Abstract

An overview of grade inflation in American higher education is presented and its ethical implications are examined and found to be troubling. A synopsis of the ethical ethos of engineering is provided and an account is given of corresponding expectations regarding ethics instruction in engineering education. Because it is unethical, grade inflation is contrary to the ideals and goals of engineering education; and recommendations are proffered accordingly.

I. Grade Inflation in American Higher Education

Grade inflation is very much like price inflation which, is the general rise in the average price of a basket of goods. Price inflation is measured by taking the same physical quantity of items and measuring the price of those goods periodically. Because the physical items being measured do not change, an increase in prices will indicate inflation, which affects monetary value only. Grade inflation exists when the value of grade point averages increases with no change in the real physical attributes of what the grades are measuring. In other words, grade inflation refers to an overall rise in grades with no commensurate increase in quality of courses or academic achievement.\(^1\)

Grade inflation is ubiquitous in American higher education.\(^2\) Its contemporary causes (i.e., since the 1960s) are reported to be the Vietnam War,\(^4\) and “…white professors, imbibing the spirit of affirmative action….”\(^6\) Peter Sacks\(^8\) attributes its continuation to the increasing influence of postmodernism\(^9\) on American society. Professor Valen E. Johnson corroborates this in his recently published book about grade inflation, where he states that postmodernist faculty are “much less likely to assign poor grades.”\(^18\) There is considerable literature against postmodernism,\(^\dagger\) which is generally associated with the humanities (Figure 1). Other grade-inflation causes proffered include the growing consumer mentality of students,\(^19\) the corporate-management style leadership culture pervasive in higher education nowadays with its attendant commercialization\(^21\) of higher education\(^23\) (including for example the evaluation of teaching by students as customers/consumers of higher education\(^24\)\(^25\)), and the misperception that over-grading enhances student self-esteem.\(^6\)\(^22\)\(^26\)

\(^*\) Also see Riesman\(^7\) regarding this impetus.
\(^\dagger\) For example, see the references cited in Manhire.\(^27\)
Grade inflation is widely reported in the literature; and virtually all reports of it are critical. A comprehensive overview of grade inflation is given in the *CQ Researcher* and Professor Johnson’s book provides a thorough quantitative study of the subject. In addition, circumstantial evidence has been reported which suggests that grade inflation has encroached upon engineering education. It has recently been reported that at Northwestern University’s McCormick School of Engineering and Applied Sciences, 48 percent of grades are in the A range and 86 percent are in the A-B range; and even more important with respect to this article’s theme, “Stephen Carr, McCormick’s associate dean for undergraduate engineering, said the school’s faculty has discussed grade inflation and decided there was nothing wrong with it.”

II. Grade Inflation Is Unethical

Ethics is “The discipline dealing with what is good and bad and with moral duty and obligation.” This definition is consistent with that found in philosophy and the (axiomatic) principle that: “Certain aspects of right and wrong exist objectively, independent of culture or per-

* See for example the references cited in *Manhire.*
sonal opinion.” The intention herein is to describe grade inflation by way of language that is “unambiguously ethical in the sense of expressing straightforward judgements of right and wrong.”

Trenchant testimony condemning grade inflation includes the following:

In a recent report issued by the American Academy of Arts and Sciences, grade inflation was deemed unethical:

The main plea is to be clear about professional standards and obligations and to bring practices into line with these standards. The selection of a standard will necessarily be an individual matter—individual for each college or university, department, and faculty. The present system is flawed. The ethics of professional conduct demand that we—as faculty members—seek the best solutions for our institutions.

According to Yale University Professor Stephen L. Carter, grade inflation is uncivil:

Civility allows criticism of others, and sometimes even requires it, but criticism should always be civil. This proposition helps explain why grade inflation is not only dangerous but actively uncivil: When college professors give easy grades, we show that we do not respect our students enough to face their fury or disappointment. We make no sacrifices on their behalf but instead require sacrifices of others, both the exceptional students, who are unable to distinguish themselves because the merely fair students earn grades every bit as good, and the marginal students, who believe they know more than they do because we gift them with grades their work does not earn.

In his book *Grade Inflation*, Professor Valen E. Johnson of the University of Michigan describes the following “alarming” implications of grade inflation regarding student course selection (and student evaluation of teaching, SET):

An instructor who grades stringently is not only less likely to receive favorable course evaluations, but is also less likely to attract students (another indication of poor teaching?). Because most departments are hesitant to devote teaching resources to undersubscribed classes, this means that stringently grading instructors are also less likely to have the opportunity to teach specialized courses in their academic area. And of course, to the extent that personnel decisions at an institution are based on teaching effectiveness, or at least on the institution’s perception of teaching effectiveness, stringently grading faculty are less likely to be promoted, to receive salary increases, or to be tenured.

