

TITLE IX COMPLIANCE REVIEW REPORT

Iowa State University

**Departments of Mechanical
Engineering and of Chemical and
Biological Engineering**

Fiscal Year 2016



**U.S. DEPARTMENT OF
ENERGY**

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JOINT TITLE IX COMPLIANCE REVIEW REPORT

Iowa State University, Ames Iowa
Conducted September 13-14, 2016

I. Introduction

On September 13 and 14, 2016, the Office of Civil Rights (OCR) of the United States Department of Energy (the Department or DOE) and the Office of Diversity and Inclusion (ODI) of the National Science Foundation (NSF) conducted a joint Title IX compliance review of the graduate program of the Mechanical Engineering (ME) and the Chemical and Biological Engineering (CBE) programs at Iowa State University (the University or ISU). The compliance review was conducted pursuant to Title IX of the Education Amendments of 1972 (Title IX), as amended, 20 U.S.C. Section 1681, *et seq.*, and the Department's Title IX implementing regulations, 10 C.F.R. Parts 1042 and 1040 (2013)¹ and the NSF Title IX implementing regulations at 45 C.F.R. Part 618. During the course of the compliance review, the Department requested and obtained data from the University and gathered data from the University's website. In September 2016, members of the Department's compliance review team held on-campus interviews with University administrators, including the University's Title IX Coordinator, and with students, faculty, and staff of the ME and CBE programs. The facts, findings, and recommendations contained in this report are based on a review and an analysis of the data obtained from the University, including the University's website, as well as information obtained from the interviews held with students, faculty, staff, and administrators.

A. Objective and Scope

Objectives

The objective of the Title IX compliance review at the University was three-fold: (1) to determine whether male and female applicants and students had equal access to the opportunities and benefits offered by the graduate ME and CBE programs; (2) to determine whether the University was in compliance with the requirements of Title IX and DOE/NSF Title IX implementing regulations; and (3) to identify and report on any promising practices instituted by the University for promoting gender equity.

Scope

At the University, the Title IX review team elected to review the graduate component of the ME and CBE programs. To determine whether graduate applicants and students, regardless of their sex, had equal access to the opportunities and benefits offered by the ME and CBE programs, the Title IX review team evaluated the following areas and practices of the ME and CME programs: (1) student enrollment; (2) recruitment and outreach efforts; (3) admissions policies; (4) leave of absence and re-enrollment policies; (5) financial assistance opportunities; (6) graduate examination and writing requirements; (7) the academic climate; and (8) student safety.

¹ DOE Implementing regulations (10 CFR Parts 1040 and 1042) do not reflect the annual requirement that DOE conduct two Title IX reviews that are mandated in 20 U.S.C. § 1681. However, these regulations fully outline the review criteria used herein.



To determine whether the University was in compliance with the requirements of Title IX and DOE/NSF Title IX implementing regulations, the OCR and ODI evaluated the following: (1) whether the University has designated a Title IX Coordinator; (2) whether the University has taken continuing steps to notify the campus community about its nondiscrimination policies related to Title IX; and (3) whether the University has adopted and published grievance procedures providing for the prompt and equitable resolution of Title IX-related complaints, including sex discrimination and sexual harassment complaints.

B. Background

DOE supports a diverse portfolio of research at colleges, universities and research institutions across the United States, providing funding to more than 300 such institutions every year, which supports thousands of principal investigators, graduate students, and post-doctoral researchers. Similarly, the NSF provides funds to more than 1,900 colleges, universities, and non-profit institutions supporting approximately 300,000 researchers, postdoctoral fellows, trainees, teachers and students. During the most recent three-year period for which public data on research funding are available (2010-2014, inclusive, the period included in this review), the DOE and NSF, together, provided \$209.6M in research funding to The University, averaging just over \$41.9M annually. In the same period, the The University received more than \$557.6M in funding from all Federal agencies, combined².

The Title IX statute and DOE's Title IX implementing regulations prohibit recipients of federal financial assistance, such as colleges and universities, from discriminating on the basis of sex in any of their educational programs or activities. (20 U.S.C. § 1681(a); 10 C.F.R. § 1042.100) In addition, DOE's regulations at 10 C.F.R. Parts 1040 and 1042, require the Department to periodically conduct compliance reviews of recipients of DOE financial assistance to ensure compliance with the nondiscrimination requirements of Title IX. (10 C.F.R. §§ 1042.605, 1040.101(a))

NSF has promulgated regulations to ensure that educational programs receiving NSF funds are free of gender discrimination and harassment. (45 C.F.R. Part 618). NSF's regulation under Title VI of the Civil Rights Act of 1964 incorporated by reference to NSF's Title IX compliance responsibilities, require the agency to conduct periodic reviews of the practices of recipients to determine whether they are in compliance. At NSF, ODI is charged with conducting compliance reviews under Title IX, and the Department of Justice (DOJ), pursuant to Executive Order 12250, has overall enforcement authority to ensure agencies are in compliance.

Title IX:

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance ...

20 U.S.C. § 1681(a)

Additional statutory authority requiring DOE to conduct compliance reviews is found in the American COMPETES Act, Pub. L. No. 110-69, § 50101, 121 Stat. 572, 620 (2007), first enacted in 2007 and reauthorized in 2011. The Act states that DOE should: (1) implement the recommendations contained in a July 2004 Government Accountability Office (GAO) report titled, "Gender Issues: Women's Participation in Sciences has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX;" and (2) conduct at least two Title IX compliance reviews annually of recipients of DOE financial assistance.

² Source: Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, accessed via the National Science Foundation WebCASPASPAR database system [Online <http://webcaspar.nsf.gov>; access date 2 October 2016].



C. Review Process

The Joint Title IX Compliance Review was initiated via memo on 9 May 2016. The University was selected, using neutral criteria, as one of a number of institutions that received funding from both DOE and NSF.

An initial data request was sent and arrangements were made with the Iowa State Title IX Coordinator and the DOE lead for the site visit. Publicly-available Institutional Postsecondary Education Data System (IPEDS) data on degrees awarded in mechanical and chemical engineering were accessed to provide trend analysis.

A site visit team held meetings and interviews at the University on September 13-14, 2016. An opening session was held with many university representatives, including the University General Counsel, the Title IX Coordinator, the Dean of the College of Engineering, and the Department Heads of Mechanical Engineering (ME) and Chemical and Biological Engineering (CBE). This provided an opportunity to introduce the site visit team and explain the purpose and procedures to be followed for the visit. At this meeting, background about the Title IX Compliance Review was presented, as was the plan for the visit.

After the meeting, 13 administrators³ (including the Dean of Engineering, ME and CBE Department Heads, Title IX Coordinator, Advance program personnel, etc.) were interviewed. A total of 15 full-time tenured/tenure track faculty⁴ and four senior and lecturers associated with the ME and CBE departments were interviewed.

	CBE		ME	
	Female	Male	Female	Male
Tenured full professor	1	3*	2*	2
Tenured, associate professor	2	0	0	0
Tenure track, assistant professor	2	0	3	0
Tenured/Tenure Track Faculty Total	5	3	5	2
Non-Tenure track lecturer	1	0	2	1
Faculty Grand Total	6	3	7	3
Master of Engineering	0	1	0	2
Master of Science in Engineering	0	0	1	1
PhD	14	7	3	11
Student Grand Total	14	8	4	14

*Includes department chair.

The team interviewed 40 students, of whom five were in master's degree programs and 35 were at various stages of PhD programs⁵. Interviews with faculty, administrators and students were conducted following interview guides that facilitated data entry and analysis (excel). With few exceptions, all interviews were completed by two team members, each of whom wrote separate sets of notes used in the development of this report. No inferential statistics were used, instead, the findings are presented as descriptive analyses.

A draft version of this report was sent to the University on September 14, 2017. The University submitted its comments to the report on December 14, 2017. Those comments are incorporated into this report.

³ Several administrators held academic ranks, but were interviewed by the Title IX team due to their administrative rather than academic roles, these included the Advance program personnel.

⁴ The CBE and ME department chairs are included in the faculty counts shown in the table.

⁵ Interviewers failed to note degree program for one of the male CBE students interviewed.



II. Background: The ISU Mechanical Engineering and Chemical & Biological Engineering Programs

A. University Overview

ISU is a public land-grant university with over 36,000 students. The town of Ames has a population of 61,000. The university has a strong agricultural tradition, including being the “birthplace” of the agricultural extension model, now common at public land-grants. The College of Engineering is now the largest school with 9,300 students and 500 staff and faculty. Federal agencies provide approximately \$111.5M annually, of which over \$41.9M of research funds are provided annually to ISU by the DOE and NSF. ISU is also a member of the American Association of Universities (the AAU), who’s membership consists of 62 of the top academic and research institutions in the United States and Canada. The 60 AAU universities in the United States award nearly one-half of all U.S. doctoral degrees and 55 percent of those in the sciences and engineering.⁶

The Graduate College at ISU administers a broad array of campus and distance-based graduate programs at the master’s and doctoral levels. Administrative functions associated with admission to the university, progress towards degrees, and degree completion are executed by the Graduate College. Additionally, the Graduate College offers classes that have broad cross-program interest such as GR ST 565, a lab safety class, which is required for any graduate students in CBE and ME who are to work in the laboratories. Indeed, when the site visit team asked faculty and students about “safety,” lab safety was the topic most often referenced. This suggests a strong culture at ISU of knowing and implementing key principles of laboratory safety.

As is common in higher education, more specific processes associated with graduate students remain decentralized within graduate programs, which are generally organized within colleges. For example, while the Graduate College verifies that a student has met the minimum requirements for admission to the university, students must also be admitted to a graduate program, for which additional requirements must be met. The Graduate School website provides many pathways that lead students into the relevant programs of study and include FAQs that emphasize the need for students to connect with the specific programs in which they are interested.

In its most recent “Engineering By the Numbers,” the American Society for Engineering Education reports that with 1,155 engineering bachelor’s degrees awarded in 2015, the University was ranked 14th in the nation. However, whereas women accounted for 20% of degrees at the national level, at Iowa State, women earned just 14% of the undergraduate engineering degrees.

B. ISU Advance Program

ISU was the recipient of an NSF Advance Institutional Transformation (IT) award in 2005. The box describes the features of their Advance award, which is an on-going (institutionalized) program funded by the University. While the program is focused on increasing the recruitment, retention, and advancement of women STEM faculty, the close connections between faculty and graduate students in research activities suggest the program could have implications for graduate students who are not the direct target population.

