

**Report to the Academic Senate
of the
Ad Hoc Committee on Plus/Minus Grades**

Arizona State University
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Report of the Ad Hoc Committee on Plus/Minus Grades

This report of the ad hoc Committee on Plus/Minus Grades is designed to inform all members of the University community on the pros and cons of adopting a +/- grading system. By so doing, the Committee intends to make members of the Academic Assembly and especially their representatives in the Academic Senate aware of any consequences such a change is likely to entail. The result, we hope, is an informed decision by the Senate, justified by the information presented here and accepted by all as a well-founded judgment.

The Committee makes its own recommendation, but its members also realize that this decision is one that appropriately rests with the Academic Assembly through its representative body the Academic Senate. Either of those bodies may give different weight to the evidence and different consideration of the pros and cons.

Recognizing the historical fact that the Academic Senate has already passed one resolution to implement a plus/minus system, the majority of the Ad Hoc Committee has opted to place before the Senate an alternative form that follows the original motion with one major stipulation left unaddressed and probably unintended by the Senate resolution of 1993. The Committee forwards a proposal for a system, subsequently identified as System 2 (see Table 1), that implements a full measure of plus and minus at the A, B, C, and D levels, but with no plus or minus for the E grade. However, while the plus and minus grades shall be recorded on the transcript, no increment or decrement in grade point shall be assigned to the plus or minus for purposes of calculating the grade point average. For example, the A+, A, and A- grades will all receive 4.0 grade points.

Having placed this model before the Academic Senate for its consideration, it is nevertheless the sense of a majority of the Ad Hoc Committee that ASU should not adopt a +/- grading scheme but rather retain its current system, subsequently labeled System 1. The Committee majority gives greater weight to the evidence presented here that such a change offers few benefits overall, while posing potential problems for students at both ends of the academic success spectrum, those who operate in the *summa cum laude* range of 3.8 and higher and those who live nearer the 2.0 mark required for academic success.

History of Plus/Minus at ASU

In April, 1992, ASU's Academic Senate approved Resolution 23 (see Appendix B) to establish a grading system that would include + and - options for B and C grades, as well as A- and D+ options. No A+, D-, nor E+ and E- grades were envisioned. The plus grade would add .3 points to the standard grade point while the - grade would subtract .3 from the standard grade point of A=4.0, B=3.0, C=2.0 and D=1.0. Resolution 23 was forwarded to University President Lattie Coor, who deferred action on the resolution until the capability to implement it was developed by Information Technology (IT).

Table 1. Various Grading Systems of ASU Peer Institutions and Selected Others

System 1		System 2		System 3		System 4		System 5		System 6		System 7		System 8	
A	4.0	A+ A A-	4.0 4.0 4.0	A+ A A-	4.00 4.00 3.67	A+ A A-	4.33 4.00 3.67	A A-	4.00 3.67	A A-	4.00 3.67	A A-	4.00 3.67	A	4.0
B	3.0	B+ B B-	3.0 3.0 3.0	B+ B B-	3.33 3.00 2.67	B+ B B-	3.33 3.00 2.67	B+ B B-	3.33 3.00 2.67	B+ B B-	3.33 3.00 2.67	B+ B B-	3.33 3.00 2.67	B+ B	3.5 3.0
C	2.0	C+ C C-	2.0 2.0 2.0	C+ C C-	2.33 2.00 1.67	C+ C C-	2.33 2.00 1.67	C+ C C-	2.33 2.00 1.67	C+ C C-	2.33 2.00 1.67	C+ C	2.33 2.00	C+ C	2.5 2.0
D	1.0	D+ D D-	1.0 1.0 1.0	D+ D D-	1.33 1.00 0.67	D+ D D-	1.33 1.00 0.67	D+ D D-	1.33 1.00 0.67	D+ D D-	1.33 1.00	D	1.00	D	1.0
E	0.0	E	0.0	E+ E	0.33 0.00	E	0.00	E+ E	0.33 0.00	E	0.00	E	0.00	E	0.0
ASU Arizona NAU Oklahoma Texas U Ill.-Chicago Kansas (varies)		Maryland MIT +/- grades appear on transcripts but do not affect gpa calculations		UCLA UC-Berkeley Missouri-no E+ Nebraska-no E+		Iowa Oregon Stanford North Carolina State		Cincinnati Colorado Connecticut Kansas (varies) USC Iowa State Florida State ¹ Ore. St.-no E+ Temple-no E+ Washington ²		Ohio State Wash. State Minnesota (±.333) ASU (Resolution 23, 1992)		Penn State		Rutgers <hr/> Some schools use ± 0.3; others ± 0.33; some ± 0.333. Florida and Rutgers do otherwise.	