Harvard University drew considerable international (and surely unwanted) press attention to itself as a result of the recent and highly publicized grade-inflation scandal there. *Harvard Magazine*

* As opposed to the language of values, as described by Olafson.
lampooned Harvard for its lax academic standards and the political cartoon shown in Figure 2 appeared in newspapers across America. Grade inflation is so severe at Harvard University that one might mockingly conclude that Harvard is setting the standard for grade inflation; it has become the epitome, i.e.; laughingstock, of the phenomenon, against which the rest of higher education may be compared.

The cynical/satirical press attention grade inflation is receiving of late does not bode well for those universities following Harvard’s lead, especially those state-support schools that wish to maintain public trust and respect for their academic programs.*

Harvard University Professor Harvey C. Mansfield, a longtime critic of grade inflation, has said the following about grade inflation there (and elsewhere):

> You often hear that it’s very hard to get into Harvard, but not very hard once you’re there. That is a truth you hear from Harvard students; it is only beginning to reach the Harvard faculty. The faculty for the most part does not realize quite

---

* As public awareness of grade inflation grows, it may very well reach a threshold where it fuels public support for political action along the lines described in Professor Dziech’s polemic "Why Academe Gets No Respect."46
how easy Harvard is now. It thinks only of the difficulty of getting into Harvard, arising from the fact that merit, and not family wealth, is now the predominant factor in admission. Thus, essentially all Harvard students are bright. But are they equally bright?

Grade inflation is a statement that they are. Having spoken on the subject, I do not want to repeat the arguments. To sum them up: Grade inflation may once have had the idea behind it that grading is an undemocratic act of oppression by teachers over students, but nobody now advances that stale claim from the 1960s. Grade inflation has become a thoughtless routine convenient for professors, students, parents, and administrators, in which an individual professor overgrades his students as unconsciously as a parent might spoil his children.

It is hard now for professors to be hard on students. It is hard for them to give demanding assignments, make unsympathetic comments, enforce deadlines, and be sparing of praise and difficult to impress. It is not that students are not respectful of professors. They are sometimes just short of worshipful; they are far from denouncing and protesting the authority of the older generation as they used to do in the 1960s. But the respect of students for professors is now exceeded by the respect of professors for students, which does come from the 1960s. And it is not that professors are devoted to their students in gratitude for their students’ respect. Their devotion is limited by their failure, on principle but also for their convenience, to consider what is good for students. What is good for students is now thought to arise mainly, if not entirely, from their own choice. There is just one limitation on student choice. What they must not choose is an education someone might think is good for them.

Course evaluations by students, typical at universities since the 70s, also undermine the authority of professors. They make professors accountable to students on the basis of needing to please them, like businesses pleasing customers or elected officials pleasing voters. The superiority of those who know over those who don’t know is slighted, and the students’ judgment comes down to the charm of the professor as students perceive it. What at first might be justified as useful feedback from students ends up distorting the relationship between professors and students.26

In addition, Professor Mansfield writes:

People often criticize elementary and secondary schools for demanding too little of students. In the past presidential race, both candidates spoke frequently of the need to raise standards. But at Harvard, the supposed pinnacle of American education, professors are quite satisfied to bestow outlandishly high grades upon students. We even think those grades reflect well on us; they show how popular we are with bright students. And so we are quite satisfied with ourselves, too.
There is something inappropriate -- almost sick -- in the spectacle of mature adults showering young people with unbelievable praise. We are flattering our students in our eagerness to get their good opinion. That our students are promising makes it worse, for promise made complacent is easily spoilt. What's more, professors who give easy grades gain just a fleeting popularity, salted with disdain. In later life, students will forget those professors; they will remember the ones who posed a challenge.

In a healthy university, it would not be necessary to say what is wrong with grade inflation. But once the evil becomes routine, people can no longer see it for what it is. Even though educators should instinctively understand why grade inflation is a problem, one has to be explicit about it.

Grade inflation compresses all grades at the top, making it difficult to discriminate the best from the very good, the very good from the good, the good from the mediocre. Surely a teacher wants to mark the few best students with a grade that distinguishes them from all the rest in the top quarter, but at Harvard that's not possible. Some of my colleagues say that all you have to do to interpret inflated grades is to recalibrate them in your mind so that a B+ equals a C, and so forth. But the compression at the top of the scale does not permit the gradation that you need to rate students accurately.