⁶ <https://www.aau.edu/who-we-are/our-members>



ISU ADVANCE

- Goal: promote and sustain institutional change at all levels of the university resulting in the full participation of women and minority faculty
- NSF funding – “3rd round” IT, 2005-2012
- Housed in the Provost’s office under the Associate Provost for Faculty
- Led by the ADVANCE Fellow
- The ADVANCE Faculty Fellow works with the Provost, the Associate Provost for Faculty, college deans, senior administrative leaders, and college equity advisors to institutionalize positive change in the university’s policies, practices, and structures
- College Equity Advisors work with their respective deans, diversity committees, department chairs, and faculty in their colleges to implement best practices:
 - Faculty searches,
 - Transform policies and practices to help faculty succeed in moving through the ranks
- College of Engineering Equity Advisor: is a ME faculty member

The site visit team interviewed the ISU ADVANCE Faculty Fellow and College of Engineering Equity Advisor (a relatively new appointee as the Equity Advisor at the time of the onsite visit), who provided additional details about the on-going activities of the ISU Advance program. was.

C. College of Engineering Faculty Overview

Figure 1 provides details about the CBE and ME full time faculty by sex, rank and tenure status as of the Fall 2016 semester. Highlights include:

- ME is chaired by a woman, with four men associate chairs
- CBE is chaired by a man with a woman associate chair
- ME:
 - 43 tenured / tenure track (T/TT) faculty
 - 19% of T/TT are women (compared to national of 13.5%⁷)
 - No mid-level (associate professor) women – two full and five untenured assistant
 - 14 lecturers, 43% women
- CBE:
 - 21 T/TT faculty,
 - 29% are women (compared to national of 18.8%²)
 - 3 lecturers, 100% women
 - Women were evenly distributed across the T/TT ranks in CBE (two at each of the levels)

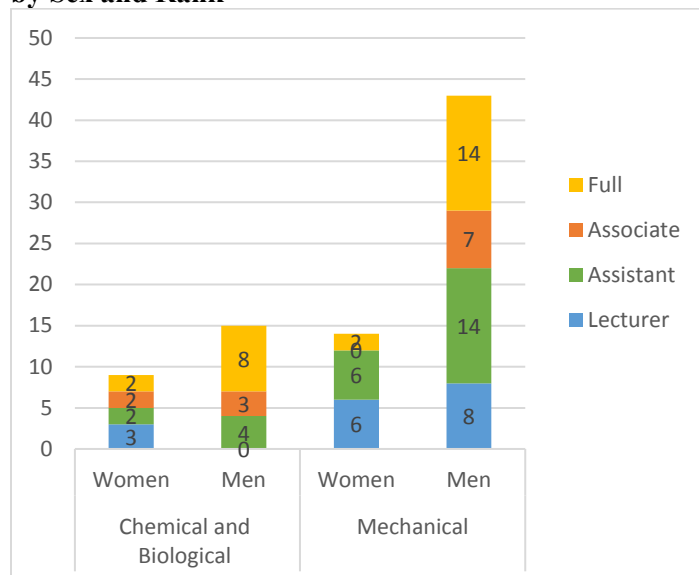
Compared to national representations, ME is around the national average of 14% and CBE is much higher than the national of 19%. Tenure track and tenured professors are those who oversee graduate student research and, hence, the access to research careers in ME and CBE. That a large number of women were in untenured lecturer positions rather than in the research positions, can be an area of concern, since

⁷ National data on engineering faculty are from the American Society for Engineering Education (ASEE) annual survey of engineering departments, reference: “Engineering By the Numbers” [Online <https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf> access date 4 September 2016].



lecturers' duties include a high volume of teaching (mostly at the undergraduate level) and service work. This reinforces gender stereotypes that women are teachers and men are researchers.

Figure 1. Chemical and Biological and Mechanical Engineering Faculty⁸ at Iowa State University by Sex and Rank



Interviewed faculty members were asked about a number of academic research processes that have been found to be potentially at issue with respect to gender in the literature on gender and science in research settings.⁹ Topics included: the advancement processes; tenure processes; and access to start-up resources. Faculty—male and female—consistently reported that these advancement and tenure processes were both fair and transparent, with more senior faculty (both male and female) suggesting that these processes had become more transparent in the past several years than in the past. Additionally, faculty reported that they felt start-up resources provided were fairly allocated and did not see any problematic disparities.

It is important to note that ISU's College of Engineering has engaged in "grow your own" practices, whereby talented women who completed undergraduate and/or graduate programs were recruited to complete PhDs at ISU in order to join the college's faculty. With the nationally low level of women's participation in engineering, such practices have been suggested as a way to increase the representation of women on engineering faculties. The principal drawback typically cited for this practice are questions about the extent to which such women are able to truly attain the status of "colleague" within a department once they have been familiar in subordinate roles as students. It is important to note that, in the case of ISU, there was no evidence to suggest that this status issue was a problem. Indeed, the "grow

⁸ Not included in faculty head counts: the Senior VP and Provost (a full professor man) holds a faculty appointment in ME; adjuncts and courtesy appointments are also not counted for either department. As a note, the CBE department has an NSF ERC for Biorenewable Chemicals (CBiRC)

⁹ See, for example: *Advancing Women in Science: An International Perspective* (New York, NY: Springer) (2015). National Research Council (NRC). 2007. *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*. Washington, D.C.: The National Academies Press. NRC. 2010. *Gender Differences at Critical Transitions in the Careers of Science, Engineering and Mathematics Faculty*. National Academies Press, Washington, DC., *Transforming Science and Engineering: Advancing Academic Women*, by (Ann Arbor, MI: University of Michigan).



your own” practice appears to have been successful in producing individuals who were respected by most male colleagues (indeed, one such woman served as the department chair during her career at ISU).

D. ISU CBE and ME Graduate Programs

According to the most recent data from the American Society for Engineering Education (ASEE), Iowa state ranked 7th among U.S. colleges and universities in the number of ME bachelor’s degree awarded in 2015 (ChE was #12) however, the graduate programs are not as large as those at other institutions included in the ASEE data. Nationally, ISU’s 81 PhDs in all fields of engineering in 2015 placed it as #43 in the U.S. for production of PhDs in engineering.

As referenced earlier, ME has about twice the faculty as CBE and ME has proportionately fewer women on faculty than CBE. Distribution of women faculty is even across ranks within CBE but concentrated in junior positions in ME. Degree production (all levels combined) in ME is about three times that of CBE. ISUs graduate programs websites provide information for prospective students that includes mean time to degree, 7-year graduation rates and employment outcomes of graduates. Providing such information is a “best practice” in graduate education, consistent with increased scrutiny of educational outcomes at the U.S. Department of Education. At U.S. research-intensive institutions, the average time to the PhD was 6.9 years in 2011 (S&E Indicators 2014, p. 2-31). Not many institutions provide this information.

Level	Indicator	CBE	ME
PhD	Graduation rate (7-year)	67.7%	68.2%
	Mean time to degree	5.6 yrs	4.6 yrs
MS	Median time to degree	3.2 yrs	3.4 yrs
ME	Median time to degree	2.6 yrs	3.2 yrs

Note: Includes students who completed degrees between 2010-2013.

Employment Outcomes	CBE		ME	
	Masters	PhD	Masters	PhD
Employed in-field	44.0%	88.0%	57.0%	85.0%
Employed out-of-field	0.0%	3.0%	2.0%	8.0%
Continuing education	44.0%	0.0%	31.0%	3.0%
Seeking	0.0%	9.0%	9.0%	5.0%
Response rate	60.0%	89.0%	70.0%	75.0%

Note: Includes students who completed degrees between 2011-2015.

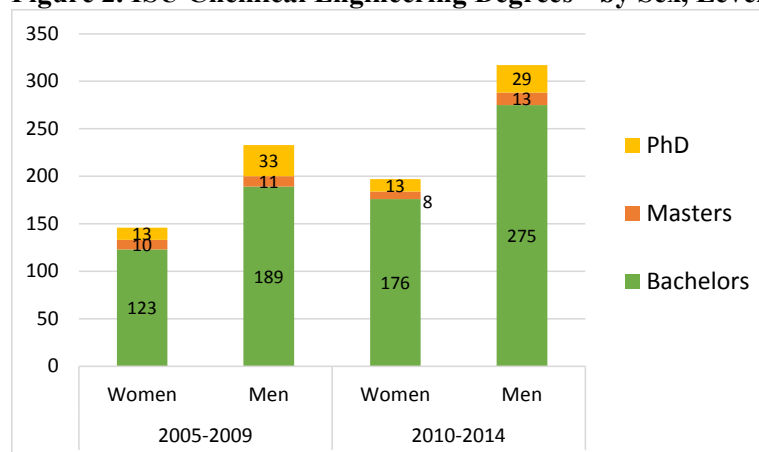
Source: ISU Graduate College academic programs web pages.

Overview – Chemical & Biological Engineering

CBE programs at Iowa State are more chemical and less biological. Bioengineering, a field that draws a lot of women, is in a separate department.

On a national basis, chemical engineering tends to have more women at all levels – as students and as faculty members – than mechanical engineering. According to ASEE, around 32-33% of bachelor’s, master’s and PhD degrees in chemical engineering (ChE) are awarded to women. In the most recent five-year period (2010-2014), women accounted for 39.0% of ChE bachelor’s degrees, 38.1% of masters, and 31.0% of PhDs. In the most recent five-year period, the increase in men’s degrees at the undergraduate level in ChE from 189 to 275 was slightly larger than the increase for women from 123 to 176 degrees.



Figure 2. ISU Chemical Engineering Degrees¹⁰ by Sex, Level, and Time Period

Source: NSF analysis of Integrated Postsecondary Education Data System (IPEDS) accessed via the NSF WebCASPAR database system, access date 9 August 2016.

The CBE Graduate Handbook had extensive language about ChE proficiency and processes for removing graduate students from the program. The importance of four core ChE classes is emphasized, as is the requirement for students without a ChE undergraduate or master's degree to demonstrate proficiency in these four classes (ChE 545, 554, 583, and 587).

