

Focus on Research:

**Student Achievement
in Summer Session
Versions of Traditionally
Semester-Length Courses**

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Courses offered in the summer sessions and other non-standard semester time-frames have often received criticism. Perceptions of the lack of the educational quality of courses offered in non-traditional time-frames persist. In a 1991 study and again in a presentation to the Plenary Session of the 1993 annual meeting of the North American Association of Summer Sessions, Patricia Scott reported that intensive courses are purported to “sacrifice breadth, short shrift academic standards to accommodate the time frame and obliged students to ‘cram’ information at the expense of genuine learning and development” (Scott, 1991 & 1993). This view was not new in that it reflected that of Charles Slichter who wrote that “six weeks was too short a time in which to produce anything of educational value!” (Slichter, 1927).

Yet surveys of undergraduates enrolled in summer sessions have shown and continue to show that summer session instruction is rated at least as good as, if not better than that of the fall or spring semesters. This

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view was reflected in the seminal work *The American University in Summer* (Schoenfeld & Zillman, 1967) and also at the Research Forum of the 1995 North Central Conference on Summer Schools annual meeting, *Views of Continuing UW-Madison Undergraduates, 1994 Summer Sessions* (Martin, 1995) The high level of student satisfaction with the instruction in sessions shorter than the traditional semester supports the research on intensive courses which shows that they

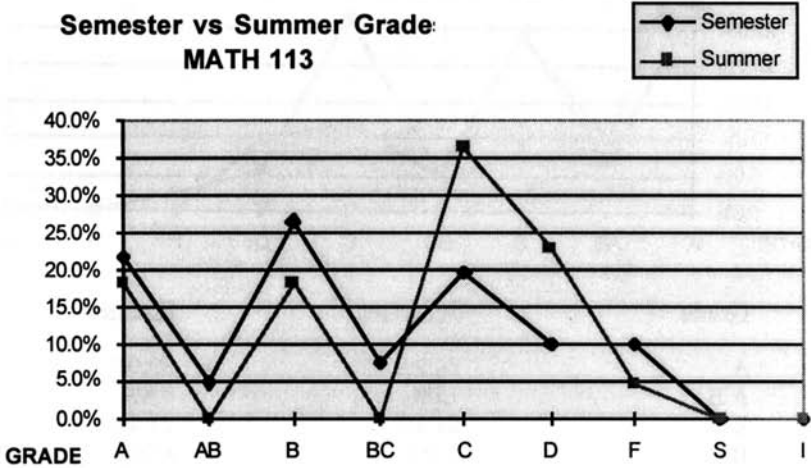
...yield equivalent and sometimes superior learning outcomes in comparison to traditional length courses, and this was true regardless of the degree of intensity (be it a weekend, summer, interim, modular, or during the semester) and regardless of the field of study. Only one study found in favor of semester-length courses over intensive courses. The rest showed differences of no significance in learning outcomes or significant differences in favor of intensive courses. Moreover, all of the case studies supported learning outcomes in intensive courses. (Scott, 1993)

In 1995, to determine whether this trend was continuing, a survey of student performance in terms of grades earned was carried out at the University of Wisconsin - Madison in a set of summer session versions of semester-length courses that are a part of the established undergraduate curriculum. The grades surveyed were from the 1993-94 academic year and the 1994 summer sessions. The summer sessions versions were of different lengths and intensity. Four eight-week courses, two four-week courses, a three- and a five-week course were chosen for the study. The courses were selected from the undergraduate requirements in the natural sciences, the humanities, and the social sciences, along with two breadth courses. In the natural sciences, Math 113 "Trigonometry" and Chemistry 103 "General Chemistry" were chosen; in the humanities German 101 "First Semester German" and East Asian 201 "Third Semester Chinese," along with Scandinavian Studies 375 "The Writings of Hans Christian Andersen," which also serves as a literature in translation course and is commonly used as a humanities breadth requirements, were selected. In the social sciences, Economics 101 "Principles of Microeconomics," History 393 "The Civil War, 1848-1877," and Communication Arts 101 "Fundamentals of Speech," which also served as a breadth requirement, were chosen.