Moreover, everyone knows that C is an average grade, whereas a B+ is next to the top. Mere recalibration does not address the real problem: the raising of grades way beyond what students deserve.

At Harvard, we have lost the notion of an average student. By that I mean a Harvard average, not a comparison with the high-school average that enabled our students to be admitted here. When bright students take a step up and find themselves with other bright students, they should face a new, higher standard of excellence.

The loss of the notion of average shows that professors today do not begin with their own criteria for the performance of students in their courses. Professors do not say to themselves, "This is what I can require; anything above that enters into excellence." No. With an eye to student course evaluations and confounded by the realization that they have somehow lost authority, professors begin from what they think students expect. American colleges used to set their own expectations. Now, increasingly, they react to student expectations -- even though, by contrast to stormy times in the past, students are very respectful.

Thus another evil of grade inflation is the loss of faculty morale that it reveals. It signifies that professors care less about their teaching. Anyone who cares a lot about something -- for example, a baseball fan -- is very critical in making judgments about it. Far from the opposite of caring, being critical is the very conse-
quence of caring. It is difficult for students to work hard, or for the professor to
get them to work hard, when they know that their chances of getting an A or A-
are 50-50 [see Figure 2]. Students today are still motivated to get good grades, but
if they do not wish to work hard toward that end, they can always maneuver and
bargain.

Some say Harvard students are better these days and deserve higher grades. But if
they are in some measures better, the proper response is to raise our standards and
demand more of our students. Cars are better-made now than they used to be. So
when buying a car, would you be satisfied with one that was as good as they used
to be?

Besides, the evidence clearly undermines that argument. The Harvard University
Extension School, taught mostly by Harvard faculty members, has about the same
grading distribution as Harvard College, although exact figures on grades are dif-
ficult to come by. The school holds evening classes open to the public -- a mix of
Ph.D.'s, college dropouts, and high-school students -- and is not reserved for the
super-smart of America's youth. Yet the Harvard professors who teach those ad-
mirable, self-improving souls cannot restrain their own -- well, it's not generosity,
because high grades cost professors nothing.

Another point calls into question the claim that students are smarter now: Grades
in humanities courses are notably higher than those in the social sciences, and
both are higher than grades in the natural sciences. Yet would anyone say that
Harvard's best students are in the humanities and its worst in the natural sciences?
In fact, science students regularly do better in nonscience courses than nonscience
students do in science courses.

How did we get into this mess? Perhaps I should be asking how we should get out
of it. But to answer that question, one needs to appreciate the strength of feeling
behind grade inflation.

Grade inflation has resulted from the emphasis in American education on the no-
tion of self-esteem. According to that therapeutic notion, the purpose of education
is to make students feel capable and empowered. So to grade them, or to grade
them strictly, is cruel and dehumanizing. Grading creates stress. It encourages
competition rather than harmony. It is judgmental.

A child-development professor recently expressed the spirit of such self-esteem
with rare clarity: "As soon as you get into some of the more complicated things,
kids may experience failure. They may feel like they're stupid." This spirit is as
rampant in higher education as it is in elementary and secondary schools. At col-
leges, self-esteem often goes hand in hand with multiculturalism or sensitivity to
people of diverse races and ethnicities -- meaning that professors must avoid of-
fending the identities (still another name for self-esteem) of victimized groups.
I know what that means. It means that despite all the talk about free speech at Harvard, you had better watch what you say. And how you grade.\(^6\)

Professor Mansfield describes grade inflation as evil. It has diminished faculty authority\(^47\) and morale. The various fields of study were once commonly referred to as academic disciplines. Perhaps the diminished use of this academic argot nowadays (especially the word *discipline*, and all that it entails regarding the arduous effort required of serious study) is a reflection of the erosion of authority that Professor Mansfield describes. Students may study less now than they used to because some professors have lowered their standards for what constitutes acceptable passing work.\(^48\)

In response to claims that better students are a valid justification for grade inflation Professor Johnson cogently asks:

I wonder also how many of the professors who make the argument that their students are better than students at other universities would assign uniformly low grades if fate had landed them at Below Average U.? And should community colleges and lower-rung state schools really be prevented from assigning A’s?\(^49\)

About grade inflation, Alvin B. Kernan, Princeton University Professor Emeritus writes:

It is commonly believed that it is all to the good that anyone who wants to go to college can now afford to go somewhere in a system where tuition ranges from only a few hundred dollars to over $30,000 a year. Socially this may well be the case, but changes in the curriculum suggest that we have sent a lot of marginal students to college and that they have lowered the level of higher education.

