

Report on Grade Inflation at the University of Delaware,
1987 through 2002

Prepared by the Senate Ad-Hoc Committee on Grade Inflation
April 2004

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Grades are used by faculty to maintain academic standards and document student achievement. They are intended to inform students about their level of academic accomplishment and sort students for both educational and employment purposes. In recent years, however, colleges and universities throughout the country have become concerned about the general increase, particularly since the late '80s, in the average grade awarded students and the significant narrowing of the range within which grades are assigned. In December, 2003, the Senate Executive Committee established an Ad Hoc Committee to study grade distribution in undergraduate courses at the University and determine whether there is grade inflation and grade compression, and if there is, what might be done about it.

The Committee examined data for the distribution of grades in all courses numbered 499 or lower in the fall semesters of 1987, 1992, 1997, and 2002. For the purposes of the study, the Committee defines grade inflation as a disproportion between grades and achievements—the grades students receive for their work do not correspond to the quality of their work.

Grade Distribution at the University of Delaware: 1987, 1992, 1997, and 2002

The quality of students and the quality of instruction have clearly improved during recent years. Entering students now have, on average, higher academic qualifications than UD students a decade ago. Average SAT scores of entering freshmen improved by approximately 50 points during the 1990s. Freshmen show better high school GPAs, higher class ranks, and have taken more high school honors and advanced placement classes. The University has also become much more selective in undergraduate admissions. In fall 1991, the admission rate for first-time freshmen was 83%; in fall 2002, the admissions rate was 47%.

The quality of undergraduate instruction has also improved. Over the past years, instructional development initiatives and grant programs have focused on the implementation of learning-centered instruction across disciplines, particularly active, collaborative learning approaches, problem-based learning, technology, the advancement of general education goals, and increased use of grading rubrics and learning objectives, allowing students to know more precisely how they will be assessed and what the instructors think is important. According to a recent UD instruction survey, twenty-five percent of faculty report using a mix of active learning approaches and various types of technology. Two-thirds of the faculty regularly supervise undergraduate research, and ten percent are involved in the *Learning Integrated Freshman Experience (LIFE)*. Finally, the University has been committed to services and resources that support quality instruction and foster academic success. These services and resources include the Academic Services Center, the Center for Teaching Effectiveness, the Writing Center, the Advisement Center, Mathematics and Science Education Resource Center, and others.

Nevertheless, the Committee finds that the increase in high grades appears to outstrip the improvements in the academic quality of students and the quality of instruction. In 1987, 24% of all grades were A or A- (see **Table 1**). In 2002, 35% of all grades were A or A-, a 46% increase. While grades in the B range remained nearly unchanged (from 38 to 39%), grades in the C range fell from 27% to 19%—a 26% decrease. Thus, although the percentage of B's has held steady, many C's have become B's and B's have become A's.

The extent of changes in the distribution of grades can be seen in the changes in the percentile rank distribution for grades. The average cumulative GPA of a senior in fall 1987 was 2.78 (see **Table 2**). By fall 2002, a slightly higher GPA (2.79) placed a senior in the bottom-third of the class. While a 2.97 GPA placed a senior in the top third of the 1987 class, a slightly higher GPA (3.02) was the average among all seniors in the fall, 2002. Virtually the same pattern is true for the cumulative GPA's of freshmen, sophomores, and juniors. For freshmen, sophomores, and juniors alike, the average overall cumulative GPA in 2002 (2.90) would have placed a student in the 66th percentile in 1987. Conversely, for all but juniors, the average overall cumulative GPA in 1987 (2.62) would have placed a student in the 33rd percentile in 2002.

The changes can also be seen in the distribution of grades at the department level. The data were adjusted to reflect the University's current departmental structure, which has changed over the time in question. The data suggest that grade increases are widespread at the University. Virtually no units seem exempt, although some seem more affected than others. For example, in 1987, only sixteen of forty-three (37%) department had more than 25% of its grades A or A- (see **Figures 1 and 2**). In 2002, thirty-six (84%) departments had. In 1987, thirteen departments had more than 70% of their grades B- or higher; in 2002, despite the steady percentage of B's, thirty had. In 1987, only two departments had 85% of their grades B- or better; by 2002, ten had.