Most degree-seeking students are supported by the department, which prefers students be on RAs supported by faculty grants. There are some TAs, which are used when grants expire for students who are in good standing, making progress, and are in need.

Students choose the labs they want to join within the first couple of months of arriving. If they have not already identified a faculty member during their application and admissions process, they watch talks given by all the faculty members and then give a list to the department, which tries to honor the requests within the limits posed by faculty time and funding.

In addition to coursework and research credits, which includes the aforementioned core ChE classes and electives both inside and outside the department, all ChE students are required to take ChE698A (Teaching Practicum), which is a weekly discussion group about teaching held in the fall. Thereafter, they are required to take ChE698 (Curricular Teaching Experience) once for masters and twice for PhD students. This latter course places students with a faculty mentor, so that they basically serve as a teaching assistant for a class, designing assignments, delivering lectures, grading homework, etc. A required report at the end of the class—with faculty instructor input—is submitted to the department graduate committee. All CBE student interviewees were asked about this requirement; **students lauded this course** as critical to their preparation for both their roles as future faculty members as well as general science communicators that they thought were essential in any employment context.

Students who wish to pursue the PhD are also required to:

- Submit a five-page report summarizing their research a year after entering the program,
- Prepare the report without input from major professor following formatting requirements and to be judged by a rubric, both specified in the Graduate Student Handbook,
- Complete a preliminary exam (the prelim), which consists of three parts:

¹⁰ Despite the name of the department, all degrees awarded by the Chemical and Biological Engineering Department are Chemical Engineering degrees. According to the most recent IPEDS data, there were no “biological engineering” or “bioengineering” degrees awarded by ISU.

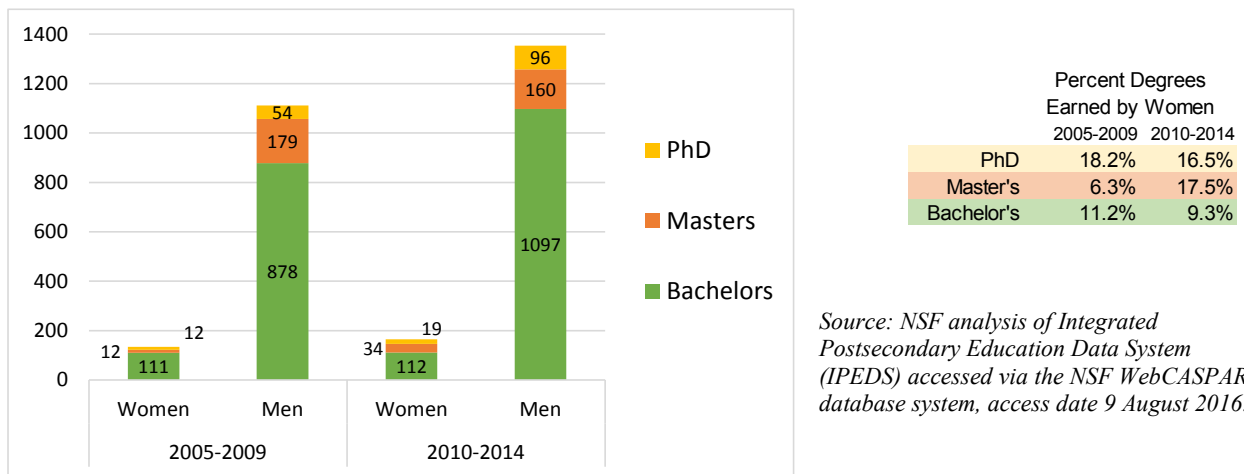


- A written research proposal,
- A public seminar (for department and the POSC), and
- Oral examination covering the proposal and ChE subject matter.
- The preliminary exams must be done within two years of entering the PhD program for those who go straight to the PhD or one year after completion of the master’s degree.

Overview of Mechanical Engineering

ME has about twice the faculty as CBE and, as shown in the graph in Figure 3 and produces about three times as many graduates at all levels, combined. The M. Eng. is available online as are several other certificate programs at the masters level, so the ME department is able to reach more students than CBE, which does not participate in distance education. While CBE appears to be phasing out the masters of engineering, these students account for about one-fourth of the graduate students in the ME department.

Figure 3. ISU Mechanical Engineering Degrees by Sex, Level, and Time Period



Though the number of degrees earned by women at all levels in Mechanical engineering has been relatively steady (or slightly increased) at ISU between the 2005-2009 and 2010-2014 periods, the increased men’s participation has resulted in women accounting for slightly proportionately fewer degree recipients in the most recent five-year period (BS and PhD). It is not clear why there has been such a pronounced increase in bachelor’s men. At the PhD level, the number of men earning degrees has nearly doubled in the 2010-2014 period, while women’s increased at a more modest level (from 12 to 19 – from about 2-3 a year to almost 4 per year). There was a large proportionate increase in women’s participation in MS programs in the 2010-2014 period compared to 2005-2009.

There are some important differences between CBE and ME. For example, while CBE and ME both require the GRE, ME allows individuals with a graduate or undergraduate degree from a U.S. regionally accredited institution to waive the GRE requirement.

The process of matching students to research groups is much different in ME than in CBE. In CBE, students chose groups. In ME, the students are chosen by professors – but it’s a complicated process. First, the graduate committee ranks students within each of the department’s research areas and then awards TAs to students based on funds availability. Then this list of funded TAs is provided to faculty members who then select students that they would like to work for them. According to the ISU data request:



“Each major professor has different criteria they use when screening applicants. A few examples include:

- Screens for grades and past classes taken related to research area
- Higher GPA and GRE scores preferred
- Related work/extracurricular/leaders activities listed on resume
- Strong letters of recommendation
- Enthusiasm for research topic
- Interviews with students via phone, Skype or in person”

In ME, PhD students are expected to take the qualifier exam and then take the prelim. These are fundamentally different from the exams required in CBE.

“The primary goal of the PhD Qualifier exam is to identify if you have the technical foundation to pursue a PhD and if possible, to identify weaknesses in your background that can be addressed. The format of the qualifying exam is decided by your major professor and POS committee. The most common format is a written exam on several topics with associated reading material that is based on core mechanical engineering subjects at the senior undergraduate or introductory graduate level.” (p. 14 of the ME Graduate Student Handbook for 2016-2017).

In ME, as in CBE, the preliminary is an oral exam that covers the research proposal and subject matter, especially in the student’s research area. There is no requirement—as in CBE—for a seminar presentation.

Compliance Review Findings: The CBE Teaching Practicum and Curricular Teaching Experience, required of all CBE PhD students, were lauded by students and demonstrate a promising practice with respect to preparing students for professional roles. Additionally, the method by which graduate students and faculty advisors are paired in CBE – a mutual matching system administered at the department level – is becoming a more common practice in academia because it provides a more gender equitable way for students to be placed in research labs than the more traditional system used by the ME department. ME’s “traditional” method relies upon student initiative, and, as detailed earlier, is not transparent with respect to individual faculty decisions, providing an atmosphere within which differential treatment can exist and be assured covert status.

E. Student Population in CBE and ME



Figure 4 shows the current graduate enrollment in ME and CBE by level and gender. While 48% of ME students (both male and female) are in PhD programs, in CBE 78% of enrolled men and 90% of enrolled women are in PhD programs. The overall size of the ME graduate program, as discussed earlier is much larger than the CBE program. The CBE program is phasing out the M.Eng. degree; there were only two students in this program in AY 2015/16, but as shown in Figure 4, the M.Eng. program continues to be important for ME, with 58 males and five females enrolled in this degree program; women’s representation rate is lowest in this graduate program (i.e., 8% versus 25% in the MS and 18% in the ME PhD program).

Figure 4. AY 2015-2016 Graduate Enrollment, CBE and ME by Gender and Level

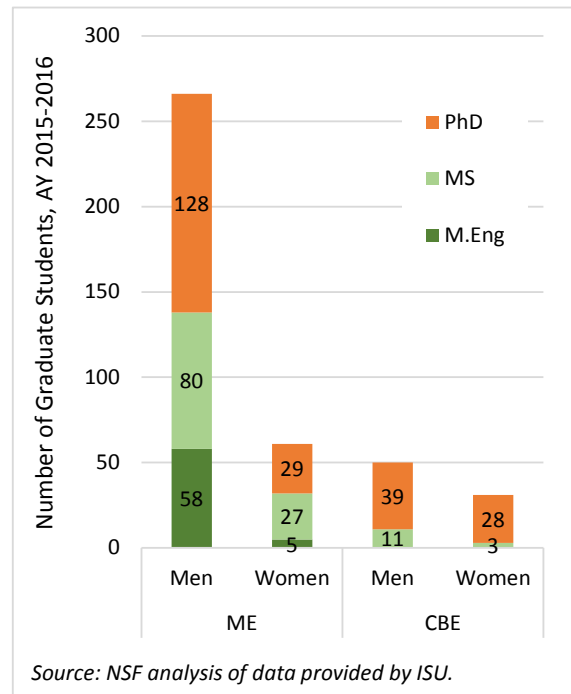
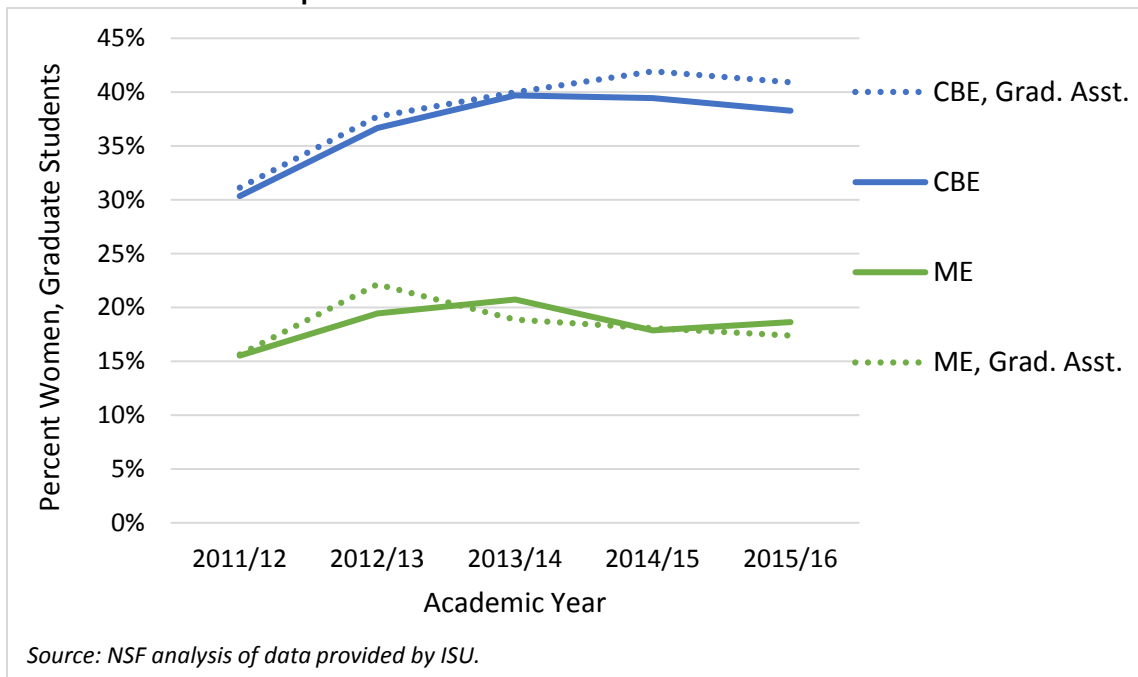


Figure 5 shows the trend in the percentage of women among overall graduate student enrollment (M.Eng., MS, and PhD, combined) for CBE and ME. Women accounted for 38-40% of CBE graduate students but just 16-21% of those in ME over the same period.