Grade inflation has concealed what has happened, making worse seem better. Many colleges still have the framework of a grading system, but even where letter grades are still assigned, higher education now gets by on what can fairly be called a pass/pass option.

Grade inflation began, of course, in the Vietnam War days to avoid sending men with student deferments to the jungle, but once the camel had its nose under the tent, the popular view that “only success should be recorded permanently” soon prevailed. Failing grades no longer exist, except at a few holdouts like Reed College in Oregon, and the lower grades of C and D are seldom seen except in the sciences. When the president of Harvard expressed concern about grade inflation to one of his university professors, he ended by losing his Afro-American Studies Program. It should be remarked that European universities have never had our type of grading system, but in its place they have had a rigorous set of final exams for the degree. Since it is most unlikely that we will ever return to something like an objective grading system, those who want reform might well argue for the European system, putting the weight entirely on extended exams for the degree, with different classes of degrees, first, second, etc.
The death of the grading system should cause no surprise, for Americans believe that grading is an anti-democratic, judgmental act which in any form manifests the elitist view that all people are not equal.\textsuperscript{50}

Why do professors go along with grade inflation, which so clearly undercuts their authority and violates their sense of their own integrity? One professor wrote the \textit{New York Times} that “the chairman of my department changed a student’s F (32 out of a possible 105 points) to a passing grade. The justification? Both parents are lawyers” (July 7, 1995). But fear of being sued is only a secondary concern in a more general breakdown of the authority that a realistic grading system once conferred on teachers and institutions. When the certainty in truth goes it becomes impossible to fail anyone.\textsuperscript{51}

Professor Kernan thinks grading has suffered death-by-grade-inflation. He also suggests that there are many marginal students in college nowadays and that they have lowered the level of academic standards in higher education. J. E. Stone of \textit{The Andrew Jackson Institute} has quantified this idea by estimating that fifteen percent of Tennessee’s college graduates (ca. 1995) “would not have earned a diploma by mid 1960s standards.”\textsuperscript{52}

Rutgers Professor Jackson Toby has written:

The meaning of grade-point averages became less clear than they used to be [sic]. Grades cannot communicate clear meanings unless they are understood in the same way by the professor who assigns the grade, the student who receives it, and the other people who read the transcript. When some professors give everyone or nearly everyone an A, perhaps because of an ideology holding that competition for grades is immoral and psychologically damaging, students who enroll in a course taught by a professor old-fashioned enough to give C’s, D’s and F’s are at a competitive disadvantage. A “C” in that course can ruin their averages and jeopardize their chances of getting into law or medical school even though it does not mean what readers of the transcript think. This tempts many students to take courses with professors with the lowest grading standards, and tougher professors are tempted to sell out to the enrollment votes of student consumers. Professor Harvey Mansfield of Harvard’s Government Department assigns two grades to students in his courses: one the grade he believes that the student deserves and a higher grade, which he assigns for the student’s official record.

Grade inflation developed partly because professors no longer graded according to the same standards but also because of the expectations of students, based on their primary school and high school experiences, that they could get high grades without working very hard. Professors were reluctant to violate these expectations, especially with minority students admitted to increase “diversity” but who lacked good preparation for college work. And students are not shy about demanding high grades, whether professors think they deserve them or not. Professors found
it easier to give in rather than to haggle, especially when student consumers were
in a position to damage a professor’s reputation on anonymous rating surveys,
which are often considered in promotion decisions. Another reason for grade in-
flation is a change of ideology among professors, perhaps because of their student
experiences in the turmoil of the 1960s. A third source of grade inflation is the
proportion of marginal students in a class. The more marginal students, the worse
the student has to perform in order to fail. Failing half of the class is not a viable
option when students can pick and choose their courses from a curriculum without
many requirements.\textsuperscript{53}

Professors Richard Kamber and Mary Biggs of the College of New Jersey write:

The problem is not only that most institutions have accepted grading practices that
persistently blur the distinction between good and outstanding performance, while
they award passing grades for showing up and turning in work -- even when that
work is poor. It is also that students and faculty members, administrators and trus-
tees, accrediting bodies, and higher-education associations have been united for
more than 25 years in their willingness to ignore, excuse, or compromise with
grade inflation rather than fight it.