At the University of Wisconsin-Madison almost 82 percent of the students in summertime are continuing students from the spring. The other 18 percent is usually composed of teachers returning for specialized training, and who are, therefore, unlikely to be enrolling in any significant numbers in the courses chosen for this experiment. Thus, the students with whom we are dealing are almost entirely continuing members of the undergraduate student body.

A survey of the performance in terms of the grades earned by the students reveals the following:¹

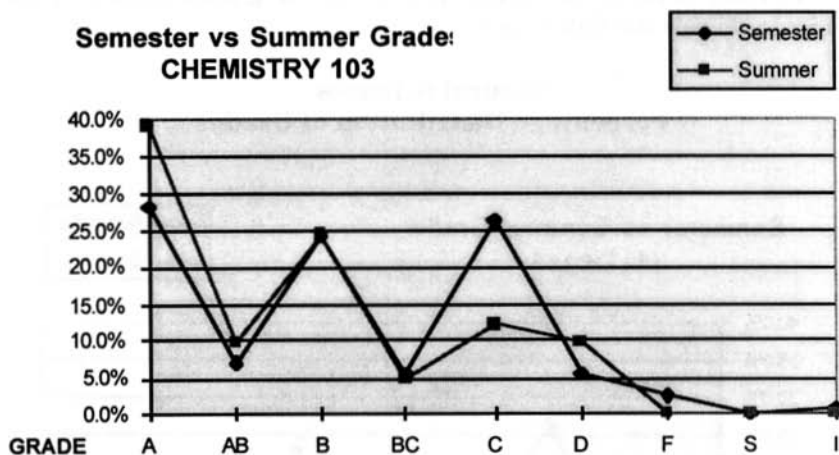
**Natural Sciences
Percentage Distribution of Grades**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	21.7%	18.2%
A B	4.7%	0.0%
B	26.6%	18.2%
B C	7.5%	0.0%
C	19.6%	36.4%
D	9.8%	22.7%
F	10.0%	4.5%
S	0.0%	0.0%
I	0.0%	0.0%

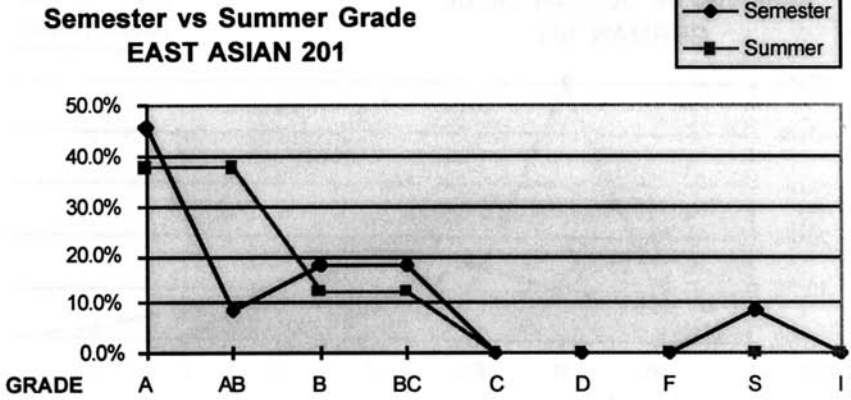
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**Semester vs Summer Grade:
CHEMISTRY 103**



