Course Credit-hour System Redesign

Strategies to Transition Semester Courses to Three Credit-hours

Custom Research Brief

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I. Research Methodology

Project Challenge  
Leadership at a member institution approached the Forum with the following questions:

- What are the national trends concerning semester-based calendars?
- What are the advantages and disadvantages of transitioning to a three credit-hour system?
- What is the impact of a transition to a three credit-hour system on student learning outcomes? What are the advantages or disadvantages for part-time students?
- Which courses and subjects are negatively or positively impacted by credit-hour transitions?
- How are faculty members negatively and positively impacted by credit-hour transitions?
- What is the process to transition from four to three credit-hour systems?
- Who participates in this process? What additional resources are required?
- What is the timeline to transition to a three credit-hour system?

Project Sources

- “Academic Senate Course Approval Process.” University D.

Research Parameters

The Forum interviewed enrollment administrators at five mid-sized, public institutions.
## A Guide to the Institutions Profiled in this Brief

<table>
<thead>
<tr>
<th>Institution</th>
<th>Location</th>
<th>Type</th>
<th>Approximate Enrollment (Total/Undergraduate)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>University A</td>
<td>Northeast</td>
<td>Public</td>
<td>4,700 / 4,600</td>
<td>Baccalaureate Colleges – Arts &amp; Sciences</td>
</tr>
<tr>
<td>University B</td>
<td>South</td>
<td>Public</td>
<td>34,800 / 26,400</td>
<td>Research Universities (very high research activity)</td>
</tr>
<tr>
<td>University C</td>
<td>South</td>
<td>Public</td>
<td>5,300 / 2,100</td>
<td>Master’s College and Universities (larger programs)</td>
</tr>
<tr>
<td>University D</td>
<td>Northeast</td>
<td>Public</td>
<td>14,500 / 13,300</td>
<td>Master’s College and Universities (larger programs)</td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics
II. Executive Overview

Key Observations  Administrators at most institutions transition from four- to three-credit semester courses during the transition from quarters to semesters. The transition to fewer terms mitigates any negative outcomes of the transition from five to three credit-hour systems. For example, the transition to semesters at University C included a reduction in required credits to graduate and general education courses to ensure students could graduate on time through the three-credit system.

The transition from five-credit courses in the quarter system to three-credit courses in the semester system requires curriculum redesign but few scheduling block changes. Five-credit courses in the quarter system and three-credit courses in the semester system meet for 50 minute periods three times per week or 75 minutes twice per week (for a total of 150 minutes per week). Calendar transitions have little impact on course scheduling, but cause faculty to edit and reevaluate curricula and syllabi for all courses to adjust to longer terms.

Contacts at University B speculate that students achieve greater learning outcomes under the semester system because they spend more time with course material; however, faculty must adopt pedagogy that engages students over the course of a semester. Faculty incorporate more assignments that require students to interact with course material outside of the classroom, such as practice problems and projects, to compensate for the lost class time. Literature is inconclusive about the differences in student learning outcomes under three-credit or four-credit systems.

Faculty members are primarily concerned about the increase in the number of course preparations required per year under the three credit semester-based calendar. However, administrators argue that faculty may complete more course preparations, but require fewer contact hours under the semester system, and therefore do not experience an increase in workload.

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1 Course preparation refers to the amount of time an instructor must dedicate to design and prepare to teach a single course session.

2 Contact hours refers to the number of hours students spend under an instructors’ supervision for a single class; contact hours include class sessions and supplementary instruction sessions, such as labs or recitations, but do not include work completed outside of class, such as homework or visits to instructors’ office hours. Administrators determine the credit-hour value of a course based on the number of contact hours. Institutions differ the number of contact hours needed to warrant one credit-hour; a semester credit-hour typically implies 15 to 16 contact hours, and a three credit-hour course implies 45 to 48 credit hours.
III. Overview

National Trends

National Data Indicates Growing Participation in Semester-based Academic Calendars

The percentage of institutions using the quarter-based academic calendar declined steadily over the last 25 years. In the 2011 academic year, fewer than ten percent of all public four- and two-year institutions used the quarter-based academic calendar. Most institutions assign credit hours based on the number of contact hours needed to deliver content. However, some institutions do not assign credit-hours to courses or assign credit-hours based on historical practices, rather than a calculation based on contact hours. The National Center for Education Statistics does not gather data concerning the number of credits (e.g., three, four, etc.) assigned to a course, therefore it is difficult to determine the number of semester-based institutions that offer four-credit courses.