Grade inflation subverts the primary function of grades. Grades are messages.
They are means of telling students -- and subsequently, parents, employers, and
graduate schools -- how well or poorly those students have done. A grade that
misrepresents a student's performance sends a false message. It tells a lie. The
point of using more than one passing grade (usually D through A) is to differenti-
ate levels of successful performance among one's students. Inflating grades to
please or encourage students is confusing and ultimately self-defeating.

Unlike price inflation, where one might try to keep pace with the declining value
of a currency by paying out more of that currency, grade inflation is trapped by the
upper limit of the grading system. When the highest grade ceases to identify a stu-
dent's work as outstanding, the grades below it also lose power to recognize and
reward appropriately, as well. Thus, we find the phrase "grade inflation" mislead-
ing and prefer to speak instead of "grade conflation."

The worst results of grade conflation come from giving too many A's as well as
too few F's. When A no longer distinguishes outstanding from good, teachers lack
a formal means to inspire the long reach, the passionate striving, that is the only
way students ever achieve their academic potential. On the other end of the scale,
great damage has also been done by the metamorphosis of F from an academic
grade for "failing to do acceptable college-level work" into a disciplinary category
for "failing to come to class" or "failing to submit assignments."

By passing students for going through the motions of learning, faculty members
and their institutions are adopting the practice of social promotion that has
stripped high-school diplomas of credibility. Thousands of college graduates are
staffing businesses, teaching children, providing critical social services, and even
winning admittance to graduate and professional schools without having mastered
college-level skills or knowledge.

With four out of five students graduating with GPA's of B-minus or better, with a
college degree ensuring neither knowledge of subject matter nor basic skills, em-
ployers and graduate schools have had to rely on other measures to sift applicants.
Standardized-test scores and institutional "reputation" have become more impor-
tant than the judgments of teachers and scholars. The discouragement of excel-
lence, the concealment of failure, the torpedoing of our own credibility: harsh ac-
cusations, hard to believe, and yet these are the consequences of grade conflation.

Grade conflation has prevailed for decades on campuses because it links in unwit-
ting collusion all of the constituencies involved in providing, receiving, and pay-
ing for higher education. Legislators, accrediting bodies, and trustees urge institu-
tions to strive for better retention rates. Presidents and provosts goad departments
to attract and retain majors by apportioning resources on the basis of enrollments.
Deans and department chairs overemphasize the importance of high ratings on
student evaluations for reappointment, tenure, and promotion. Faculty members,
enmeshed in this perverse reward system, follow the path of least resistance and
rationalize their conduct. Students, conditioned by grade conflation in high
schools and convinced that high grades are essential to future success, campaign
for lenient policies on the dropping and retaking of courses and the expunging of
unwanted grades.54

Professors Kamber and Biggs associate grade inflation with, inter alia, lying, social promotion,
the discouragement of excellence, the concealment of failure and loss of credibility.

All of the preceding testimony, which reflects traditional academic ethos, is indicative of the
consensus of thought, opinion and judgement to be found in the literature on grade inflation.
Even if one thinks that some of it is hyperbole (which this author thinks not), it
is nonetheless based on certain troubling facts creating pernicious negative public perceptions that, as has al-
ready been suggested, are too onerous to continue to ignore.

As Professors Mansfield, Kamber and Biggs point out, grade inflation has resulted in consider-
able grade compression (at the top).54 Further compression will ultimately produce a de facto bi-
ary (pass/fail)† grading system (see Professor Kernan’s previous remarks) that is really no grad-
ing system at all since, with grade inflation, virtually everyone passes (many with honors, see
Figure 3) and nobody fails (and those few who fail, rarely fail based on merit). As already men-
tioned, grade inflation may become more noticeable off campus than on. Public opinion may
eventually find grade inflation to be a serious quality issue;56 and, as such, possibly also conflate
it with other quality issues the tax-paying public deems important regarding the overall worth of

---

* See Gibson’s satire proposing a number of ludicrous solutions to the grade-compression problem.55
† Pass/fail grading is essentially a dead letter on campus nowadays. When it is offered, very few students partake of
it because it carries on their transcripts the stigma of being a grading-avoidance mechanism.
universities as publicly supported institutions. Loss of respect\textsuperscript{46} for academic integrity could undermine public trust, and thus public support, and encourage legislative action by statehouse politicos to further reduce state financial support (subsidy) of higher education.\textsuperscript{57-60} Also, a poor academic reputation resulting from grade inflation could inflict collateral damage to alumni support\textsuperscript{61-62} and perhaps even research funding.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.jpg}
\caption{Honors}
\textit{(Used with permission of Sage Stossel)}
\end{figure}