The percentages of grades in the A range decreased in eight departments between 1987 and 2002, but the decreases were small in some instances (1.7% and 3.4%) and generally were reductions from very high levels (one department from 70.9%, another from 53%, two more from 45% and 48.3%, another three from 31.3%, 35.7% and 39.1%, and only one from below 25%). And while the percentages of grades B- and higher decreased in six departments, the decreases were small (two less than 1%, two between 1 and 2%, and none more than 3.6%). The percentage of grades B- or better remained high across most departments, including two departments with more than 88%, another with nearly 81%, and a fourth with 75.8%. Moreover, of the fifteen departments that awarded a smaller percentage of B's in 2002 than in 1987, thirteen had more than a 30% increase in A's, twelve had more than a 60% increase, four had more than a 90% increase, and two had well above a 100% increase in the percentage of A's, including one of more than 400%.

As the grade of A has become much more common, the grade of C has become correspondingly infrequent. In 1987, only six departments had fewer than 15% of their grades C+, C, or C-; in 2002, seventeen had. While the percentage change in the grades of A and A- rose by more than 60% in twenty-one departments between 1987 and 2002 (and by more than 100% in five), the percentage change in the grade of C+, C, and C- fell by 25% in twenty-seven departments during those years and rose by 25% in only two (in both instances from a relatively low base). Of the thirteen departments with decreases in B's and increases in A's, only two had any increase in the percentage of C's, while the other eleven had decreases in C's ranging as high as 95.2%, with five others over 50%. In short, there has been a striking increase in the percentage of grades in the A range and an equally striking decrease in the percentage of grades below B-. A's and B's are now very much the norm.

A similar upward shift can be seen in the average grades awarded to students at the various SAT levels. The committee found it interesting that grades have improved at every level

of SAT scores (see **Table 3** and **Figure 3**). From 1992 to 2002, the average GPA (for grades awarded fall semester) for students with the highest SAT scores (1400-1600) increased 0.16 points (3.22 to 3.38) or 5%. The average GPA for students with the lowest SAT scores (400-899) increased even more, 0.18 points (2.20 to 2.38) or 8.2%. And while the average GPA for students with the second highest SAT scores (1300-1399) increased 0.22 points (3.03 to 3.25) or 7.3%, the average for students with the second lowest SAT scores (900-999) increased 0.24 points (2.38 to 2.62) or 10.1%. Perhaps most interesting, for the middle three groups (1000-1099, 1100-1199, and 1200-1299) the jumps in average GPAs were the greatest in absolute numbers and largely so in percentage terms: 0.26 points (2.54 to 2.80) or 10.2%, 0.26 points (2.68 to 2.94) or 9.7%, 0.27 points (2.81 to 3.08) or 9.6%, respectively. Since GPA's increased on average at all SAT levels, the increase in GPA's cannot be explained by the higher SAT scores of incoming freshmen. In addition, SAT scores have only a relatively low positive correlation with freshman grades, and so, in any event, conclusions regarding the effect of SAT scores on GPA's cannot be made beyond the freshman year.

The changes in grade distribution at the University are not affected by the course level (100, 200, 300, 400 level courses) or by the number of students in a class. A steady increase in the percentage of A's awarded in 100, 200, 300, and 400 level courses occurred from 1987 to 2002 (see **Table 1**). The 100 level courses had the lowest absolute increase of 8% (25% to 33%), while the upper three levels ranged from a 12% to 14% increase. At the same time, the percentage of B's remained relatively constant and was about the same for all four levels (Replace with table??100-level: 35% to 38%; 200-level 37% to 38%; 300-level 42% to 40%; and 400-level, 41% to 40%).

As for class size, the committee found that, over all, smaller classes had a higher percentage of A's than larger classes, but that small (1-22 students), medium (23-50 students) and large (51 or more) classes had almost identical increases in the percentage of A's (32% to 42%, 24% to 35%, and 18% to 28%, respectively; see **Table 1**). On the other hand, as with course level, class size did not seem to have an effect on the percentage of B's awarded (small: 38% to 37%; medium: 39% to 40%; large: 36% to 39%). In short, it seems that neither course level nor class size affected the changes in the grade distribution.