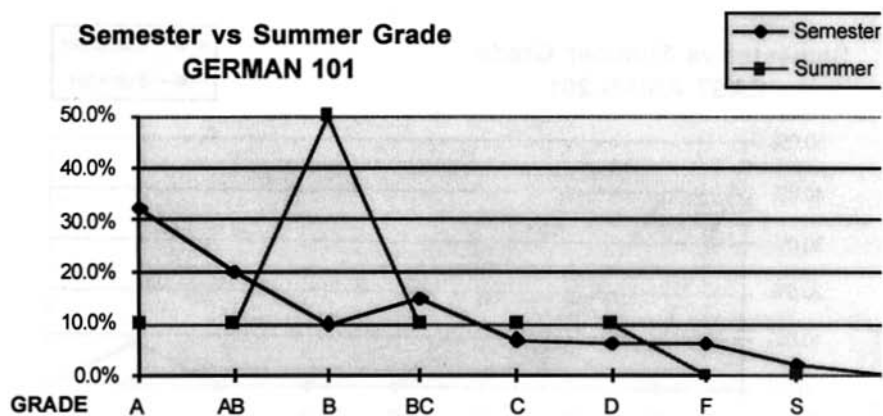
<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	28.2%	39.0%
A B	7.0%	9.8%
B	24.4%	24.4%
B C	5.4%	4.9%
C	26.3%	12.2%
D	5.4%	9.7%
F	2.5%	0.0%
S	0.0%	0.0%
I	0.9%	0.0%

**Humanities Courses
Percentage Distribution of Grades**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	45.5%	37.5%
A B	9.1%	37.5%
B	18.2%	12.5%
B C	18.2%	12.5%
C	0.0%	0.0%
D	0.0%	0.0%
F	0.0%	0.0%
S	9.1%	0.0%
I	0.0%	0.0%

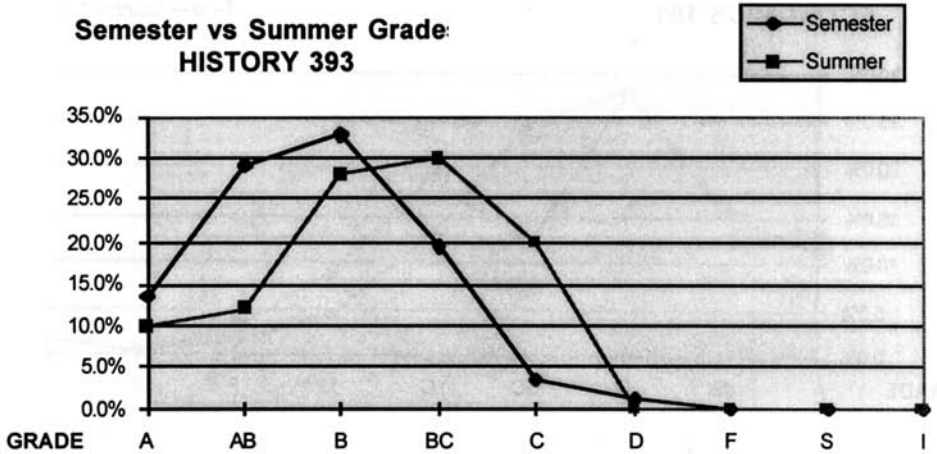
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<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	32.3%	10.0%
A B	20.2%	10.0%
B	10.1%	50.0%
B C	15.2%	10.0%
C	7.1%	10.0%
D	6.1%	10.0%
F	6.1%	0.0%
S	2.0%	0.0%
I	0.0%	0.0%

**Social Sciences
Percentage Distribution of Grades**

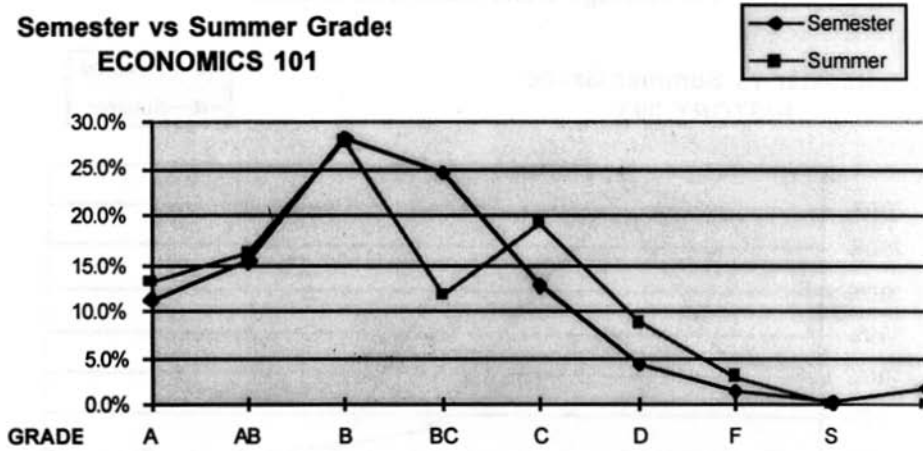
**Semester vs Summer Grade:
HISTORY 393**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	13.4%	10.0%
A B	29.3%	12.0%
B	32.9%	28.0%
B C	19.5%	30.0%
C	3.7%	20.0%
D	1.2%	10.0%
F	0.0%	0.0%
S	0.0%	0.0%
I	0.0%	0.0%