2011-2012 Academic Calendar Systems at Post-Secondary Institutions

<table>
<thead>
<tr>
<th>Institutional Calendar</th>
<th>Public 4-Year Institutions</th>
<th>Public 2-Year Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semesters</td>
<td>90.9% (533 institutions)</td>
<td>90.5% (930 institutions)</td>
</tr>
<tr>
<td>Quarters</td>
<td>6.7% (39 institutions)</td>
<td>8.4% (86 institutions)</td>
</tr>
<tr>
<td>Other</td>
<td>2.4% (14 institutions)</td>
<td>1.1% (12 institutions)</td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics, IPEDS Data

Trends in Use of Quarter System Calendar for Public and Private Institutions

IV. Transition Considerations

**Motivation**  
*State or System Mandates Motivate Change to Semester-based Calendar Systems*

Most institutions transition to semester-based academic calendar systems in response to a mandate by state government or senior academic leaders at state university systems.  
*University C* transitioned to a semester-system to comply with a state-wide mandate; contacts explain that state administrators argued the semester-based calendar presented pedagogical benefits.

**Advantages of Semester-based Credit Systems**

- **Facilitates transfer and articulation agreements:** Semester-based calendars increase the ease with which students can transfer to and from an institution, because most institutions operate on a semester-based calendar and course credits more easily align. Additionally, contacts at *University B* note that transitioning to a semester-based calendar simplified the process to create articulation agreements with local two- and four-year institutions.

- **Provides more flexibility for students to select courses and accommodate extracurricular opportunities:** Semester calendars more easily accommodate courses with varying credit-lengths, which allows students to select courses that accommodate external activities. Administrators at *University B* intended for the semester system to help students secure internships and study abroad scholarships. Previously students struggled to secure these opportunities because the academic calendar prevented them from starting or finishing these activities in accordance with employers or third-party organizations’ expectations.

- **Aligns curricula with textbooks and other course materials:** Most textbook publishers design books and other materials, such as labs or demonstrations, under the assumption that an institution follows a semester-based calendar. For example, an American Literature reader at *University C* is divided into themes and chapters that correspond to a 15-week calendar. While faculty members may use this reader in a quarter-based calendar, they may not address all the material suggested by the author in a 10-week timeframe.

**Pedagogy and Faculty**  
*Quarter to Semester Transitions Do Not Affect Course Meeting Times*

Five credit-hour quarter-based courses and three credit-hour semester-based courses require similar meeting frequencies and class durations. Contacts note that the similarity between schedules simplifies the transition from quarters to semesters, and encourages administrators to transition to a three credit-hour system instead of a four credit-hour system.

<table>
<thead>
<tr>
<th>Institutional Calendar</th>
<th>Length of Monday/Wednesday/Friday Sessions (Course credit value)</th>
<th>Length of Tuesday/Thursday Sessions (Course credit value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarters</td>
<td>• 50 minute (5 credits)*</td>
<td>• 1 hour and 50 minute (5 credits)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1 hour and 15 minute (4 credits)*</td>
</tr>
<tr>
<td>3-Credit Semesters</td>
<td>• 50 minute (3 credits)*</td>
<td>• 1 hour and 15 minute (3 credits)</td>
</tr>
</tbody>
</table>
Increased Preparations Concern Faculty Members During Credit-Hour Transitions

Faculty members worried about potential changes in their teaching load during the transition to three-credit courses under the semester system. At all institutions, the standard teaching load of 12 credit-hours under the quarter system did not change when the institution transitioned to a semester-based calendar. While three-credit-hour courses include fewer contact hours and shorter courses, faculty members often perceive that their workloads increase after the transition due to the increased number of preparations a faculty member must conduct per year. Contacts at University B note that faculty members often prefer four credit-hour courses because they require fewer preparations as faculty members carry fewer courses in their teaching load. Overall, a three-credit-hour system increases the number of preparations per year from either quarter- or four credit-hour based systems.

### Faculty Teaching Load Structure

<table>
<thead>
<tr>
<th>4-Credit Semesters</th>
<th>50 minute (3 credit courses)</th>
<th>1 hour and 5 minute (4 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* indicates optional additional 50 minute discussion or lab meetings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3 Semester Credit-hour Course Preparations per Year

<table>
<thead>
<tr>
<th>Quarters</th>
<th>5 Credit Course</th>
<th>5 Credit Course</th>
<th>2 Credit Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Credit Semesters</td>
<td>3 Credit Course</td>
<td>3 Credit Course</td>
<td>3 Credit Course</td>
</tr>
<tr>
<td>4 Credit Semesters</td>
<td>4 Credit Course</td>
<td>4 Credit Course</td>
<td>4 Credit Course</td>
</tr>
</tbody>
</table>

= 12 Credit Teaching Load

### 45 Course Meetings and Preparations per Semester*

= 4 Courses per Semester in Teaching Load

= 2 Semesters per Year

= 360 Preparations per Year

### 30 Course Meetings and Preparations per Quarters*

= 3 Courses per Quarter in Teaching Load

= 3 Quarters per Year

= 270 Preparations per Year**

* 45 and 30 course preparations per term equal the product of course meetings per week and weeks per term.