Conclusion

The committee finds that the increase in high grades appears to outstrip the improvements in the academic quality of students and the quality of instruction. In all class sizes, at all course levels, for all SAT groups, and in virtually all departments, there has been a marked shift in grades from C's to B's and from B's to A's since 1987 at UD. The improvement in the overall academic quality of students and of instruction at the University accounts for some but not all of this upward shift. From what the Committee can determine, UD is similar in this regard to many other universities. Grade inflation and grade compression are a national, not simply a local, problem.

Effects of Grade Inflation

- Education is degraded, and students are less motivated to study hard. Faculty are likewise less motivated to make a strong effort.
- Better students become indignant that average students receive the same grades as they do for weaker efforts. Better students lose the sense of being challenged.
- Valuable information about students and their potential performance is lost. Graduate and professional schools and employers cannot distinguish the best from average students. This tends to devalue the degrees of all graduates, as schools and employers look askance at UD transcripts.
- Students shun sections, courses, and majors which have more rigorous grading standards.
- Students, not knowing their true strengths and weaknesses, leave college inadequately prepared to select their most suitable or promising careers.

Possible causes of grade inflation

Experts and scholars who have examined recent changes in grade distribution have suggested possible causes for grade inflation. These include the following:

- Students must maintain a 3.0 or better GPA in order to keep their scholarship beyond the freshman year, and so faculty feel strong student and parental pressure to award grades of A or B as well as their own qualms about being the professor who might be responsible for a student losing his or her scholarship.
- Although studies report that expected grades, in fact, have only a minor effect on student evaluations, student evaluation of instructors and courses put pressure on faculty, particularly untenured faculty, to lower standards for grading in return for more favorable ratings.
- Some students seek less academic rigor and less demanding instructors in order to boost their GPA's.
- The emphasis on retention and graduation of students may tempt some departments and colleges to award grades that will keep students on track for graduation, whether or not they have learned much.
- Some faculty, critical of making distinctions between excellence and competence, and competence and incompetence, disapprove of assessment and grading, in principle.
- A perceived shift toward "consumerism," where students are viewed as customers to be kept happy, causes students to expect grades that will please them and faculty to give them such grades.

Recommendations

1. The Faculty Handbook presently does not state what each of the letter grades means. The committee recommends that the Handbook be amended to state that a grade of A means an excellent or distinguished level of achievement; B, a good or above-average level of achievement; C, a satisfactory or average level of achievement; D, a poor or below-average level of achievement; and F, failure to fulfill minimum requirements. Pluses and minuses indicate falling high or low within each category.
2. High grades may be a sign of good teaching, but they also may be a sign and even a cause of bad teaching, since they may lower the standards and hence the incentives for students' performance. The committee therefore recommends that grade distribution (along with syllabi, course evaluations, etc.) be part of the Chairs' annual appraisal of their faculty members' accomplishments in teaching, research and service. Chairs receive the grade distribution for all courses in their department at the end of each semester. If a faculty member's grades are clustered near the top of the scale, the Chair should ask the faculty member to explain why. Deans, likewise, should do the same with Chairs. Faculty members may have good reason for giving many high grades, but the burden should be on them to explain why, if they do so.
3. The committee recognizes that differences among instructors and courses—disparate course content, course expectations, grading criteria, teaching styles, and so on—make it very difficult to distinguish between improved student performance and inflated grades. Nevertheless, even if there were no grade inflation at UD, the data show that there would still be grade compression. Even if the entire increase in grades reflected improved student performance, there would be a need to distinguish better among levels of that performance. The committee therefore recommends that grades be awarded more strictly in accordance with the meaning of each of the grades recommended above so that different levels of achievement are distinguishable. This may require faculty to look at alternate or better assessment tools.
4. Since the quality of students entering UD is improving, faculty should be encouraged to challenge students more. This would maintain UD's reputation as an institution of high academic standards.
5. Since different departments may have very different reasons for assigning high grades, the individual colleges should undertake careful periodic examinations of grade distribution in their departments.

6. This report covers the time period between 1987 through 2002. Based upon the data examined, the committee anticipates that grades have continued to rise in the last two years. We therefore recommend that the Faculty Senate periodically forms an ad hoc committee to review grade distribution at UD.

Appendix
Tables and Figures

Table 1: Total Grade Distribution and Percentages for 1987, 1992, 1997, and 2002 by Class Level, Class Size.