1. Florida State uses increments and decrements of 0.25. Thus, an A- is 3.75 while B+ is 3.25.

2. The University of Washington grades by 0.1 points and then assigns letter values. As A is 3.9-4.0, A- is 3.5-3.8, etc.

In Fall, 2001, the Administrative Systems Priorities Oversight Committee, led by Dr. Milton Glick, asked Information Technology (IT) to reassess their ability to implement +/- grades. The assessment showed that with changes in the technical environment that have taken place since 1992, it would in fact be possible to implement +/- grades within the Student Information System with a nine-to-twelve month programming effort. The IT staff was then asked to seek clarification of the specifics required by the Senate, including a specific implementation calendar, and prepare to staff the project.

In effect, the issue of +/- grades came anew to many of those in the Senate. Citing the length of time since the initial Senate resolution adopting a +/- grading system, Senate President Mort Munk ruled that the Senate should revisit the decision. The earlier Senate decision did not seem to be well-informed, in the sense of having examined the various consequences of a system change. In addition, the membership of the Academic Assembly had witnessed many departures and many new additions during that time. Finally, the past decade witnessed a number of adoptions of +/- grade systems that could be useful in making certain that any system adopted is best for our particular setting. An opportunity for the Academic Assembly through its Senate to revisit its earlier decision seemed appropriate.

Consequently, President Monk appointed an *ad hoc* committee, chaired by Senate President-Elect George Watson and representative of the different colleges and other interests, with special attention to naming individuals familiar with student academic issues generally, and more specifically the particular needs and concerns of students in the Honors College and intercollegiate athletics. The make-up of the Committee may be seen in Appendix A.

Description of the Committee's work

The Committee met on four occasions during the Spring, 2002, semester and twice again in the Fall prior to the release of this report. During that time, it gathered the information presented here, including invited presentations to the Committee by a number of individuals with a particular knowledge of and interest in the type of grading system employed at ASU. Presenters were asked to submit a statement in writing and respond to questions from Committee members. Those presentations informed the writing of this report and written statements are included in the Appendix material.

The Committee chair and certain other senators also received input from students, both informally and formally at one meeting of ASASU and at one of the Academic Senate meetings. The basic points made by students are incorporated into this report.

The intent of this report is to inform the University community as fully as possible of the Committee's findings in order that the Academic Senate may make its recommendation to the president fully confident that it represents the will of the Academic Assembly. Members of the Academic Assembly should understand that the bylaws of the Assembly permit any decision of the Academic Senate to be subjected to review by the Academic Assembly (see ACD 112-01.II.D.3).

Grading Systems in Use Around the Nation

There are a variety of grading systems in place among universities around the nation, many of which were adopted during the 1990s up to the present. Among PAC-10 schools, ASU peer universities, and a few others that came to the Committee's attention, eleven different systems were observed. These eleven have been grouped into 8 basic systems with the other 3 acknowledged as minor variations of a basic type (see Table 1).

Noteworthy is the fact that no Arizona state universities use a +/- system. However, all other universities in the PAC-10 athletic conference do. Moreover, all but 3 of ASU's peer institutions (viz., Texas, Oklahoma, and the U. of Illinois at Chicago) have some sort of +/- system in place.

The standard practice in such systems is to increment the standard letter grade by 0.33, sometimes carried to only one (0.3) or out to three (0.333) decimal places, for a plus grade. Thus, a grade of B+ becomes a 3.3. Similarly a minus grade decrements the standard letter grade by 0.33 (or 0.3 or 0.333). A B- in such a system typically received a grade credit of 2.67. Florida State differs by using increments and decrements of 0.25. Rutgers has a system that permits only plus supplements to a standard grade, no minuses, and it allocates a 0.5 to that plus grade (see Group 8 in Table 1).

