 2 Semesters, 70 Instructional Days Each, 48 min Classes

The following table is generated by first calculating the total student work load per year (3 quarters) for the current system for a 15 cr hr load in each quarter with the credit hour rule used above and noting that our average number of instructional days per quarter has been around 49.333 for most past years.

$$\left(1 \frac{cl \text{ hrs}}{wk} \times \frac{48 \text{ min}}{60 \text{ min}} + 2 \times 1.1\right) \times 15 \times \frac{49.333}{5} \times 3 = 1332 \text{ hrs per year}$$

Also with a 3 hr per wk per cr hr definition this gives a weekly work load currently of 45 hours. The rest of the first row of the table then comes from each new model (A, B or C) by finding the value of the out of class work index n which makes the total work load for the year equal to 1332 hrs. In the new system the **total yearly work load** is obtained as follows

$$T = 13.5 \times 2 \times \left(\frac{ID}{5}\right) \times (Cl + 2 \times n) + 3 \times \left(\frac{14}{5}\right) \times (Cl + 2 \times n)$$

where it is assumed that the average instructional days in a mini-mester is 14, ID is the instructional days in a semester, Cl is class time in hours and n is the out of class work index defined above. Then the **credit hour workload, the weekly workload during a semester** and the **weekly workload during a minimester** are, respectively

$$(Cl + 2 \times n) \quad , \quad 13.5 \times (Cl + 2 \times n) \quad , \quad 3 \times (Cl + 2 \times n) \times \left(\frac{ID}{14}\right)$$

Weekly and Credit Hour Work Loads and Out of Class Work Index to Reach a Specified Total
Yearly Work Load

Total Student Work Hours in Academic Year	Semesters			Semesters			Semesters		
	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	
	Current	Current	Model A	Model A	Model B	Model B	Model C	Model C	
1332 (Current)	45.0 (3)	1.10	46.8 (3.5)	1.23	43.7 (3.24)	1.12	43.7 (3.24)	1.22	
1400 (5% incr)	47.3 (3.2)	1.18	49.1 (3.6)	1.32	45.9 (3.40)	1.20	45.9 (3.40)	1.30	
1467 (10% incr)	49.6 (3.3)	1.25	51.5 (3.8)	1.41	48.1 (3.56)	1.28	48.1 (3.56)	1.38	

Total Student Work Hours in Academic Year	Mini-mester			Mini-mester			Mini-mester		
	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	Hours per Week (per cr hr)	Out of Class Work Index	
	Current	Current	Model A	Model A	Model B	Model B	Model C	Model C	
1332 (Current)	45.0 (3)	1.10	48.2 (16.1)	1.23	48.5 (16.2)	1.12	48.5 (16.2)	1.22	
1400 (5% incr)	47.3 (3.2)	1.18	50.7 (16.9)	1.32	51.0 (17.0)	1.20	51.0 (17.0)	1.30	
1467 (10% incr)	49.6 (3.3)	1.25	53.1 (17.7)	1.41	53.5 (17.8)	1.28	53.5 (17.8)	1.38	

Looking at the first row of the first table for semesters, we see that the 65 day semester with 60 min classes (Model A) will require a 4% increase in the weekly workload, a 17% increase in work

load per credit hour, and a 9% increase in the out of class work index compared to the current quarter system. The 70 day semester with 60 min classes (Model B) will require a 3% decrease in weekly work load, an 8% increase in work load per credit hour, and a 2% increase in the out of class work index compared to currently. The 70 day semester with 48 min classes (Model C) will require a 3% decrease in weekly work load, an 8% increase in work load per credit hour and a 2% increase in out of class work index.

Per the conversations in the Semester Working Group meeting of April 28 in which it was proposed that we might increase the overall work load of our students, rows 2 and 3 of the table explore the possibility of a 5% or 10% increase in total yearly workload. The consequences in terms of weekly work load and out of class work index are shown.

Conclusions: In order to define what the workload is for one credit hour in this one possible mode of measuring a credit hour (1 class time unit + the necessary out of class time to reach some desired value) it will be necessary to decide what the length of the semester is in instructional days and what the class length time will be. This is because, as demonstrated above, for any given fixed definition of a credit hour, the weekly workload and workload per credit hour changes dramatically for the same total annual workload depending on these two numbers .

The final conclusion is then that the three decisions on (1) the number of instructional days, (2) the length of class period, and (3) the weekly workload per credit hour should be made together as one decision based on the kind of data given in the above table and what we expect our students to do.

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A Final Pedagogical Note about Mini-Mesters

The numbers above show that during a mini-mester a student will have to work between 48.5 and 53.5 hours per week over an approximately three week period to get to somewhere between the current annual workload and a 10% increase in that number. There is virtually no mall and it will take a lot of trial and error to determine what will work and what won't. A very careful assessment program to compare the deliveries should be an absolute minimum requirement if we are to go out on such a long and precarious pedagogical limb. Also at a minimum, the entire faculty should be polled as to initial impressions about whether they would be willing to put any of their courses into this environment **before** we take such an

unprecedented approach. ***All of this puts in doubt the estimate that a typical student would take one 3 cr hr course a year in a mini-mester. If there is only one mini-mester the combined likelihood that curriculum will be available in the mini-mesters and students will take advantage goes down even further.***