Figure 5. Five-Year Enrollment Trend: Women as a Percent of All Graduate Students and as a Percent of Those on Assistantships



F. Recruitment and Admissions



Unlike undergraduate education, which includes many non-department-based requirements, graduate education resides within programs housed in departments. At comprehensive public institutions like ISU, the undergraduate student body is often highly representative of the state’s own high school graduating classes with a relatively small percentage of students from outside the state.

For graduate education, high performing undergraduate students may be individually recruited by faculty members, for whom high-quality graduate assistants are an incentive. Among the 40 students interviewed by the Title IX team, only five – all ME graduate students (28% of the 18 ME graduate students interviewed) – indicated that they had completed undergraduate degrees at ISU.

Figures 6 and 7 include data on applications, admissions, and in ME (Figure 6) and CBE (Figure 7). These tables combine data for the past five years’ of admissions, provided in the data provided to the Title IX team by ISU. Data in Figure 6 indicate:

- Women were equally likely as men to be admitted and to subsequently enroll in the ME M.Eng. program;
- Women were twice as likely as men to be admitted but less likely than men to enroll in the ME MS program; and
- Women were more likely than men to be admitted and slightly less likely than men to enroll in the ME PhD program.

Women’s lower likelihood of matriculating at ISU’s ME program suggests the program may need to make more competitive offers to women who are admitted (i.e., more aggressively recruit women they have identified as qualified to study for the M.S. and PhD degrees).

Figure 6. ME Graduate Admissions Funnel, AY 2010-2011 - 2015-2016 (Combined)

		Mechanical			
		Total		Grand	Percent
		Women	Men	Total	Women
M.Eng.	Applicants	28	230	258	10.9%
	Admissions	14	117	131	10.7%
	Enrollment	7	55	62	11.3%
	Admits as a % of applicants	50.0%	50.9%	50.8%	
	Enrolled as a % of admits	50.0%	47.0%	47.3%	
	Conditional likelihood of enrollment	0.250	0.239	0.240	
MS	Applicants	135	988	1123	12.0%
	Admissions	24	92	116	20.7%
	Enrollment	15	71	86	17.4%
	Admits as a % of applicants	17.8%	9.3%	10.3%	
	Enrolled as a % of admits	62.5%	77.2%	74.1%	
	Conditional likelihood of enrollment	0.111	0.072	0.077	
Doctoral	Applicants	108	738	846	12.8%
	Admissions	45	170	215	20.9%
	Enrollment	23	94	117	19.7%
	Admits as a % of applicants	41.7%	23.0%	25.4%	
	Enrolled as a % of admits	51.1%	55.3%	54.4%	
	Conditional likelihood of enrollment	0.213	0.127	0.138	

Source: Analysis of data provided by ISU.



CBE is phasing out the M.Eng. and has low overall enrollment in the M.S. program, therefore, Figure 7 shows analysis of only PhD program admissions data for the CBE program. Women were slightly more likely than men who applied to the CBE PhD program to be admitted but women were much more likely than men to enroll in the program once accepted.

Figure 7. CBE Graduate Admissions Funnel, AY 2010-2011 thru 2015-2016 (Combined)

		Chemical and Biological			
		Total		Grand	Percent
		Women	Men	Total	Women
Doctoral	Applicants	176	441	617	28.5%
	Admissions	44	93	137	32.1%
	Enrollment	25	36	61	41.0%
	Admits as a % of applicants	25.0%	21.1%	22.2%	
	Enrolled as a % of admits	56.8%	38.7%	44.5%	
	Conditional likelihood of enrollment	0.142	0.082	0.099	

Source: Analysis of data provided by ISU.

The student interviews also shed light on the recruitment methods of the department. First, in response to the question: “Was there anything in your recruitment and/or admissions experience that you felt was not fair?” all but one student reported “No.”¹¹ This (male) student suggested that the way fellowships were awarded was not fair; another male student (international) indicated that he thought it was initially unfair that he was not able to visit campus, but was satisfied that a skype session with a relevant faculty member alleviated this shortcoming.

Six of the interviewed CBE students indicated that they were fully funded to visit campus prior to their decision to enroll. All interviewed U.S. males and two of the three U.S. females reported this was the case. No international students—students located outside the United States at the time of application—were provided with funding to visit campus. Two thirds of interviewed CBE students reported earning an undergraduate degree outside the United States.

In contrast, only one of the ME program interviewees reported receiving partial funding to visit campus during the recruitment process. Five ME student interviewees earned undergraduate degrees at ISU, three at other U.S. institutions, and five at non-U.S. institutions.

When asked why they decided to come to ISU, the overwhelming majority of responses (27 of 40 interviewees) indicated it was because of the reputation of the programs and/or specific faculty members. Several students reported ISU had made the “best offer” and/or had provided an additional incentive to enroll in the graduate program.

Compliance Review Findings: ISU’s ME program should determine why women who have applied to and been admitted to their graduate programs decide not to enroll. ME could explore ways to reach out to these qualified applicants to encourage their matriculation. The CBE program provided funding to domestic students to visit campus and international males reported skype sessions as important in the decision-making process. The ME program might explore these strategies.

¹¹ It should be noted that asking this question only of currently-enrolled students is inherently biased; students who had not enrolled may be more likely to have formed impressions of the ISU admissions/recruitment process as “unfair.”



G. Financial Assistance, Assistantships, Incentives, and Awards

Funds from fellowships and assistantships are critical for the support of graduate studies. Additionally, types of support are important because of the research relationships embodied within these support systems. Historically, women, among other groups underrepresented in science and engineering fields, have been hindered from equitable access to graduate study by gender-based restrictions on funding and to research laboratories, in which they could develop research collaboration skills and receive guidance/mentorship from a faculty member and other experienced researchers. From a Title IX perspective, the question is: to what extent do women and men graduate students in EECS have equitable access to funds and research opportunities?

There was no evidence to suggest that there were gender disparities within either ME or CBE with respect to the type of assistantship (RA versus TA) or in the assignment to full or part-time assistantships during the regular academic year or the summer. The data shown in Figure 5, for example, indicates that women accounted for an equivalent percentage of graduate students and of those on assistantships for both CBE and ME for the past five academic years (2010-2011 thru 2015-2016).

H. Degree Completion

Master's and doctoral degree requirements differ, with fewer and more structured course-based requirements at the master's level and more research-based requirements at the doctoral level. From a Title IX perspective, once admitted, to what extent are the outcomes of the educational processes equitable for women and men?

CBE and ME provided different data associated with overall program attrition in response to the data request item: "Identify, by sex and by degree sought, the number of students who dropped out of the graduate programs during the 2011-2012, 2012-2013, 2013-2014, 2014-2015, and 2015-2016 academic years." CBE provided the requested data; but aggregated students across all degree levels¹² showing that of the five students who left the program during the reference period, two (40%) were women, which is slightly higher than women's average enrollment in CBE during the same period, which was 37%. With respect to the ME program, Iowa State provided data for each degree level¹³. Across all degree levels 17.2% (5) of the 29 graduate students who dropped out were women, which is lower than the 19% average total enrollment for women in the ME program during this period. One of the female students switched majors, while the other female student reasons for leaving the CBE program were not reported. In the most recent completed academic year (2016-17), only two male PhD students and no female students dropped out. Analysis of the ME department attrition data for the above five-year period are summarized as follows:

ME Program	Percent Women	
	Student Attrition	Average Total Enrollment
M. Eng.	0%	19%
M. S.	22%	18%
PhD	17%	19%

¹² As discussed earlier, the CBE program, in contrast to the ME graduate program, was highly focused on the doctoral level, with very small numbers of master's level students. Hence, it was appropriate for CBE to aggregate given the overall small numbers of students who left the program each year.

¹³ ISU provided revised ME program data after the onsite and in its response to the draft report. The revised data that ISU provided included the spring 2011 semester, which the review team did not include in the above analysis. The review team analyzed the 2016-17 year separately as detailed above.



Total	17%	19%
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Source: Analysis of data provided by ISU.

For ME overall, female attrition was below average enrollment in ME graduate programs, except for M.S. enrollees, who accounted for two of the nine total M.S departures, or 18% of the total departures. This is slightly higher than the 22% total female enrollment during the 2010-11 to 2014-15 review period. No specific reasons were provided by ISU for the departures of these women from the ME program.

It is common for students who persist to the final oral dissertation defense to succeed; it is rare for students to fail or drop out of a graduate program at this late point. Instead, student attrition typically occurs at examination time points (e.g., the qualifier in the two engineering degree areas and the comprehensive in all three program areas), because of academic difficulties completing coursework, or a variety of personal reasons. Data provided by ISU on “passed the dissertation requirements during the 2011-2012, 2012-2013, 2013-2014, 2014-2015, and 2015-2016 academic years” indicated that only one woman and one man had failed (both in ME) during this five-year period, with the woman successfully passing in a subsequent term.