The most common method in place is the System 5 model shown in Table 1. It features no A+ or E- grades, but otherwise, with a couple of exceptions at the E+ level, there are pluses and minuses at each grade level. ASU's Academic Senate Resolution 23 in 1992 proposed System 6, one in which there are no A+, D-, or E+ grades.

Discounting the Rutgers system that has no minus grades at all, the other six +/- systems vary largely at the top of the scale and toward the lower end. Systems 2, 3, and 4 all have an A+ but only System 3 provides an increment for that grade, and only 3 schools in the sample employ that system. Otherwise, what distinguishes the systems is the presence or absence of + and - grades at the C, D, and E levels. Only 1 system and 1 school eliminate the C- and that school, Penn State, did so only after considerable debate.

System 2 is a hybrid model that has come into play in at least two universities of note, MIT and Maryland. Both have opted to employ a +/- system in which the pluses and minuses appear on a student's transcript but are not used to calculate grade point averages for external reporting. MIT adopted their system after a 3 year trial period and subsequent evaluation (see Appendix C), while the University of Maryland is currently in its own trial evaluation of such a system.

The University of Washington has a different model of assigning points that then plug into a model that most closely resembles System 5. Faculty assign numeric grades in increments of 0.1, and those points are then assigned letter grades that look more like the rest of the world. Grades of 3.9 and 4.0 are As; 3.5 to 3.8 constitute an A- and so on down the line.

Questions Regarding Plus/Minus Grading

Does a +/- system help curb grade inflation?

The short answer is “No.” However, such a question not only betrays an underlying bias regarding grades, it also misses the point. The real issue is whether a +/- system will affect grade accuracy. Theoretically, it should. Methodologically, the goal is to provide a grade that minimizes error, namely, that difference between the grade representation of the score assigned to a student and what the instructor would consider to be a student’s true score. By providing a finer grading scale, instructors can come closer to assigning a grade that accurately reflects a student’s “true” score.

A computer model developed at Wake Forest University (see Appendix D) estimates error in grade assignment at between a root mean square of 0.3 to 0.7 in a system not using +/- . That error drops to between 0.3 and 0.33 for a +/- system. Certain assumptions about their model are unrealistic, but it does capture the common sense understanding that a student whose “true” grade is represented by the score of 81 on a 100 point scale is more accurately captured with a grade of B- (assuming 80 is the minimum required to fall in the B range) than either a grade of B or C. Assuming a certain amount of random error were involved in estimating this student’s “true” score of 81, there is some chance of this student’s scores failing to reach the B level, resulting in a grade of C in a non-plus/minus system. In a plus/minus system, the student would more likely receive a C+, resulting in less error, and, of course, the best chance of receiving a B-, closest to the “true” grade.

Clearly, faculty who feel too limited in their grade options will feel that a +/- system will permit truer grading. A 1999 analysis of faculty and student reactions to the implementation of +/- at MIT over the previous three years revealed overwhelming support by faculty and strong support from students regarding the efficacy of +/- . Over 70% of the students and fully 85% of the faculty felt that +/- modifiers provided better feedback to students regarding student work. Over 90% of the faculty reported the belief that their assessment techniques provided them sufficient information with which to assign +/- grades. Both graduate (71%) and undergraduate (64%) students tended to agree with that assessment.

What impact does +/- have on grade point average?

This question needs to be broken down into subcomponents because the effects differ for different students.

Overall institutional grade point average

In two different impact studies, MIT and North Carolina State University (NCSU), the impact of switching to a +/- system had small, but somewhat consistent effects overall on GPA. One-third of the undergraduates in both institutions saw a decline in their GPA, albeit typically not much of one. At MIT only 4% saw an increase of 0.1 or more. On the other hand, almost 23% of NCSU undergraduates saw an increase in their GPA. In the case of NCSU, the middle rows of Table 2 present their comparison of the actual institutional GPA using +/- and the GPA that would occur if the +/- supplements are

Table 2. Usage and Apparent Effects of Plus/Minus System at North Carolina State University