Considering all this and the testimony cited above, as well as the preponderance of literature against grade inflation, surely grade inflation is unethical in the sense of what is good and bad, and is contrary to traditional ethical tenets concerning moral duty and obligation.
III. Ethics in Engineering and Engineering Education

Ethics is an essential element of engineering practice. Recent literature suggests that there is growing interest in ethics in higher education. For example, the Carnegie Foundation for the Advancement of Teaching has published a report on ethical issues in the scholarship of teaching and learning. Professor Robert Hauptman (St. Cloud State University) has written about dishonesty in the academy. Professor Wendy Wassyng Roworth has written about ethical obligations of faculty to students, institutions, and colleagues and Professor Rudolph H. Weingartner has written about the moral dimensions of academic administration. An official statement on ethics by the American Association of University Professors (AAUP) is published in the Redbook.

As for engineering and engineering education:

Ethics in science and engineering has attracted increasing attention in recent years. Several well-publicized incidents, like the destruction of the space shuttle Challenger and the accusations surrounding the Thereza Imanishi-Kari/David Baltimore case, have focused heightened attention on the values by which scientists and engineers govern their professional behavior. In response, legislatures and governmental agencies have imposed ever more strict regulations regarding public disclosure, conflict of interest, and the like. Universities and national accrediting agencies are beginning to insist on formal training in ethics. Indeed, the Accrediting Board for Engineering and Technology (ABET) now specifically requires training in ethics for all engineering undergraduates [emphasis added]. The National Institutes of Health requires formal ethics education for the graduate students funded by the NIH Training Grants Program.

No doubt this focus on ethics in science and engineering fits into a broader debate about personal and social morals in general. This debate is strongly colored by what many perceive to be a steady erosion of moral standards throughout much of Western culture. Regardless of whether such a decline truly exists, the perception of decline has made the debate about moral values increasingly shrill and bitter. Unfortunately, many scientists and engineers remain inadequately prepared to contribute to moral debates in a useful way, even within their own disciplines. Good intentions alone do not substitute for a keen eye for detecting ethical issues and a sound method for reasoning about them.

Professors I. J. Kemp (Glasgow Caledonia University) and S. Duncan (University of Strathclyde) have published an (electronic) article about the role of ethics in engineering and engineering education; and in 1996, Norman R. Augustine (then President and Chief Executive Officer of

---

* Consider for example the unethical debacles associated with the deregulation of the electric utility industry a few years ago (i.e., Enron, California electricity shortages, etc.) where: “The bottom line is that we engineers stood by—or even worse, actively participated—as business people, regulators, and politicians did serious harm to utility grids in the United States, Europe, and elsewhere.”

† The AAUP’s ethics statement also appears in Professor Weingartner’s book along with Modern Language Association (MLA) and Association of American Law Schools (AALS) counterparts.
Lockheed Martin Corporation and Chairman of the National Academy of Engineering) wrote about rebuilding engineering education so as to include, inter alia, an ethical issues component. The National Academy of Engineering (NAE) devoted the Fall 2002 issue of *The Bridge* to ethics. The National Society of Professional Engineers’ (NSPE) code of ethics for engineers has a long history (since 1935). The *Engineers’ Creed* was adopted by the NSPE in 1954.

ABET mandates ethics instruction in engineering education. “Indeed, the Accrediting Board for Engineering and Technology (ABET) now specifically requires training in ethics for all engineering undergraduates.” However, scrutiny of the higher-education accreditation system in the United States is increasing as a result of, among other things, grade inflation. For example, the American Council of Trustees and Alumni (ACTA) reports that “Accredited institutions offer courses and even degrees that give little educational value and have allowed academic standards to sink while turning a blind eye to grade inflation.”

Writing in *The Bent†*, Professor Frank G. Splitt (Northwestern University) describes a cultural problem in the academic engineering community that is fostering resistance to the changes mandated by EC2000:

> There is more behind the reticence of some of our engineering schools to adopt change than complacency, indifference, forgetfulness, and even the routine resistance to change that characterizes organizations and institutions that consider themselves “successful” in doing what they are currently doing. Apparently, powerful interrelated counter-reform forces are working to maintain the status quo. These forces can be attributed, in part, to a cultural problem that stems from the patterning of the academic engineering community after the academic scientific community—where published research is prime—rather than professional communities such as legal and medical. Consequently, engineering faculty are largely deficient in the practices of engineering and have little or no firsthand knowledge or experience to pass on to students being educated for careers in engineering practice as opposed to research. Systemic engineering education reform is at least partially dependent on the resolution of this and other interrelated problems.