Subgroup	N and % of A Grades				N and % of B Grades				N and % of C Grades				N and % of D and F Grades				Total N of Grades Awarded			
	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002
<i>Class Level</i>																				
100-Level	5333	4958	6208	6947	7519	7763	7739	8033	5814	6240	4809	4470	2973	2506	2111	1721	21639	21467	20867	21171
%	25%	23%	30%	33%	35%	36%	37%	38%	27%	29%	23%	21%	14%	12%	10%	8%	36%	34%	33%	32%
200-Level	3365	4164	5026	6254	6795	7071	7640	7573	5526	5699	5163	4256	2533	2543	2130	1739	18219	19477	19959	19822
%	18%	21%	25%	32%	37%	36%	38%	38%	30%	29%	26%	21%	14%	13%	11%	9%	30%	31%	32%	30%
300-Level	3310	4306	4683	5902	5606	5938	5876	6313	3450	3503	2999	2812	1128	1342	1014	838	13494	15089	14572	15865
%	25%	29%	32%	37%	42%	39%	40%	40%	26%	23%	21%	18%	8%	9%	7%	5%	22%	24%	23%	24%
400-Level	2168	2215	2997	4095	2820	2752	3075	3703	1535	1268	1183	1204	426	294	289	221	6949	6529	7544	9223
%	31%	34%	40%	44%	41%	42%	41%	40%	22%	19%	16%	13%	6%	5%	4%	2%	12%	10%	12%	14%
<i>Class size</i>																				
1-22	4506	6169	7873	8635	5376	7611	7358	7522	3145	3957	3640	3155	1110	1516	1221	1121	14137	19253	20092	20433
%	32%	32%	39%	42%	38%	40%	37%	37%	22%	21%	18%	15%	8%	8%	6%	5%	23%	31%	32%	31%
23-50	5833	5536	7114	9339	9612	8435	9635	10860	6384	5417	4992	5067	2752	2218	2169	1795	24581	21606	23910	27061
%	24%	26%	30%	35%	39%	39%	40%	40%	26%	25%	21%	19%	11%	10%	9%	7%	41%	35%	38%	41%
51+	3837	3938	3927	5224	7752	7478	7337	7240	6796	7336	5522	4520	3198	2951	2154	1603	21583	21703	18940	18587
%	18%	18%	21%	28%	36%	34%	39%	39%	31%	34%	29%	24%	15%	14%	11%	9%	36%	35%	30%	28%
	N and % of A Grades				N and % of B Grades				N and % of C Grades				N and % of D and F Grades				Total N of Grades Awarded			
	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002	1987	1992	1997	2002
UNIVERSITY	14176	15643	18914	23198	22740	23524	24330	25622	16325	16710	14154	12442	7060	6685	5544	4519	60301	62562	62942	65781
TOTALS	24%	25%	30%	35%	38%	38%	39%	39%	27%	27%	22%	19%	12%	11%	9%	7%	100%	100%	100%	100%

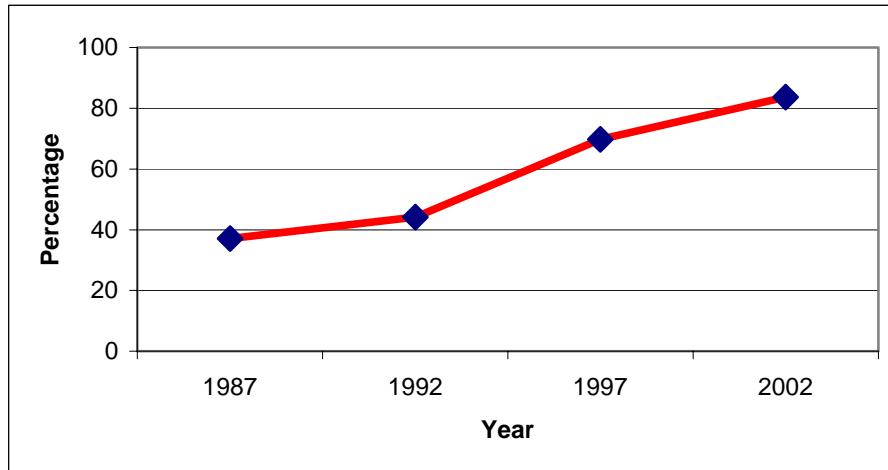
Table 2: Cumulative GPA Statistics for 1987, 1992, 1997, and 2002