		Fall 94		Spring 95		Fall 95		Spring 96		Fall 96		Spring 97	
		UG	G	UG	G	UG	G	UG	G	UG	G	UG	G
Percentage of all grades awarded which were	+	2.7	5.1	10.1	7.0	9.8	10.8	11.1	10.0	11.5	11.0	12.0	10.3
	-	2.5	5.0	11.3	7.7	11.3	11.5	12.4	11.0	12.5	12.0	12.9	10.5
Percentage of course sections in which at least one + or - grade was awarded		13.5	21.5	41.2	34.4	46.1	45.9	48.2	45.7	49.4	50.3	51.2	47.8
Percentage of course credit hours in which at least one + or - grade was awarded		13.7	24.4	49.7	32.4	47.4	49.2	52.1	43.5	55.1	49.0	56.8	44.1
Mean GPA	Using +/-	2.70	3.49	2.65	3.60	2.64	3.57	2.66	3.54	2.72	3.54	2.73	3.53
	Without +/-	2.70	3.50	2.66	3.61	2.67	3.58	2.67	3.56	2.73	3.56	2.74	3.55
Percentage of students whose GPAs are now ____ they would apparently be without the +/- scale													
	higher than	7.7	6.9	22.9	7.0	22.0	12.0	22.6	10.3	22.8	11.4	23.1	9.1
	the same as	81.7	82.5	44.5	78.3	44.8	67.5	43.0	70.2	43.1	67.0	42.4	72.2
	lower than	10.6	10.6	32.7	14.7	33.2	20.5	34.4	19.5	34.1	21.6	34.4	18.8

stripped. Such a comparison should be done with caution. There is no guarantee that a student receiving an A–, for example, would have received an A had no +/- option been available.

Impact on students with 3.8 to 4.0 GPA

There seems little doubt that the number of 4.0 students will decline in a +/- system and likely that fewer will make ASU's 3.8 standard for graduating *summa cum laude*. That is suggested by the model developed at Wake Forest (see appendix D) and borne out by the data at NCSU.

At NCSU, the percentage of all undergraduate grades that were As hovered around 31 to 32% in the years immediately preceding the change to +/- . In the first three years after +/- , the percentage of grades that were in the A range (viz., A+, A, and A–) increased slightly to 33%, almost 34%. However, the A and A+ grades were only 28% of that 33%; the other 5% was A–, which suggests that some As are going to drop to A–. Among B, C, and D grades, there were more plus grades than minus grades, but in the A range, there were more than twice as many A– as A+ grades. Even when the NCSU analysts modeled a scenario of giving A+ grades a 4.33 credit, around 10% of all students, (not just the top students) would see their grade point averages decrease. This is substantially less than the third who saw their GPA drop under the NCSU system that rewarded an A+ with a credit of 4.0, but 10% is still not an insubstantial number. Subsequent to their study, NCSU adopted a system of awarding an A+ 4.33 grade points.

Impact on students hovering around a 3.5

The 3.5 GPA is significant because it serves as a cut point for many students who are on merit-based financial aid. The Wake Forest model suggests that students needing to maintain a 3.5 GPA will be little affected by any change to +/- . Such students tend to operate in what would become the A, A–, B+, B range. While some of their As will be an A– at 3.67 grade points, many of their B grades will be B+, scored at 3.33 rather than the 3.0 for a B. Losses in GPA at the A level resulting from the A– will be offset by gains in GPA brought about by the B+.

Impact on students hovering around a 3.0

The +/- option will reduce variation in the grades of students who operate at the 3.0 level but it is unlikely to have any appreciable effect on their overall GPA. Unlike those operating at the 4.0 level, in which a ceiling effect limits going higher, preventing offsets for lower grades, those who hover around 3.0 are as likely to see an increase as a decrease in GPA. Indeed, given the narrower span of a larger number of grade options, there may now be greater incentive for students to strive for that next higher level. Low B students, for example, now have an incentive to do better. Even though an A may remain just as elusive as before, moving from a B– to a B or even up to B+ is realistic and has real consequences for one's GPA.

Impact on students hovering around a 2.0

The Wake Forest model suggests no difference on the impact of +/- between those students who operate in the range 3.0 and those at 2.0. However, there is one important

difference. A GPA that drops below 2.0 has severe consequences for successful academic standing. Consequently, the grade of C– at only 1.67 grade points is a real problem. Even so, just as with students at the 3.0 level, there is unlikely to be any appreciable impact on overall GPA, especially given the increased incentive for students to perform better within a general grade range of A, B, or C. Only a little stronger effort and better performance can produce an actual change in the grade point credit for the course.