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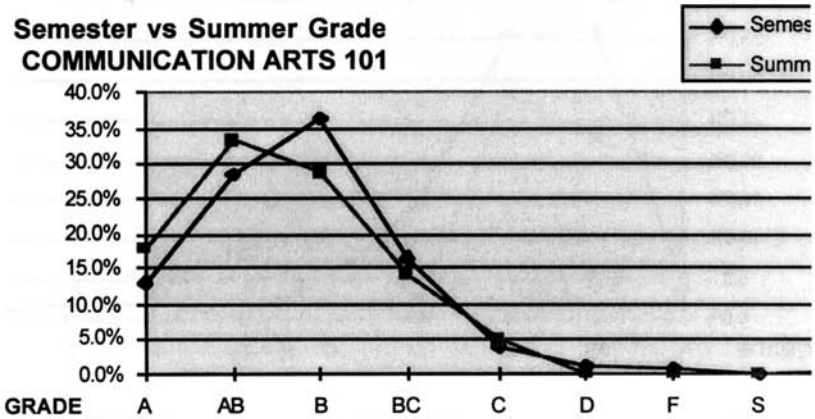
**Semester vs Summer Grade:
ECONOMICS 101**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	11.3%	13.2%
A B	15.3%	16.2%
B	28.4%	27.9%
B C	24.4%	11.8%
C	12.7%	19.1%
D	4.3%	8.8%
F	1.5%	2.9%
S	0.3%	0.0%
I	1.8%	0.0%

**Breadth Courses
Percentage Distribution of Grades**

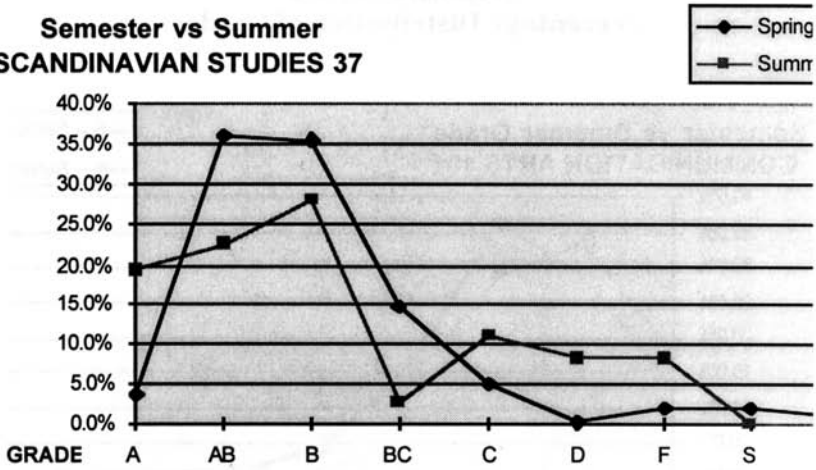
**Semester vs Summer Grade
COMMUNICATION ARTS 101**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	13.0%	18.0%
A B	28.4%	33.3%
B	36.2%	28.6%
B C	16.4%	14.3%
C	3.9%	4.8%
D	1.0%	0.0%
F	0.8%	0.0%
S	0.0%	0.0%
I	0.3%	0.0%

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**Semester vs Summer
SCANDINAVIAN STUDIES 37**



<u>Grade</u>	<u>Semester</u>	<u>Summer</u>
A	3.8%	19.4%
A B	36.1%	22.7%
B	35.4%	27.8%
B C	14.9%	2.8%
C	5.0%	11.1%
D	0.13%	8.3%
F	1.9%	8.3%
S	2.0%	0.0%
I	1.1%	0.0%

An analysis of these data reveals:

u The summer students' average GPA is slightly lower than that reflected by the students' performance in the same course during the semester.