Compliance Review Finding: Students lauded the guidance they received from faculty, suggesting that, as is normative, faculty play an important role as mentors in ensuring that students are well-prepared for important examinations, thesis, and dissertation work.

III. Title IX Statutory and Regulatory Requirements

Educational institutions that receive Federal financial assistance are required under Title IX to develop and implement nondiscriminatory policies and procedures, and to appoint an individual to coordinate and implement Title IX functions. Title IX also requires each recipient of Federal financial assistance to notify its students and employees of the name, office, address, and telephone number of the employee(s) appointed to coordinate and administer its Title IX grievance process.

NSF regulations implementing Title IX are found at 45 CFR § 618. DOE implementing regulations require a recipient to prominently include a statement of its policy of nondiscrimination on the basis of sex in each announcement, catalog, or application form that it makes available to students and employees or which is otherwise used in connection with the recruitment of students and employees. 10 C.F.R. §1042.135 to 140.

Recipients are also required to adopt and publish grievance procedures providing for the prompt and suitable resolution of student and employee complaints that allege actions prohibited by Title IX. 10 C.F.R. §1042.140(b). The U.S. Department of Justice recommends that grievance procedures include both an informal and a formal process, and also provide complainants with information on their right to file a discrimination complaint with an appropriate Federal agency, if there is no satisfactory resolution of the complaint.

Title IX Coordination Compliance Requirements. In addition to the contact information dissemination requirement, for purposes of this review, DOE and NSF focused on the following key aspects of Title IX coordination:

1. Effective functioning, including skills and competencies, regarding the key responsibilities of administrating and implementing the University’s Title IX grievance process;
2. The authority and access of the Title IX Coordinator to university senior leadership needed to effectively perform roles and responsibilities; and
3. Appropriate training of faculty, staff, and students.



Each NSF grant contains, as part of the grant terms and conditions, an article implementing Title IX and the NSF regulations. Basic compliance with the procedural requirements of NSF's Title IX regulations requires the following:

Designation of a responsible employee (Title IX Coordinator, reference: 10 C.F.R. § 1042.135 and 45 C.F.R. § 618.135) – Recipients of Federal financial assistance must designate at least one employee to coordinate Title IX compliance efforts and responsibilities, including complaint investigation into allegations of discrimination prohibited by Title IX. The recipient must notify all its students and employees of the name, office address, and telephone number of the employee or employees appointed to fulfill the Title IX coordination responsibilities.

Adoption of Complaint Procedures (reference: 10 C.F.R. § 1042.135 and 45 C.F.R. § 618.135) – Recipients of Federal financial assistance must adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action that would be prohibited by Title IX.

Dissemination of Policy (reference: 10 C.F.R. § 1042.140 and 45 C.F.R. § 618.140) – Recipients must take specific and continuing steps to notify beneficiaries (e.g., notifying students and applicants for admission) that they do not discriminate on the basis of sex in the educational programs or activities that they operate, and that they are required by Title IX not to discriminate in such a manner. The U.S. Department of Education's Office for Civil Rights (OCR) has issued guidance on how such a statement should be developed and disseminated¹⁴. This guidance recommends that the statement of nondiscrimination include a statement that the recipient does not discriminate on the basis of race, color, national origin, sex, disability and age, in programs that receive Federal financial assistance. Both DOE and NSF's Title IX regulations at 10 C.F.R. § 1042.140 and 45 C.F.R. § 618.140(a) requires that the statement of nondiscrimination must state that questions about Title IX may be referred to the employee designated to coordinate Title IX compliance or to a designated Federal agency official. Recipients are required by the same regulations to include the name, address, and telephone number of the designated coordinator in their notifications.

A. Nondiscrimination and Sexual Harassment Statement and Notification of Nondiscrimination Policies

1. Nondiscrimination Statement: The university catalog and the website include the following language:

Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. veteran. Inquiries regarding non-discrimination policies may be directed to the Director, Office of Equal Opportunity, Title IX/ADA Coordinator, and Affirmative Action Officer, 3350 Beardshear Hall¹⁵, Ames, Iowa 50011, Tel. 515 294-7612, email eooffice@iastate.edu.

A similar statement appears on page 2 in the Faculty Handbook.

2. Nondiscrimination policies

¹⁴ <https://www2.ed.gov/about/offices/list/ocr/docs/nondisc.pdf>

¹⁵ A new room location was provided on the university website when checked during report preparation: 3410 Beardshear Hall.



ISU has a “[Discrimination and Harassment](#)” policy (the Policy) that has been in effect since May 1, 2006 and most recently updated on April 3, 2017¹⁶. This policy includes a policy statement, a sexual harassment policy and definition, formal/informal complaint resolution processes, the identity of and contact information for the Title IX Coordinator and deputy coordinators, information on other student or faculty complaint and grievance processes, enforcement mechanisms for violations of this policy. The Policy can be found on the OEO website and other documents in electronic format contain web links to the Policy. These websites and documents include 2016-17 editions of the Graduate College Handbook, the Faculty Handbook, but not in the ME Department Graduate Student Handbook.

3. Sexual Harassment Policies: ISU has a sexual harassment policy exists and is in [section 1.1 of the Policy](#).
4. ISU also has a policy called “[Sexual Misconduct, Sexual Assault, and Sexual Harassment Involving Students](#)” that can be found on the Dean of Students [website](#) at the Sexual Misconduct [page](#). On the ISU OEO website, there is a [webpage](#) that is devoted to Title IX. This page provides information that includes an overview of the Title IX regulation, guidance on which ISU staff is a “responsible employee” for reporting acts in sexual harassment and sexual assault/violence, information on the reporting of sexual assaults under the Clery Act, a definition of “consent” with respect to sexual assault, information for pregnant students and other information and resources on Title IX and Sexual harassment/sexual assault.

A review of the Faculty Handbook found a section that covers discrimination and harassment (page 110)

The ME Department Graduate Student Handbook provides a number of student grievance procedures related to grades and other academic issues, but does not contain the Policy, sexual harassment policy or the nondiscrimination statement.

B. Designated Title IX Coordinator and Responsible Office

The designated Title IX Coordinator is the Director of Equal Opportunity within the Office of the Vice President for Diversity and Inclusion. There are three Deputy Title IX Coordinators which are placed within Academic Affairs, Student Affairs, and Athletics, who do not report to the Title IX Coordinator.¹⁷ Additionally, ISU has 20 Office of Equal Opportunity Information Advisors who

“are members of the University community who have received extensive discrimination and harassment training, conducted by the Director of Office of Equal Opportunity (OEO) or designee, to act as information advisors on topics pertaining to discrimination and harassment, have general knowledge about applicable laws, university policies and procedures. ... The information advisors are unit-level contacts for faculty, staff and students who would like to talk with someone about a harassment or discrimination incident related to race, color, age, religion, sex, sexual orientation, gender identity, genetic information, national origin, marital status, disability or protected veteran status. Advisors can assist you with harassment, discrimination complaints. You can contact an

¹⁶ This update occurred after the NSF/DOE onsite visit and data request in connection with this Title IX compliance review.

¹⁷ Subsequent to the Site Visit in September 2016, a fourth staff person, from the ISU Graduate College, was listed as a Deputy Title IX Coordinator on the “Dispute Resolution” website (<http://www.policy.iastate.edu/policy/discrimination/#titleixcoordinator>).



OEO Advisor from your unit or anyone of the Information Advisors.” (A list of OEO Information Advisors was provided.)

The Director of Equal Opportunity’s staff includes two investigators and an administrative assistant. This position reports to the Vice President for Diversity and Inclusion. Previously the position reported to the President’s Chief of Staff. Since 2011 there have been eight separate individuals who served as either the Title IX coordinator or the interim Title IX coordinator. This signifies a high level of turnover from a human resources point of view. The current Director of Equal Opportunity/Title IX Coordinator has served in the position since April 2016. During the 2011-2016 period an AAU campus climate survey was administered, which focused “on sexual assault, sexual misconduct and sexual harassment. In a three-week period in April 2015, more than 5,200 Iowa State students completed the web-based survey.”

According to the position description provided with the data request prior to the site visit, the Director of Equal Opportunity job duties include: Program management (35%); Compliance duties (35%); Administrative duties (25%); Other duties (5%). The position description indicates under “scope” that the office “May investigate 250-350 formal and informal complaints per year. Conducts at least one training and education program per month on policy and procedures.” Under position details, the position is described as having complexity and innovation with important roles in leadership interacting with internal and external communities. Under innovation, the position is described as

“Requires extremely high creative ability; develops, formulates and/or designs totally new methods, procedures, systems, strategies, programs, products, or artistic designs from virtually “blank” situations where precedents are non-existent or of little value; demands for insight, ingenuity and expressiveness are defined by the need to think through a totally novel perspective breaking away from virtually all past referents.”

The responsibility for execution of compliance and outreach associated with Title IX resides with the Director of Equal Opportunity within a new organizational structure, the Office of the Vice President of Diversity and Inclusion. The first Vice President in this new office arrived less than a year prior to the site visit (December 2015). The original line of authority for the Director of Equal Opportunity, as specified in the position description was to the university President’s Chief of Staff. There was insufficient evidence to assess the extent to which the Title IX coordinator had authority and access to senior leadership to effectively perform roles and responsibilities.

Review Criteria: Designation of Title IX Coordinator and Dissemination of Contact Information	Yes	No
1. The University has designated a Title IX Coordinator.	X	
2. The Title IX Coordinator has notified faculty, staff, and students regarding his or her contact information (including name, office address, and telephone number).	X	
3. The Title IX Coordinator has the appropriate skills and competencies regarding the key responsibilities of administering the University’s Title IX grievance process.	X	
4. Title IX Coordinator has the authority and access to university senior leadership needed to effectively perform roles and responsibilities.	?	

C. Dissemination of Title IX Policy/Provision of Title IX Training

Title IX policy was included on the ISU website. It can also be accessed via web links but not explicitly referenced in the university catalog description related to harassment. The review team found that the



Title IX policy is adequately disseminated across ISU programs and in ISU media. However, the ME Department Graduate Student Handbook does not contain key nondiscrimination and anti-harassment policies. Almost all students indicated they were familiar with Title IX but 25% of interviewed international students indicated they did not know anything about Title IX.