	1987		1992		1997		2002		% Change 87 to 02
	Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev	
Freshman SAT-Total	1137	127	1125	123	1136	141	1178	125	3.6%
Freshmen Cumulative GPA	2.45	0.72	2.43	0.70	2.58	0.75	2.81	0.72	14.7%
33rd percentile	2.14		2.11		2.28		2.54		18.7%
66th percentile	2.75		2.73		2.93		3.17		15.3%
Sophomore Cumulative GPA	2.59	0.55	2.59	0.57	2.71	0.58	2.84	0.59	9.7%
33rd percentile	2.31		2.31		2.41		2.59		12.1%
66th percentile	2.79		2.79		2.95		3.12		11.8%
Junior Cumulative GPA	2.73	0.52	2.73	0.54	2.81	0.54	2.94	0.55	7.7%
33rd percentile	2.45		2.45		2.53		2.68		9.4%
66th percentile	2.92		2.96		3.03		3.21		9.9%
Senior Cumulative GPA	2.78	0.48	2.83	0.51	2.88	0.52	3.02	0.51	8.6%
33rd percentile	2.53		2.75		2.61		2.79		10.3%
66th percentile	2.97		3.33		3.11		3.26		9.8%
Overall Cumulative GPA	2.62	0.60	2.64	0.61	2.74	0.62	2.90	0.60	10.7%
33rd percentile	2.35		2.57		2.46		2.65		12.8%
66th percentile	2.86		3.05		3.00		3.19		11.5%

Table 3: Average Term GPA by SAT Range

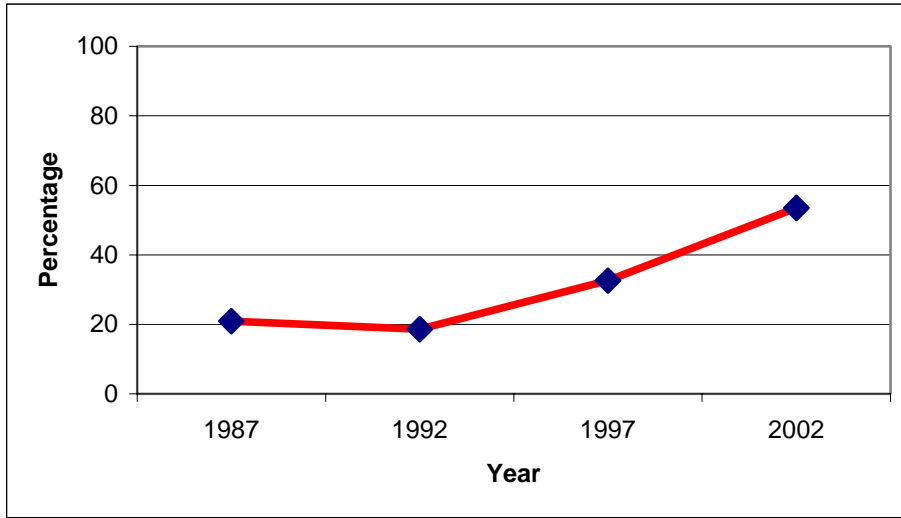
SAT Range	Fall Term			Percent Change
	1992	1997	2002	
400-899 <i>Count</i>	2.20 869	2.30 662	2.38 587	8.2%
900-999 <i>Count</i>	2.38 1448	2.46 1737	2.62 1373	10.1%
1000-1099 <i>Count</i>	2.54 3476	2.65 3623	2.80 3155	10.2%
1100-1199 <i>Count</i>	2.68 4023	2.76 3788	2.94 4285	9.7%
1200-1299 <i>Count</i>	2.81 2249	2.88 2289	3.08 3199	9.6%
1300-1399 <i>Count</i>	3.03 769	3.11 1038	3.25 1423	7.3%
1400-1600 <i>Count</i>	3.22 328	3.27 463	3.38 493	5.0%

Figure 1: Percentage of Departments with 25% or Higher A's



Note: In 1987 complete data were available for 43 departments. Only data for those 43 departments were used for the remaining years.

Figure 2: Percentage of Departments with 33% or Higher A's



Note: In 1987 complete data were available for 43 departments. Only data for those 43 departments were used for the remaining years.

Figure 3: GPA by Year Over SAT Range