The real problem with the C– grade arises from its conflict with current requirements for a grade of C or higher in order to receive course credit. This requirement typically applies in a student’s upper division major courses. Some universities have kept that C minimum, in effect raising the requirement for a passing grade. For example, a student in a grading system with no +/- options who achieves a score of 70 from an instructor using 70 as the cut off point for a C before +/- will receive a passing grade of C. Under +/-, however, a score of 70 (or even 71 or 72) would likely be assigned a C–, not good enough to achieve a passing grade of C.

On the other hand, if that problem is handled by permitting a C– to be an acceptable passing grade, as some universities have done, then an anomaly arises in which a student could pass all of his or her courses at an acceptable level, namely, at a C– or higher and yet not have attained the 2.0 necessary for graduation or successful academic standing. This issue is raised in the statement of Professor Jerry Kingston, ASU’s longtime Faculty Athletics Representative (see Appendix E), who points out that an athlete needing to meet the NCAA’s requirement of a 2.0 to be eligible for competition could achieve a series of C grades, except for one C–, and thus be declared ineligible. The pressures to eliminate that minus on a grade or get another grade elevated to a plus will be felt, not only by students, but by faculty as well.

These problems may be little more than a nuisance, but the faculty at Penn State was sufficiently perturbed that it adopted a +/- system with no C– grade. Some schools have kept the C as the minimum passing grade; others declare any grade in the C range as passing, while still others have specifically listed C– as being the minimum acceptable grade for those courses formerly requiring a C minimum.

ASU’s policy in accepting transfer credit also reflects this problem. ASU specifically prohibits the transfer of course credit from other institutions “. . . in which the lowest passing grade (D) or a failing grade was received.” Yet, in implementing this policy, ASU precludes the transfer of credit for any course in which a student received a grade below C, or 2.0. It is an issue that must be addressed if a +/- system is adopted.

Inter-class equity

Although any adoption of a +/- system provides an instructor with the option of using the +/- refinements, its optional status would cause problems in multi-section courses offered by different instructors if some instructors used +/- and others did not. The solution is clear, if not exactly easy. Multiple section courses should have an agreement among instructors about the uniform application of +/-.

Learning incentive

The impact of grades on the learning process remains an issue of some dispute, almost surely because grades serve as incentives for some students while not for others. One can argue that the smaller grade intervals of +/- should increase incentives to achieve the next higher grade because it is more within reach. On the other hand, one could argue that there is both less to gain and less to lose in a +/- system, thereby decreasing incentive. The MIT study, if nothing else, certainly shows a large discrepancy between faculty and student attitudes on the impact that grades can have on issues of learning, pressure, and competition.

Grade grievances and appeals

The Committee did not locate data on the impact of +/- on grade appeals or grade grievances. Anecdotal evidence was heard that such appeals and grievances could increase by 30% or more. Although the narrower grade increments in a +/- system suggest that there is less to gain in a grade change, narrower increments also suggest that any change should be easier to attain. As noted previously in discussing the C- grade, the pressures to remove a minus or to gain a + will be felt by students and faculty alike. More grade appeals seem likely.

Technical Implementation Issues

The initial resolution of the Senate to adopt a +/- system was never approved by President Coor, in large part because the adoption was not technologically feasible for ASU at the time. The issue of adopting +/- arose again last year at the initiative of the Administrative Systems Priorities Oversight Committee through Information Technology when it informed the Senate that modifications to the Student Information System could now be made to accommodate +/-.

In a statement from Michael Dixon, Senior Associate Director of Undergraduate Admissions at ASU (see Appendix F), our Degree Auditing Reporting System (DARS) currently interprets transfer grades from other institutions using a system in which increments and decrements are carried only to one decimal place. Thus, an A- is 3.7, not 3.67 and a B+ is 3.3, not 3.33. If ASU adopts a +/- system, Dixon suggests conversion practices for transfer course work with +/- grades be synchronized with the system used for ASU course work with +/- grades. This would ease any explanation of our system to others.

Articulation

If adopted, ASU will be the only higher education institution among Arizona's state universities and the community colleges to employ +/- . On the one hand, this should not present any real problems on the technical side; all schools have to deal with students coming in from systems that have +/- . On the other hand, the issues discussed earlier regarding the C- grade come into play. As Zoila Gamero de Tovar, ASU's director of Academic Transfer Articulation, noted in her presentation to the Committee, there is a considerable amount of reverse transfer between ASU and the community colleges. Will the community colleges accept a C- grade from an ASU student desiring to take a community college course in which the C- grade at ASU was from a prerequisite course?