Comparing grades of semester and summer students in this range of undergraduate courses revealed that the average GPA obtained by the summer school students was 2.892 as compared to 2.984, the overall average obtained by the semester students. This is not a significant difference.

u GPAs were higher during summer in three out of the five subject areas.

German, Chemistry, and the History class average GPAs for summer school students were actually higher than those from the preceding semester.

u In the other five courses the spring average GPAs were higher.

Based on the data collected from the eight classes, if students were to take a summer session class, they would have a three out of eight chance of receiving a higher grade than if they had taken a course during the spring semester.

u The length of the summer session does not seem to affect the GPA average.

Math 113 was offered in the three-week session; History 393 in the four-week session; Scandinavian Studies 375 in the four-week session; and Asian 201 in the five-week session; the remainder, Economics 101, German 101, Chemistry 103, and Communication Arts 101 were in the eight-week session.

u Looking at the individual courses in the academic groupings, natural sciences, humanities, and social sciences, there is generally a similar distribution of grades in both the semester and summer.

Natural Sciences:

Mathematics: The grade distribution was similar in both semester and summer courses. The failure rate is 4.5 percent in the summer session and 10 percent in the semester course.

Chemistry: The grades are spread fairly consistently between spring and summer. There is a 0 percent failure rate in the summer and a 2.5 failure rate in the semester course.

Humanities:

Chinese: 74.1 percent of the summer students earned an A or an AB, whereas in the spring semester only 54.6

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percent earned an A or an AB. There were 0 percent failures in third semester Chinese both in the summer and in the spring.

German: Significantly more students received grades of B in the summer (50 percent compared to 10 percent in the semester). There were 0 percent failures in the summer and a 6.1 percent failure rate in the semester course.

Social Sciences:

History: Grade distributions were similar with 0 percent failures in both summer and the semester courses.

Economics: The grading in both the spring semester and the summer followed a similar distribution. There was a 2.9 percent failure in summer and a 1.5 failure rate in the semester.

Breadth Courses:

Communication Arts: Grade distribution was very similar in both the semester and the summer session. Zero failures in the summer session courses, 8 percent failure in the semester courses.

Scandinavian Studies: Summer students scored significantly more grades of A than in the semester course. However, in the semester course 33.1 percent earned more AB, B, and BC grades than did the summer students. In the summer sessions there were 8.3 percent failures, in the regular semester 1.9 percent failures.

•• Summary ••

In summary then, the study shows the following major points:

u There is no significant difference in the grade point average of the students who participate in the summer session version of traditionally semester length courses.

u Performance in language-related courses, i.e. “First Semester German,” “Third Semester Chinese,” and “Fundamentals of Speech” reveals a 0 percent failure rate in the more intensive courses. This speaks well for the “immersion” theory that intensive language courses yield greater success.

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u The failure rate in the natural sciences is far lower in summer than in the semester. Both “General Chemistry” and “Trigonometry” are regarded as very demanding courses by students who are taking full loads in regular semesters.

u The one course where the readings are extensive, “Hans Christian Andersen,” reveals more than a four times greater failure rate in the summer than in the semester. This may support the view that extensive reading lists are better handled in longer time-frame courses.

u This study has contributed further to the research conclusions that shorter version courses have “equivalent or sometimes superior learning outcomes” (Scott, 1993) when compared to the outcomes of the traditional semester-length courses.

u Finally, this study can help the Academy move away from “the blissful ignorance of the growing body of evidence that there is little correlation between student academic achievement and the length of the [academic] term” (Schoenfeld, 1967).

•• Note ••

1. Thanks to Jane Danielson and Christina Gallagher, graduate students in Continuing and Vocational Education at the University of Wisconsin-Madison, for their help in compiling and analyzing the data.

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