Review Criteria: Policy Dissemination	Yes	No
1. Title IX policies and procedures are posted in the following locations:		
a. On University Web site for Title IX Coordinator	X	
b. On University Web site for Student Affairs or other office	X	
c. In University handbook and/or catalog	X	
d. In the Department under review (i.e., on a poster or other notice)		X ¹⁸
2. The Title IX procedures are easily found through a search on the University Web site.	X	
3. Students are regularly reminded of Title IX policies and procedures via email or letter		?
4. Students interviewed seem to understand the process for filing a Title IX complaint.		Somewhat
5. Faculty members interviewed seem to understand the process for filing a Title IX complaint.	X	

To what extent has Title IX information been understood by the faculty and students in CBE and ME? Interviews indicated that there was widespread awareness that Title IX existed and confirmed that most faculty and students were aware that there was a Title IX coordinator at ISU. Only a handful of students had no knowledge of Title IX (six of 40, five of whom were international students).

A review of Iowa State’s [website](#) revealed that all Iowa State students, staff and faculty must take Title IX and unlawful harassment online training. Students are to take it at least once during their matriculation at ISU¹⁹ while faculty and staff must take the training every two years²⁰. The courses required to be taken are “Unlawful Harassment Prevention” and “Title IX, Violence Prevention and Campus Save Act”, plus supervisors and faculty also must complete a third, supplementary course on unlawful harassment prevention. OEO keeps departments apprised of their employees' progress in completing training, and employees who are due to get training are reminded by email.

A review of Iowa State’s website also revealed that all Iowa State employees must take Title IX and unlawful harassment online training every two years. The courses taken are “Preventing Discrimination sexual violence and Title IX” and “Unlawful Harassment Prevention”, plus supervisors and faculty also must complete a third, supplementary course on unlawful harassment prevention. OEO keeps departments apprised of their employees' progress in completing training and employees who are due to get training are reminded by email. A review of information on the ISU website (see Footnote 18) reveals high participation rates of students, faculty and staff. As of April 30, 2015, 94% of staff and 86% of faculty completed the Unlawful Harassment Prevention training, 89% of staff and 86% of faculty completed the Unlawful Harassment Prevention supervisor supplement and 94% of faculty and staff and 75% of students completed the Preventing Discrimination, Sexual Violence, Title IX training.

¹⁸ Department websites include a link labeled as “Non-Discrimination Statement and Information Disclosures.” The link is <http://www.public.iastate.edu/~disclosure/>; when checked in March 2017 in preparing this report, Title IX was not one of the 29 items included on the linked page. Additionally, there was not a “Non-Discrimination Statement” included on the linked page.

¹⁹ <http://www.inside.iastate.edu/article/2015/04/30/training>

²⁰ <http://www.inside.iastate.edu/article/2016/08/04/training>



Iowa State’s Title IX Training can be accessed at this link, which includes sublinks for graduate students and employees <https://www.sexualmisconduct.dso.iastate.edu/titleix>.

In spite of these high participation rates, the interviewees’ responses greatly varied when asked about trainings and their participation in the training. Faculty reported completing an online training in the areas of anti-discrimination and sexual harassment but were not clear whether this was mandatory or not. Additionally, faculty were not uniformly aware of similar training requirements for students. Not all students reported being trained (see box, below). A majority of male students (over 80%) and a sizable minority of female students (over 40%) reported that they had not received anti-discrimination training while at ISU. While 60% of female interviewees (both US and international) indicated they had received anti-discrimination training, only 14% of US and 22% of international male student interviewees indicated they had taken such training. Those who took training reported it was online and not in person. A 2016 review of materials developed and disseminated at ISU found the materials to be largely general without specific examples for STEM (or any other set of fields of study). The website has links to YouTube videos about various topics (these were informative and provided accurate information).

The review team learned that in AY 2017-18, Iowa State has partnered with EVERFI a company that develops Title IX online training programs, to provide Title IX training. All students and employees were required to complete the first part of training by March 12, 2018, and the second part of training by April 9, 2018

Review Criteria: Provision of Title IX Training	Yes	No
1. Title IX Coordinator provides appropriate training to faculty, staff, and students.	X	
2. Students interviewed recall having had education and awareness opportunities on anti-discrimination.		X
3. If training is provided, is it mandatory?	X	
4. If training is provided, are there education and awareness modules designed to resonate with STEM students and faculty, e.g., using hypothetical examples of inappropriate conduct or actions that might occur in a STEM setting such as a lab?	Unknown	

D. Complaint Process and Procedures

The ISU internal discrimination complaint process is described on the [website](#) for the Office of Equal Opportunity. The website indicates where complaints may be filed and provides links to an [intake form](#) as well as to external agencies to which complaints may be filed.²¹ The process is initiated via completion of an intake form, which includes the following confidentiality statement on the bottom of the second page, where the complainant’s signature is required:

“CONFIDENTIALITY STATEMENT

The Office of Equal Opportunity will make every effort to maintain confidentiality except in situations where law, University policy, or the investigatory process requires the release of information.

RETALIATION AGAINST AN INDIVIDUAL WHO FILES A COMPLAINT AND/OR PARTICIPATES IN AN INVESTIGATION IS STRICTLY PROHIBITED.”

ISU adjudicates Title IX complaints in the following manner, including Sexual Misconduct (Sexual Violence, Sexual Assault and Sexual Harassment) and Sex/Gender Discrimination:

²¹ Three external agencies are referenced: Iowa Civil Rights Commission; U.S. Equal Employment Opportunity Commission; and U.S. Department of Education Office for Civil Rights.



- Complaints filed by students against other students are first investigated by OEO. Using the “preponderance of evidence” standards, if the misconduct is deemed to violate the Student Conduct Code, the [Student Disciplinary Regulations](#) shall govern the complaint, investigation, and adjudication process through the Office of Student Conduct (OSC).
- Complaints filed by students against faculty adjudication may ultimately occur through the Office of the Senior Vice President and Provost. For complaints against faculty, the [Faculty Handbook](#) will govern the process.
- Complaints filed by students against staff will ultimately occur through the Office of Equal Opportunity. For complaints against staff, the Policy will govern the process.

With the exception of sexual misconduct complaints, informal complaint processes may be utilized in addition to the formal complaint processes.

[The Policy](#) provides details about ISU’s policies procedures regarding complaints.²² The page starts with definitions of discrimination and harassment, followed by a section on “conflict resolution.” The policy statement is missing a clear articulation of the process by which a complainant would file a complaint. The section on complaint resolution suggests that complainants are expected to file complaints in different ways with different offices depending upon the alleged perpetrator’s relationship with the university. The information in this section is confusing because there is no clear specification of steps to file a complaint and because the section referencing complaints against students indicates: “The policy on *Sexual Misconduct, Sexual Assault, and Sexual Harassment Involving Students* (see Resources below) contains information on support services for students during any complaint resolution process.” The statement suggests that sexual misconduct, assault, and harassment are the only kinds of disputes associated with students. The OEO website provides a link to the Sexual Misconduct website and on that website, individuals can access the [Title IX Guide for Complainants](#) and the [Title IX Guide for Respondents](#). Both guides provide very detailed information on the sexual misconduct complaint process, but not on complaint procedures for other forms of discrimination prohibited by Title IX.

In evaluating whether a school's grievance procedures are prompt and equitable, and thus satisfy the Title IX requirement, DOE and NSF looks to applicable DOJ and U.S. Department of Education Office for Civil Rights (OCR) guidance²³ to determine whether the procedures provide for:

1. Notice of the right to file a discrimination complaint with an appropriate Federal agency, either simultaneously with the filing of an internal grievance or after the unsatisfactory resolution of a grievance.
2. Notice to students, parents of elementary and secondary students, and employees of the procedure, including where complaints may be filed;
3. Application of the procedure to complaints alleging harassment carried out by employees, other students, or third parties;
4. Provisions for adequate, reliable, and impartial investigation of complaints, including the opportunity to present witnesses and other evidence;
5. Designated and reasonably prompt timeframes for the major stages of the complaint process;
6. Written notice to the complainant and alleged perpetrator of the outcome of the complaint;
7. An assurance that the school will take steps to prevent recurrence of any harassment and to correct its discriminatory effects on the complainant and others, if appropriate;

²² <http://www.policy.iastate.edu/policy/discrimination/>

²³ Revised Sexual Harassment Guidance: Harassment of Students by School Employees, Other Students, or Third Parties, US Department of Education - Office for Civil Rights, January 2001



- 8. Where appeals are part of procedures, they must be accorded equally between the parties;
- 9. Ease of access and understanding.

Faculty members felt that they understood or could figure out how to file a complaint or to assist a student who came to them for advice about a complaint. Students, on the other hand, varied in their understanding of the complaint process. All U.S. women students reported that they already were familiar with the process of filing a complaint of discrimination or sexual harassment, while just over half of the international male student interviewees were unaware of how to do so. A small minority of international women and U.S. men (more than 15% of each group) lacked even a general understanding of the process to file a complaint.

The ISU website “How to file a complaint” (<http://www.eoc.iastate.edu/nov--30th-how-to-file-a-complaint>) is the clearest articulation that complainants need to complete an Intake Form (downloadable PDF file) and then sign the complaint and that this can be done at the Office of Equal Opportunity. The “Discrimination and Harassment” website (i.e., <http://www.policy.iastate.edu/policy/discrimination/#Complaint>) to which potential complainants are referred was confusing and provides no details of the process associated with complaint processing including timing, notification, and appeals.

While ISU does not have a single, comprehensive discrimination complaint procedure, ISU does meet the criteria in the checklist below with respect to its Student Code of Conduct and Faculty Handbook complaint processes and related informational media. Complaints involving students are referred to these procedures depending on the accused individual’s affiliation to ISU. It should be noted that the informal and formal discrimination complaint process, which is used for student complaints against ISU non-faculty staff, is not as specific as the procedures involving student and faculty conduct. It is not known if a more specific procedure complaint supports the informal and formal discrimination complaint process as it applies to student/staff complaints.