Professor Splitt has apparently raised the ironic possibility of unethical academic resistance to implementing (by way of EC2000) the study of ethics into engineering curricula.

Recapitulating, the literature indicates considerable interest in ethics and unethical conduct is detrimental to higher education, the practice of engineering and engineering education. Through its accreditation apparatus, engineering education has mandated that the study of ethics be included in engineering curricula. Grade inflation is unethical and ubiquitous in higher education; and so it follows that engineering education should actively seek a remedy to it should it exist within its midst (as circumstantial evidence suggests it does).

---

* ABET was not included in the ACTA study associated with this report.
† *The Bent* is an organ of Tau Beta Pi, the national engineering academic honor society comparable to Phi Beta Kappa.
IV. Recommendations and Conclusion

Grade inflation permeates American higher education and its culture. Those so acculturated include, inter alios, the professoriate, university administration, alumni, employers of graduates (who are well aware of grade inflation), students and their tuition (and tax)-paying parents. Perhaps the most important cohort in (and benefactor to) this culture is the tax-paying public (only some of whom are aware of the extent of grade inflation today). All parties agree, quite sincerely, that high academic standards are of paramount importance, yet grade inflation/compression continues unabated. There is no organized overarching national effort to combat it. This remark is not intended to be an indictment critical of the character of either Americans or higher education. Instead, the intention is to suggest that grade inflation is an extremely complex and obstreperous social challenge. For example, we Americans take pride in our egalitarianism. But we also covet the elitism that comes with the distinction of the rarely occurring high grades of traditional high academic standards (rather than today’s meaningless grade inflation/compression fiction). Grade inflation is a sort of postmodern Lake Wobegon-like illusion somewhat along the lines of having our cake and eating it too.

Who might solve the unethical problem of grade inflation? Apparently not the professoriate, not alone at least, as history has demonstrated over the past thirty-five years or so. Why not? In part it is because of the following insurmountable (so-far) difficulties. In today’s consumer-oriented university, faculty, especially untenured tenure-track professors and adjunct faculty (who comprise the majority of faculty at some schools) cannot afford to risk their careers to poor performance evaluations by their student-customers (in response to non-inflated grading). Nor can their management (provosts, deans, department chairs, etc.) afford unhappy student customers because that may lead to, among other things, budget (subsidy) cutbacks (and possibly even the foreclosure of academic programs) driven by low enrollments in academically challenging disciplines (a la Stone52). In today’s market-driven economy, parents expect top value for their money as well as an excellent return on their investment (tuition), which includes grades for their children that are emblematic of the expectation of academic excellence that is purchased so dearly. All of this is rational if one accepts that education (and excellence) is a commodity; but its acceptance also fuels grade inflation. Grade inflation responds to our natural craving for high academic standards with the unethical lie that academic aptitude can be purchased. The outcome is that highly compressed grades, like economic hyperinflation, are becoming meaningless if not worthless and

---

* Consider our affinity for such things for our children as bumper stickers proclaiming “My Child is an Honor Student at…” (see Twitchell86).
† For example, the mapping of symbols (letter grades to numbers) in the definition of letter grades in the 1972-73 edition of Ohio University’s undergraduate catalogue included English language descriptions of what each letter grade was intended to mean, as follows: A, Very high with 4 (four) points per quarter hour attempted; B, High with 3 (three) points per quarter hour attempted; C, Average with 2 (two) points per quarter hour attempted; D, Passing but below the level required for making progress toward graduation with 1 (one) point per quarter hour attempted; F, Not passing, no credit earned and no points awarded but hours attempted added to the attempted total. Only the symbolic mapping of letters to numbers remains in subsequent catalogs, leaving all the symbols undefined (explicitly); and thus undermining letter grades by making them more open to (implicit) interpretation. The resulting opportunity for relativistic (contextual) individual interpretation of the meaning of letter grades is conducive to grade inflation. The average letter grade awarded at Ohio University is now B; and this fact, as a manifestation of grade inflation, reinforces the conventional wisdom nowadays that C is in fact a below-average grade.
‡ Even if this is not true, the perception that it is true can fuel grade inflation.87
even pernicious. Nowadays, grade inflation is an entrenched commonplace. Few naively misconstrue their contemporary value (Figure 4) with their now extinct traditional virtue and utility.