**Four credit-hour semester courses also result in 270 course preparations per year, as faculty members carry three courses in load for two semesters.
Faculty Increase Out-of-class Assignments to Compensate for Lost Class Time Under Semester- and Three-credit Systems

Student learning outcomes were not a primary consideration for faculty members during quarter to semester transitions as course schedules and meeting frequencies remained relatively similar. Contacts at University C note that semester-length courses require students to spend more time analyzing course material and achieving higher-level learning outcomes. Although students spend more time immersed in a course topic over the course of a semester, the shift from four to three credit-hour courses requires shorter course meeting times. Faculty members adjust the curriculum and increase requirements for students to interact with course material outside the class session to promote a deeper understanding of course content. Contacts suggest essays, group projects, and practice problems or homework to compensate for lost class time after transitions.

Research Not Conclusive on Positive Impact of Semesters or Three-credit Systems

“While outcomes assessment plans designed in the past few years may provide the data necessary to prove or disprove [that semesters are more conducive to student learning than quarters] on a widespread level, at present there is no defensible, widely applicable proof of the educational superiority of one calendar over another.”

Rochester Institute of Technology
Quarter-to-Semester Calendar Conversion Report

“Very little of the literature contains data on student learning under different academic calendars, and the data we’ve found are equivocal. Given the number of factors that could have produced results [associated with calendar transitions], one hesitates to put much stock in the available empirical data in this area.”

California State University-Los Angeles
Report of the Task Force on Academic Calendar

Allow Math, Science, and Language Courses to Retain a Three-credit Lecture and One-credit Supplement Requirement

Faculty in mathematics, physical sciences, and language departments raise the most concerns regarding schedule changes as courses in their disciplines often meet more frequently during a quarter than three days per week or require additional course time for labs and practice sessions. Contacts report that faculty in these disciplines at University B implemented more curriculum adjustments to account for class-time loss, but also successfully lobbied curriculum committees to retain some four credit-hour courses. In response, curriculum committees approved four credit-hour courses that consisted of a three credit-hour lecture course and a one credit-hour lab or recitation section. This solution eased scheduling concerns because the three credit-hour lecture portion could be scheduled in three credit-hour blocks in the institution’s schedule. Registration administrators schedule one credit-hour sections separately, usually during the evenings or on Fridays to not interrupt three credit-hour course blocks during other days and times.
Part- and Full-Time Students

Adjust Course Schedule to Accommodate Evening Courses for Part-Time Students

Institutional definitions of full- and part-time students do not change as a result of calendar and credit-hour transitions. Students must still enroll in 12 credit-hours to maintain full-time status and six credit-hours to maintain half-time status. This threshold does not adversely impact half-time students who must enroll in six credit-hours to maintain federal financial aid eligibility, because they can continue to earn sufficient credits by enrolling in the same number of courses and do not need to adjust their travel schedule significantly (i.e., two courses, each worth three credit-hours). Contacts at University B suggest that administrators accommodate part-time students’ needs by rescheduling courses in which large numbers of part-time students enroll to the evenings. Contacts also suggest consolidating course meeting times to once or twice per week instead of traditional courses which meet three or four times per week to accommodate students who cannot commute to campus more than twice per week.

“Schools with high reliance on [part-time student enrollments] should analyze and prepare for the likely decline in part-time enrollment. Midway through the conversion process, Northeastern University decided to keep its University College and Law School on the quarter system so as to avoid decline of a student population critical to their budget projections.”

- Forum Interview

V. Implementation

Participants in Course Review

Faculty Members Participate in Course Approval Process Without Additional Compensation

All courses must be re-approved through multiple committees before they are offered under the new calendar system. Faculty members at most institutions approved courses through existing curriculum committee structures that approve all new courses. Senior academic administrators at University A formed a new Education Policy and Curriculum Committee to review courses and programs during the transition, although the duties and participants of the committee were similar to traditional curriculum committees. Senior academic administrators did not provide extra compensation for the increased workload required of faculty on curriculum committees. Contacts at University C describe this increased in duties as similar to those expected of faculty members when institutions must apply for re-accreditation from regional accrediting bodies. However, the chair of the university-level curriculum committee received one course (i.e., three to four credits) of release time to complete duties the committee required. At University D, the committee chair met with department administrators to explain the transition process and required paperwork so administrators could train departmental faculty on how to submit course proposals.

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Fast-track forms at University A required the following information for the original quarter-based course and the modified semester-based course:

- Course title
- Course number
- Number of credit-hours
- Prerequisite courses
- Corresponding semester-based course
- Conversion comments (e.g., direct conversion, modified or eliminated content, etc.)
Administrators eliminated many courses during the transition as they collapsed three quarter-length course sequences into two semester-length sequences. Faculty members could not submit these courses through fast-track options because of the substantial additions to course syllabi to compensate for the lost course in the sequence.

**Course Approval Process at University D**

1. Department-level committee reviews or modifies course; department chair approves course for further submission.
2. College-curriculum committee reviews course and college dean approves course.
3. University Undergraduate Curriculum Committee reviews and approves course.
5. Chair of Academic Senate approves course.

Source: Institution Web site