Review Criteria: Grievance Procedures As Written –2001 OCR Guidance	Yes	No
The procedures must provide for:		
1. Notice of right to file with appropriate Federal agency, either simultaneously or after unsatisfactory resolution of internal grievance.	X	
2. Notice to students and employees of procedure, including where complaints may be filed.	X	
3. Application of procedure to complaints alleging harassment carried out by employees, other students, or third parties.	X	
4. Provisions for adequate, reliable, and impartial investigation of complaints, including the opportunity to present witnesses and other evidence.	X	
5. Designated and reasonably prompt timeframes for the major stages of the complaint process.	Varies among the procedures	
6. Written notice to complainant and alleged perpetrator of the outcome of complaint.	X	
7. Assurance that the school will take steps to prevent recurrence of any harassment and correct its discriminatory effects on the complainant and others, if appropriate.	X	
8. Appeals, if included, must be accorded equally between the parties.	Varies among the procedures	
9. Appropriate dissemination, including efforts to ensure ease of access and understanding.	X	



Review Criteria: CBE and ME Title IX Complaint Activity	Yes	No
1. In the Department in the past 5 years, there have been formal complaints of:		
▪ Sex discrimination		X
▪ Sexual harassment		X
▪ Sexual assault		X
2. If yes, did the University follow the written Title IX procedures in addressing the incident(s)?	NA	
3. Faculty, staff, and/or students reported other or potential incidents of:		
▪ Sex discrimination	X	
▪ Sexual harassment		X
▪ Sexual assault		X

IV. The Environment/Climate

The term “chilly climate” in reference to the negative implications for equity in college education environments was coined in a 1982 report by titled “The Classroom Climate: A Chilly One for Women.” Since that time, there have been over 40,000 references to the concept of climate in the scholarly literature. The on-going interest in this topic is reflected in recent research by the AAU on Sexual Assault and Sexual Misconduct at 27 colleges and universities.²⁴For the purposes of Title IX review, therefore, to what extent is the climate equitable for women and men in the subject departments?

Within a university graduate program, the faculty establish and model the norms of appropriate behavior, reward and sanction students’ behaviors in conformity to the norms of professional conduct, and are a resource for students as mentors and advisors. Within the academic setting, as well, junior faculty (untenured assistant professors) rely upon senior (tenured) faculty, who evaluate progress towards tenure for tenure-track faculty and establish norms of professional conduct. A Title IX compliance review analysis examines the extent to which the CBE and ME departments’ climate is equitable for women and men and specifically the extent to which female and male graduate students have equitable access to professional development within the ME department’s graduate programs.

A. Gender Bias Perceptions

To understand the climate, the site visit team reviewed data provided by ISU about complaints and investigations of potential gender bias issues undertaken by the OED, interviews with faculty and students in CBE and ME, and information in the AAU Campus Climate report for ISU.

Summary - AAU Report Findings

The larger context for issues related to sexual misconduct and sexual harassment can be understood with reference to a relatively recent study (results were published in 2015) completed by the AAU, of which ISU is a member. The report splits out findings based on student gender and level (i.e., undergraduate or graduate student) but does not provide detail about major field of study. The study findings for ISU reflect the different issues for women at the undergraduate versus graduate level and the gaps in experiences for graduate student women versus men. For example, in a section about experiences of sexual harassment,

²⁴ The AAU website with report findings is available at: <https://www.aau.edu/Climate-Survey.aspx?id=16525>. Campus-level results for Iowa State are available at the Office of Equal Opportunity site at <http://www.eoc.iastate.edu/sites/default/files/aasurvey/AAUCCS-ISU-report.pdf>.



while undergraduate women and men were most likely to report at least one incident since the start of the 2014 term (84%), graduate and professional student women were more likely (72%) than men at this same level (65%) to report harassment. But while just 5% of undergraduate women and 6% of undergraduate men indicated the harasser was a faculty member, 20% of graduate women and 15% of graduate men indicated a faculty harasser. Additionally, graduate students of both genders were more likely than undergraduates to indicate the harasser was another staff or administrator at ISU (12% of women and 10% of men).

The survey asked respondents about reporting of harassment – to whom and the effectiveness of that reporting. The Title IX Coordinator was listed as one of the possible individuals to whom students could report; overall only 20% of those who reported harassment did so to the Title IX Coordinator, with graduate and professional student women the most likely subgroup to do so (35%). Overall, among those who had reported to the Title IX coordinator, just 11% indicated that the report had been “Very” or “Extremely” useful.

Complaint and Investigations Analysis

The original data request included the following:

“13. a. Identify the number of Title IX complaints, if any, that did not originate in the Chemical/Biological and Mechanical Engineering Departments, whether informal or formal, filed with the University during the 2011-2012, 2012-2013, 2013-2014, 2014-2015, and 2015-2016 academic years. Include a brief description of each complaint and a statement as to the status of each complaint.

13. b. Identify the number of Title IX complaints, if any, that originated in the Chemical/Biological and Mechanical Engineering Departments, whether informal or formal, filed with the University during the 2011-2012, 2012-2013, 2013-2014, 2014-2015, and 2015-2016 academic years. Include a brief description of each complaint and a statement as to the status of each complaint.”

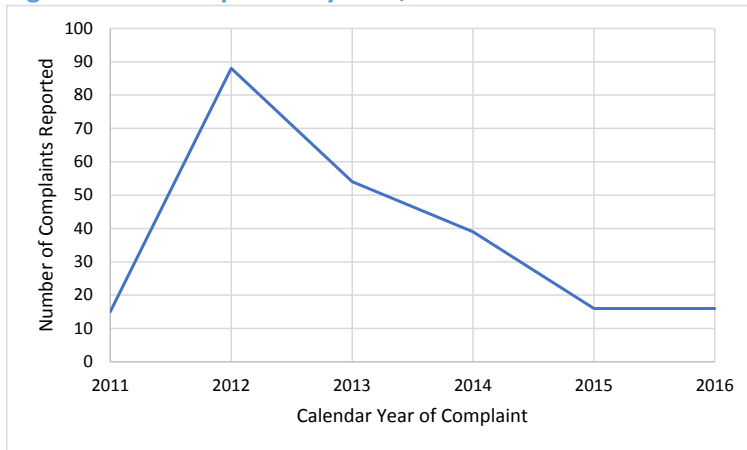
Data about 229 complaints were provided, with the name of the complainant and accused, a 1-2-word description of the complaint and a 1-4-word description of the outcome. Data entry was not consistent and in some cases the word indeterminate information about one or the other party is included.²⁵ The use of one text field to capture names and statuses is particularly problematic; that is, there should be separate data entry fields (columns) for the status of the accused and the complainant. In the provided spreadsheet, parenthetical notations accompany some entries to specify, for example “faculty,” “staff,” or “grad student.” The data, therefore, suggest that only one graduate student in the past five academic years filed a complaint with the ISU Title IX office.

Figure 8 shows a plot of the number of complaints for each calendar year included in the 2011-2012 through 2015-2016 academic years for which data were provided. After a large number of complaints in the 2012 calendar year, the annual number of complaints has dropped precipitously, in contrast to the ongoing relevance of Title IX-related issues as found in the AAU report referenced, above.

²⁵ For example, there are two complaints in which the accused is listed as “Faculty” without a name, and another complaint in which the accused is indicated as “Aerospace engineering”.



Figure 8. ISU Complaints by Year, 2011-2016



Source: Analysis of data provided by ISU.

Note: 2011 includes the last half of the calendar year, while 2016 includes just the first half of the calendar year. Omitted from the graph is a 2008 complaint settled in 2012.

All but 16 complaints had been closed by the time the data were provided (July 8, 2016); on average complaints were closed in 53 calendar days. The 16 open complaints were open an average of 86 days as of the date on which the data were provided (i.e., July 8, 2016). The data provided noted “(faculty)” or “(staff)²⁶” next to some names – there were eleven faculty (nine named, two not named) and one academic department (Aerospace engineering) identified as “accused;” involving an indeterminate number of students (in one case no names of complainants were provided, just “multiple students”). On average, these twelve complaints took 61 days to bring to closure, longer than complaints, overall. A web check verified that none of the faculty associated with these complaints were affiliated with either CBE or ME. On average, there were about two complaints per year made against faculty.

²⁶ There were seven complaints against six staff members. Several of these were individuals teaching in physiology or physical education.



Summary of Iowa State University OEO Complaint Data, AY 2011-2012 – AY 2015-2016

Time Period: 5/11/2011 - 6/30/2016	Number of Complaints			Average of Investigation processing time		
	Closed	Open	Grand Total	Closed	Open	Grand Total
Domestic Abuse	12		12	14.4		14.4
Domestic Assault	11		11	58.0		58.0
Domestic Dispute	1		1	2.0		2.0
Domestic Violence	2	2	4	106.0	78.0	96.7
Assault	3		3	20.7		20.7
Discrimination		1	1		122.5	122.5
Harassing behavior	5		5	12.8		12.8
Harassment	69	2	71	31.7	92.0	32.6
Hostile Environment	1		1	8.0		8.0
Sexual Abuse		1	1		1.0	1.0
Sexual Assault	67	8	75	84.1	102.1	85.1
Sexual Discrimination	2		2	63.0		63.0
Sexual Exploitation	1		1	9.0		9.0
Sexual Harassment	32	2	34	55.2	29.3	54.4
Sexual Misconduct	6		6	86.6		86.6
Stalking/Harassment	1		1	3.0		3.0
Grand Total	213	16	229	53.6	81.2	54.7

Source: ISU OEO, July 2016.

With respect to campus climate as it pertains to gender relations, DOE and NSF took a closer look at the climate of the CBE and ME departments. The department climate can be observed through student and faculty reports on classroom and laboratory interaction, student/advisor interaction, use of department resources, whether there is perceived gender bias with respect to exams, and other factors. Interviews with CBE and ME students informed our observations of the departments’ gender climate as detailed in the tables below:

Review Criteria: Learning Environment	Yes	No
1. There is unequal access to lab equipment and participation in labs.	X	
2. Students perceive gender bias in high-stakes exams.		X
3. Statistical data suggest differential outcomes based on gender in high-stakes exams.		X
4. Students of both genders feel as though interactions in the classroom and lab are generally not appropriate and disrespectful.	Some reports of gender bias and hostile environment	
5. Students feel professors or TAs doubt their abilities because of gender.		X
6. Students have avoided certain professors because of their treatment of or interactions with students.	X	



Review Criteria: Learning Environment	Yes	No
<p>Observations:</p> <p>Criteria 1: Equipment issue within the CBE lab space. A heavy piece of equipment is not permanently set up at a specific work station, so that students who need to use this item must bring it to their own area. Both men and women indicated that the men students had to move this equipment. Some men expressed subtle resentment of this added responsibility, while women sometimes were unable to obtain the equipment as needed for their work.</p> <p>Criteria 4: As described below, sexist and racist remarks and harassment were reported as creating a work environment hostile enough to result in at least one anecdote that student graduate school plans may have been negatively impacted by the environment.</p> <p>Criteria 6: There were a handful of reports of students changing advisors due to sexism, racism, or other discriminatory behavior.</p>		

Previous serious issues of sexism and racism within CBE – related to lab work environment – which to the observation of the review team, adversely affected women without any active measures by the faculty to mitigate these issues. Issues revealed during interviews include an indication that a female student left the program earlier than expected due to the on-going harassment; while there was another indication of awareness of a woman who was treated unfairly due to having children, and an indication of a female student who was told that a professor did not want a woman doing a project until she could “prove herself”.