Recruitment

What is unknown in the adoption of +/- is whether ASU's recruitment of top students, and others for that matter, would be adversely affected. If potential recruits to the Honors College compare the likelihood of graduating *summa cum laude* or even with a 4.0 at ASU v. the University of Arizona, will the greater difficulty of securing that GPA in a +/- system tip the balance to the U of A? We have no data on that issue. Anecdotal evidence, however, suggests that grade-conscious Honors students believe that their GPAs would be adversely affected by a change to a +/- system that attaches numerical weights to pluses and minuses.

Assessment of Various Systems

That any single system of grading is superior to another is clearly arguable given the number of systems in use. Reasonable faculty at quality universities have adopted different systems after careful consideration and deliberation. Stanford's use of a 4.3 as a meaningful A+ grade heeds the complaint of top students that all other grade levels have both the + and -. Yet faculty at most schools have rejected that rationale. Penn State reasoned that having no C- grade would solve the anomaly of having a student pass a course but receive a grade point credit of less than passing. That too is a reasonable system, but one rejected by most other universities with a +/- system.

This section examines each of 8 different grading systems, with comments bearing on a couple of additional variations within those 8 formats. These assessments can serve as the basis for any motion to adopt any particular system.

System 1, no plus or minus grades

This is the current system for ASU and therefore qualifies for the aphorism, "If it ain't broke, don't fix it." To opt for a change must be to accept that a +/- system provides advantages worth the hassle. Proponents of not changing the system do not see sufficient advantage to doing so. They do, however, see certain disadvantages from a changeover, which include: losing some competitive advantage to other Arizona schools for top students who might see ASU as a more difficult place to maintain a *summa cum laude* grade point average, problems resulting from a C- grade as not meeting the C requirement for credit in many majors, problems resulting from a C- grade receiving only a 1.67 point credit, below the 2.0 required for acceptable academic standing, an increase in grade grievances, pressure to make ever finer distinctions among student performances that may not be done with any great reliability or validity. Proponents of this system also see the presumed benefits of change as arguable, at best. They do not see the +/- system influencing so-called grade inflation. It is invalid, in their minds, for proponents of +/- to hold simultaneously that a +/- system can help control grade inflation while also having little impact on over all grade point average.

System 2, +/- grades on the transcript but no increments or decrements for GPA calculations

Proponents see this system as achieving the positive goals of +/- grading while eliminating the negatives, which mostly involve the impact of +/- on grade point average.

Faculty get to make those finer distinctions among student performances and those distinctions are recorded on the student's transcript, there for any discerning closer look by those assessing a student's academic work. On the other hand, proponents of System 2 argue, virtually all of the consequences seen as negative by proponents of no change at all (System 1) also dissipate. The question of whether a C- constitutes a passing grade in one's major may still remain, but it is easily resolved with a policy that declares a C- is in fact a passing grade in those circumstances. Admittedly, though, such a declaration by ASU does not mean other schools will recognize that declaration as valid.

System 3, +/- grades at all levels (except E) with corresponding grade point increments and decrements except that A+ = A = 4.0

System 3 and the closely corresponding System 5 constitute what appears to be the standard practice for plus/minus grading systems. They differ primarily in the fact that System 3 has an A+ grade while System 5 does not. However, the A+ in System 3 offers a grade point credit of 4.0, which does not distinguish it from the grade of A in either System 3 or System 5. Schools in either of these two systems may also be distinguished by whether or not they provide for an E+ grade. Some do; some don't.

Proponents of System 3 see it as the logical application of the philosophy of having plus and minus grades. Faculty are given the widest range of choices in assigning + and - minus grades at each grade level. There is some difference of opinion regarding whether a grade of E+ makes any sense. System 3, however, does accept the notion that the highest grade point level should be 4.0 and the lowest should 0.0. Consequently, while at A+ can be a recorded grade on the transcript, it receives only a 4.0, no higher than a grade of A. Because an E is already 0.0, no one has seen any sense or need to record a grade of E-.