Figure 4. Hyperinflation
(Reprinted with permission of The Athens News)

So again, who might solve the unethical problem of grade inflation? This duty falls to those charged with the responsibility for the overall welfare of higher education such as university presidents and boards of trustees, state governmental boards of regents and accrediting organizations. Along these lines, Professors Kamber and Biggs have called for national follow-up efforts beyond the recommendations made in the American Academy of Arts and Sciences report cited earlier:

The American Academy of Arts and Sciences report, by Henry Rosovsky, a professor emeritus of economics at Harvard, and Matthew Hartley, a higher-education lecturer at the University of Pennsylvania, endorses a number of conventional suggestions for dealing with this problem at the institutional level: sharing grade-distribution data within departments and schools, establishing curves for large classes, and including mean class grades on transcripts, among others. Yet the authors don’t deal with the need for national and regional leadership, nor the conversion of individual faculty members.

Now is an opportune moment for other national associations and agencies to follow the academy's lead and sponsor further research and debate on grading practices. In addition, regional and professional accrediting bodies should require the institutions and programs they accredit to provide grade-distribution data. They should also recommend standards for grading practices. Accreditors must recog-
nize that giving low grades for low performance -- even if this causes students to transfer, drop out, or fail -- is not only a legitimate college function, but is essential to the fulfillment of the academic mission in society. Yes, institutions should offer support services for students with special needs, but their adequacy should be assessed by examining the actual services, not raw retention rates.54

In addition, the news media can also play an important leadership role. For example, *U.S. News & World Report* magazine publishes a well-known highly-influential annual report ranking colleges and universities.* Its rankings should take academic standards into account, perhaps by somehow judiciously employing overall undergraduate grade-point-average as a grade-inflation rank-deflating penalty when rating schools. It is also possible that public support for higher academic standards may inspire political will at the statehouse level for reform.

How could engineering education contribute to correcting grade inflation? A coalition could be formed consisting of such bodies as the American Society for Engineering Education (ASEE), the NAE, the NSPE, the American Society of Mechanical Engineers (ASME), the Institute of Electrical and Electronic Engineers (IEEE), etc. and the Accrediting Board for Engineering and Technology (ABET). This coalition—with funding provided perhaps by the National Science Foundation—could play an important leadership role in reforming academic standards nationally. This might be done by first conducting a comprehensive national study27 of academic standards to determine to what extent grade inflation has encroached on engineering education. If grade inflation is not found to be a serious problem, all to the good; and engineering education can then serve as a role model for other, afflicted, sectors of higher education. If grade inflation is deemed a problem (as circumstantial evidence suggests27, 30-36), the coalition could consider developing appropriate standards reflecting the expectations of engineering practice, with implementation by way of ABET accreditation processes.

Because of the high quality of its achievements in the traditional triad of academic duty (teaching, research and service), American higher education is the envy of the World. However, unabated grade inflation/compression is becoming a threat to its well-earned and longstanding good reputation. If a remedy is not found to grade inflation’s relentless erosion of academic standards, all sectors of higher education may be seriously damaged, ultimately through widespread lack of respect for, and lack of confidence in, the academy’s ability to demonstrate its academic integrity.

Grade inflation is unethical. It behooves all stakeholders in American higher education to end grade inflation’s longstanding laissez-faire status in the academy by emphatically endorsing and responding effectively and meaningfully to Professors Mansfield, Kamber and Biggs in their call for action:

> Remedies for grade inflation are not beyond our ingenuity. What we need above all is to muster the determination to act. Our leaders need to lead.6

* Like grade inflation, arguably unethical efforts by colleges and universities to subvert the USN&WR rankings are part of the “dirty linen” of American higher education (see Woodbury88).
For the sake of everyone involved and the integrity of higher education, the fight against grade conflation needs to be joined at the national, regional, institutional, and individual levels. Will the leaders please step forward?

V. Acknowledgment

This work was supported in part by a grant from the Ohio University Institute for Applied and Professional Ethics.

References
34. Indrek S. Wichman, “Faculty Grading Procedure in Light of Undergraduate Student Perception of Self, Co-Students, Courses, Faculty,” Presented at the 2002 American Society for Engineering Education Conference & Exposition; Montreal, Quebec, Canada, June 16-19, 2002.
44. Johnson, *Grade Inflation*, 193.
69. Seebauer and Barry, Fundamentals of Ethics for Scientists and Engineers, xiii.
77. URL: http://www.nspe.org/ethics/eh1-code.asp
78. URL: http://www.nspe.org/ethics/eh1-codelist.asp
79. URL: http://www.nspe.org/ethics/eh1-credit.asp


84. Ibid., 7.


BRIAN MANHIRE
Brian Manhire (manhire@ohio.edu, http://www.ent.ohiou.edu/~manhire/) is a professor of electrical engineering at Ohio University.