In terms of gender-based discrimination, students in both CBE and ME indicated that a male faculty member (the review team determined that this faculty member is not part of CBE or ME) had called a woman student “stupid” in front of the class. Additionally, female graduate students also reported that undergraduate men make sexist remarks and are not always called to task for this behavior, even in very public settings such as campus career fairs, where potential employers are also present. Both male and female students in ME referred to condescending remarks / attitudes by faculty (number of faculty associated with this behavior was not specified). Students in both CBE and ME referenced making use of an ISU Ombuds office to resolve problems. There were a handful of reports of students changing advisors due to sexism, racism, or other discriminatory behavior.

While not Title IX issues, language, race/ethnic issues, anti-non-US student issues were raised by several students – these issues were referenced as both general to campus as well as to faculty in both CBE and ME. When these were general issues – especially ones that have come up in connection with the 2016 Presidential election (site visit was in September 2016), students indicated that ISU administration had “dealt with it.”



Compliance Review Findings:

- (1) The data provided by ISU had little detail about complaints. It was unclear in either interviews with investigations staff or in the lack of detail in the provided data, that sensitivities to the unique issues for graduate students’ relationships with advisors and the laboratory environment were understood and used to guide policy and procedures associated with serving the graduate student community within the COE. Additional data fields should be added to the complaints database and procedures for verifying data accuracy should be implemented.
- (2) While there were no data about complaints originating in either CBE or ME, the interviews revealed that there were some issues within these departments regarding the research work environment, such as the on-going problem associated with heavy lab equipment in CBE (it appears that male graduate students must move equipment that female graduate students can’t move) reports of students leaving the program because of the perceived hostile environment.

B. Campus Safety

Issues of campus safety can have a disparate gender impact. Graduate students work in laboratories, which embody a range of potential workplace safety concerns. Faculty and students may often work late at night and on weekends, suggesting a need to ensure safety concerns are addressed due to the equity implications. That is, if men but not women feel unsafe on campus, then there would be a disparate impact, suggesting non-compliance with Title IX.

Lab Safety: Many students interpreted the campus safety questions from the standpoint of “lab safety.” The graduate handbooks for CBE and ME indicated a lab safety training requirement that any students who would be working in the labs. Students reported that lab safety was constantly stressed as important. Additionally, students indicated that there were many ways in which the “buddy system” was implemented.

Campus/Facility (Crime) Safety: Faculty and students felt that the The University campus and Ames were very safe. There was a high level of awareness of various campus security measures and no faculty expressed reservations about working on campus in the evenings or weekends, beyond the lab safety concerns. Some students indicated that more lighting on campus might be helpful for making them feel safer, but this sentiment was expressed by only a couple of people in all of the interviews.

Review Criteria: Campus Safety	Yes	No
1. Students believe the campus is a safe environment (e.g., has night-time shuttle service, night-time escort, police cars on patrol, information dissemination about safety issues)	X	
2. Information on safety policies is disseminated to students.	X	
3. Students are aware of the following safety measures:		
▪ Night-time shuttle service	X	
▪ Night-time escort service	X	
▪ Dissemination of information about safety issues	X	
▪ Controlled-access buildings and labs	X	
4. Serious crimes have occurred within the past 5 years in departmental buildings/facilities or in other campus facilities used by the Department.		X
Observations: Criteria 3: Some students did indicate that some buildings were more easily accessed than others, posing a potential security risk to them. Students who worked at facilities away from the main campus indicated that the location around these facilities felt less safe than main campus.		



C. Family Focused Initiatives

Faculty and students were asked about the existence and perceived efficacy of family-focused initiatives at ISU. Additionally, students were asked about whether they knew about the general processes by which a student could take a leave of absence from her/his studies and then return (without this being specifically connected to family issues). Most students (22) indicated they had no idea how to request a leave of absence, with an additional five students having some general idea that this was possible under some sort of circumstance. Eleven students said that they were knowledgeable about the policies and procedures for requesting a leave of absence. About one-fourth of students also indicated that they would approach their advisor, with some of these students expressing the belief that their advisor would know what to do. ISU has a “Bridge” program that provides funding for six weeks’ paid leave for graduate students or postdocs who are a child’s primary caregiver. The policy can be used by either parent or a combination of both (e.g., three weeks for each parent).

Faculty indicated that they perceived ISU to be very “family friendly.” Dual career hiring practices have been in place for some time and was reported to be highly satisfactory among interviewees who referenced knowledge of dual career situations. Additionally, faculty interviewees were aware of child care services on and off campus, with only two faculty members indicating that it was difficult to get a spot. A review of the FAQ document for ISU’s University Human Resources about childcare services makes reference to the waiting list and high demand for the on-campus daycare. Additionally, information about the “Comfort Zone,” which is available for any member of the ISU community for ad hoc daycare when a child is sick, was included as well as additional information about other secondary (backup) childcare options.

Most of the students – but proportionately more women (72%) than men (64%) – reported that they were not married (or partnered) and that they did not have children. Only five of the interviewed students had children; 80% of these were men (i.e., only one woman had children). Hence, many students were aware of childcare services (33% of women and 50% of men).

Review Criteria: Family Friendly and Parental Leave Policies	Yes	No
1. The institution has a separate leave policy that addresses parental/family status for graduate students.	X	
2. The institution has a “stop the clock” policy for tenure-track faculty that addresses parental/family needs.	X	
3. The individual situations DOE and NSF heard about involving pregnancy indicate that individual faculty members are responding appropriately and consistent with Title IX requirements.	X	
<p>Observations: Faculty and students indicated that ISU was a generally “family friendly” place.</p>		

V. Conclusions and Recommendations

DOE and NSF find the University to be in compliance with the Title IX procedural requirements regarding coordination, grievance procedures, and self-evaluation. The recommendations regarding both procedural requirements as well as program administration are designed to assist ISU and its Chemical/Biological Engineering and Mechanical Engineering programs to further their efforts to ensure



equal educational opportunity regardless of gender. These recommendations (and Iowa State's response to these recommendations are:

- The ME program should review its method of admissions and subsequent selection for graduate research groups as it relies upon student initiative and ultimately, faculty selection of candidates. This type of admissions process is not transparent with respect to individual faculty decisions, thus potentially providing an atmosphere within which differential treatment can exist.

Iowa State responded that: *“the process of matching students to Research Assistantships (RAs) involves a combination of student and faculty initiative, requiring both to mutually select each other. ISU recognizes the process is not transparent with respect to the criteria that each individual faculty member uses in selecting graduate RAs. Thus, (Iowa State) will identify and implement best practices to make this process more transparent.”*

- The ME program should determine why women who have applied to and been admitted to their graduate programs decide not to enroll, given the lower level of acceptance of admissions offers than men into the ME's MS program, despite a higher admissions rate than men.

Iowa State responded that: *“The 3% difference between the proportion of women admitted to the ME MS program and the proportion who enroll, is not statistically significant.²⁷ Statistically, men and women are equally likely to enroll in all ME graduate programs, once admitted. Regardless, ISU will review why some admitted students do not enroll. ISU is currently designing a feedback process for undergraduates who fail to choose this program; (Iowa State) will use lessons learned from it to design a similar feedback process for the graduate program. Additionally, (Iowa State) is discussing the possibility of conducting exit interviews with perspective graduate students on the final day of our recruiting weekend to assess their thoughts on positives and negatives of the program.”*

- The CBE program must address the perception of students, revealed by this review, that the lab work environment has gender-based inequities with respect to lab equipment and a hostile environment towards female students due to some incidents some students have reported to the review team.

Iowa State responded that: *(Iowa State) is committed to gender equality in and out of the classroom as well as addressing all reports of hostile environments and discrimination toward protected classes. With respect to the specific incidents and examples provided in the report, ISU is in the process of developing and implementing best practices to eliminate gender-based inequalities with respect to laboratory equipment and access.*

Finally, while not required, institutional self-evaluation is a highly recommended practice to enable institutions to proactively meet its requirements under Title IX (reference: 45 CFR § 618.110(c)). Recipients of federal funds should evaluate, in terms of the requirements of Title IX, current policies and practices and their effects concerning admission of students, treatment of students, and employment of both academic and nonacademic personnel working in connection with the recipient's education program or activity. Policies and practices should be modified as necessary to ensure full compliance with the

²⁷ Significance between proportions was assessed using a 2 sample, 2-tailed z-test at significance level 0.05, computed by EpiTools software: <http://epitools.ausvet.com.au/content.php?page=z-test-2>



requirements of Title IX. The following regulations and guidance are available to institutions as resources for self-evaluation:

- Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 45 C.F.R. § 618 et. seq.;
- Business Systems Review Guide, National Science Foundation Office of Budget, Finance and Award Management;
- Department of Justice (DOJ), Coordination of Enforcement of Non-discrimination in Federally Assisted Programs, 28 C.F.R. Subpart F, §§ 42.401 – 42.415;
- DOJ, Questions and Answer regarding Title IX Procedural Requirements; and
- Department of Education (ED) OCR, Title IX Grievance Procedures: An Introductory Manual (Second Edition, 1987)
- National Aeronautics and Space Administration (NASA), Title IX & STEM: A Guide for Conducting Title IX Self-Evaluations in Science, Technology, Engineering, and Mathematics Programs. Accessible online at http://odeo.hq.nasa.gov/documents/TITLE_IX_STEM_Self-Evaluation.pdf (June 2012).