System 4, +/- grades at all levels (except E) with an A+ = 4.33

System 4 responds to the arguments of top students that the failure to increment the grade of A+ above that of an A introduces a bias against the very best students. Simply illustrated, whereas a B+ and a B- average out to a B at 3.0, an A+ and an A - under System 3 result in something less than an A, namely, a 3.83. By permitting an A+ to rise to 4.33, an A+ and an A- average out to an A at 4.0. Proponents of System 4 see it as the fair application of + and - to each grade level with corresponding increments and decrements at each grade level.

System 5, +/- grades at all levels, except for no A+, no E-, and in some instances no E+

System 5 is the most common plus/minus system in use. It addresses the issue raised in System 3 that an A+ and an A have the same grade point value by simply eliminating the A+, adopting the 4.0 as the highest grade offered. Proponents see this as protecting the integrity of the 0.0 to 4.0 grading system. With proponents of System 3, those who favor System 5 see it as the purest implementation of a +/- system within the confines of a 4.0 system, otherwise offering the full range of grades needed by faculty to provide meaningful distinctions in the learning performances of their students.

System 6, +/- grades at each level between an A (no A+) and a D (no D-)

System 6 responds to the purported bias of no A+ or incremented A+ grade by eliminating the D- grade, thus ensuring an equal number of + and - options. That is to say, 3 grades have + options (viz., B, C, and D) while 3 have - options (viz., A, B, and C). No doubt there are also those who favor this system that see little utility in a D- grade.

System 7, +/- grades at each level between an A (no A+) and a C (no C-)

Penn State adopted this system after considerable reflection focusing on how to deal with one troubling aspect of any +/- system of the System 3 through System 6 types. The standard C- grade point value is 1.67. Most universities place successful academic standing at 2.0 and a passing grade at C. By eliminating the C- grade, System 7 avoids the problem of what to do with a C- in terms of whether it constitutes a passing grade and, assuming that C- is considered passing, of having all passing grades while still failing to meet the 2.0 minimum required for successful academic standing.

System 8, no - grades, only +s at the B and C level, with 0.5 increments.

Rutgers employs a unique system that provides only B+ and C+ as grades that have increments or decrements. In this case, Rutgers students receive a 3.5 for a B+ and a 2.5 for a C+.

Committee Recommendation

The majority expression of the Committee is that the University maintain a grading system that does not use +/- . However, given the previous resolution of the Senate to adopt a +/- system, the Committee has opted to place a +/- option before the Senate. To that end, the Committee recommends the following:

1. Circulate the report between this Senate meeting and the January meeting among the Academic Assembly, various other relevant constituency organizations and representative bodies that are affected by the proposal.
2. Act in January to reconsider Resolution 23 of the Senate from 1992.
3. Move the Committee-recommended Senate Resolution 3 to first read as a substitute motion of the 1992 Senate 23 resolution, which is now a motion by virtue of the reconsideration vote. The resolution proposes to implement a +/- system that corresponds to System 2 described above.
4. At the February, 2003, Senate meeting, debate the issue raised by the substitute motion and then vote.
5. Pass the substitute motion, Senate Resolution 3, which now becomes the +/- motion pending before the Senate.
6. Defeat the pending +/- motion, Senate Resolution 3, maintaining the current grading system intact.

The rationale of the Committee's action to propose a +/- system and then recommend its defeat reflects the majority of the Committee's sense that introducing a +/- system is not in the best interests of ASU's faculty or students. On the other hand, the Committee feels a responsibility to put forward some +/- option to the Academic Assembly, given that the Senate of that Assembly has already approved a system and one that the Committee finds less desirable than another alternative. If the Academic Assembly wishes to have a +/- grading system, then the unanimous Committee recommendation is for the System 2 model.

System 2 fulfills the desire of faculty to have available greater refinements in grading without the concomitant disadvantages of +/- for those students whose grade point average hovers around 2.0, the problems surrounding the C- grade, and the potential negative impact on recruitment for the very top students. Given that there is no evidence a +/- system affects so-called "grade inflation" or has any appreciable effect on aggregate GPA scores, nor that there is any evidence a university's grading system affects the institution's reputation, the Committee sees no other +/- system that offers advantages that compensate for the disadvantages surrounding the 2.0 GPA, C- grades, and the recruitment of top students.