University of Kentucky
Title IX Compliance Report

Department of Mechanical Engineering

Office of Diversity and Equal Opportunity
May 2012
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I. INTRODUCTION

NASA conducted a compliance review of the University of Kentucky (UK or the University) Department of Mechanical Engineering (ME, the Department, or the program), to ensure that beneficiaries of NASA grants have equal opportunity, without regard to sex, to pursue, participate in and benefit from academic research, career development opportunities, extracurricular and other educational activities. The review was conducted under Title IX of the Education Amendments of 1972, and NASA’s implementing regulations and policy, which prohibit discrimination on the basis of sex in educational programs and activities receiving Federal financial assistance.¹

A. Background

NASA Title IX regulations provide for periodic review of NASA grant recipients.² These regulations became effective in November 2000. NASA’s Title IX compliance program received further impetus with the July 2004 report of the Government Accountability Office (GAO), which recommended that Federal agencies conduct onsite compliance reviews.³ In addition, NASA’s 2005 authorizing legislation requires the Agency to conduct at least two Title IX compliance reviews annually.⁴ NASA has been involved in many Title IX related compliance activities since the regulations were issued in 2000, conducting a number of limited-scope “desk-audit” as well as onsite reviews of grant recipients.

B. Objectives and Scope

NASA sought to achieve the following key objectives in conducting this review:

Objective 1

Evaluation of UK’s compliance with NASA Title IX regulations, specifically to:

- Assess the Title IX Coordinator’s role and functioning; confirm the existence of Title IX policy and procedures and the quality of their dissemination; evaluate Title IX grievance procedures and the effectiveness of their implementation; and review Title IX self-evaluation efforts, specifically regarding the UK program under review; and

- Evaluate the ME program’s provision of equal opportunity regardless of gender in the following areas of program administration: student recruitment, outreach, admissions, enrollment, retention, academic advising, research participation, classroom and lab experiences, policies/procedures, and student experiences relating to parental/marital status (“family friendly” policies), physical safety of the program environment, and, finally, recent faculty recruitment efforts.

³ Government Accountability Office, Gender Issues: Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX (July 2004) (July 2004 GAO Report). Included in the Report’s recommendations was that “the Administrator of NASA continue to implement its compliance review program to ensure that compliance reviews of grantees are periodically conducted.” (p. 28).
⁴ See NASA Authorization Act of 2005, 42 U.S.C. § 16798(b). Note that NASA’s most recent authorizing legislation does not include this provision; however, as the original provision had no sunset clause, we continue to seek to meet the 2005 requirement.
Objective 2

Identification of promising practices of UK and the ME program designed to promote gender equity, specifically to:

- Describe efforts consistent with the recommendations and focus of the July 2004 GAO report; and to
- Determine the extent to which promising practices are actually helping to create greater gender equity and diversity in the program, for both students and faculty.

C. Methodology

1. Pre-onsite Review Activities

NASA developed a Title IX compliance review plan (CRP) to identify relevant regulatory requirements, potential issues and specific inquiries needed to conduct a thorough compliance assessment of its grantees. The CRP was developed in consultation with the U.S. Department of Justice (DOJ), Civil Rights Division, and the U.S. Department of Education (ED) Office for Civil Rights (OCR), the lead agencies on Title IX investigations. In addition, NASA developed a Title IX literature review to better understand concerns regarding gender in science, technology, engineering, and mathematics (STEM) fields as well as strategies to address such concerns, including Title IX compliance efforts in the STEM context. (See Appendix: Summary Literature Review).

The CRP identified two focal points for compliance assessment: 1) Title IX procedural compliance requirements; and 2) program administration, that is, policies, procedures, and practices affecting the academic environment (see “Objectives,” above). The CRP also identified the methods by which needed information would be gathered from recipients, including: information requests for statistical data and relevant policies and procedures, and an on-site visit to interview university officials, program faculty, and students.

2. On-site Compliance Review Activities

The NASA compliance team conducted an on-site review of the UK ME Department on April 26-29, 2011. During its visit, the compliance team conducted one-on-one interviews with six female ME faculty members and three male ME faculty members, including the ME Department Head; the Dean of the College of Engineering (CoE); Women in Engineering Coordinator; Cooperative Education Director; seven ME graduate students (three female and four male); and twelve undergraduates (three female and nine male). The compliance team also interviewed the UK Title IX Coordinator and his lead staff persons for student-related compliance, faculty and staff-related compliance, including complaint and grievance processing, as well as two CoE recruiters and two ME recruiters.

II. COMPLIANCE REVIEW ANALYSIS

The compliance review analysis provides an assessment of issues within the two focus areas of procedural compliance requirements and program administration. The recommendations are intended to strengthen existing compliance activities. Promising practices associated with each of the compliance areas are also reported.
A. Designation of Responsible Official for Title IX Coordination and Enforcement

1. Compliance Assessment

Regulatory requirements and findings of fact are set forth as part of the compliance assessment. The NASA Title IX regulations state that a recipient must designate an official responsible for Title IX coordination and enforcement, i.e., a “Title IX Coordinator.” The recipient must notify all students and employees of the Title IX Coordinator’s name, office address, and telephone number.

a. Title IX Coordinator and Contact Information Dissemination

NASA’s compliance assessment focused first on the Title IX regulatory requirement to disseminate contact information for the Title IX coordinator and his office. The role of Title IX coordinator is officially held by the Associate Vice President for Institutional Equity and Equal Opportunity (IEEO). IEEO reports that it disseminates contact information for the Title IX coordinator through its Web site, campus broadcasts, and student, faculty and staff training sessions in-person and online. Contact information is also disseminated through brochures on discrimination and harassment related regulations, which are distributed in various locations on campus and online, as well as in employee handbooks, and student bulletins. In addition, IEEO contact information, as well as for the ED OCR, is electronically disseminated annually by the Office of the Registrar Kentucky Bulletin to all UK students.

During onsite interviews, the compliance team sought to determine the extent to which students, faculty and staff were aware of the Title IX Coordinator, his office and the purpose of his office. The compliance team found that those interviewed did not know who the Title IX coordinator was by name. However, most were aware of the complaint program and were generally aware of the role of Title IX in athletics, if not academics. Students interviewed stated that while they did not know the name of the office to go to if they had concerns, they felt confident they could find it online. This is a common response heard from students at large universities when asked if they know the name and contact information of the Title IX coordinator or his office. However, given the steps that UK has already taken, one would expect that at least some of the faculty and students interviewed would be familiar with the name of the Office for Institutional Equity and Equal Opportunity. Based on NASA’s limited review, the extent to which the University has been effective in this regard is not clear (see “Recommendations” below).

b. Effective Title IX Coordination: Oversight of the Grievance Process, Authority/Access to Senior Leadership, and Training Efforts

While the NASA Title IX regulations do not provide further specificity regarding the role and effective functioning of the Title IX Coordinator’s role, the U.S. Department of Justice (DOJ), which has oversight responsibility for all Federal Title IX compliance and enforcement activities, has provided additional

5 Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(a).
6 IEEO’s Web site is located at http://www.uky.edu/EVPFA/IEEO/index.html.
7 This information states as follows: “Compliance with Title IX of the Educational Amendments of 1972, which prohibits sex discrimination, and with Title VI of the Civil Rights Act of 1964 is coordinated by the Office of Institutional Equity and Equal Opportunity, 13 Main Building, University of Kentucky, Lexington, KY 40506-0032, (859) 257-8927. . . Questions concerning compliance with regulations may be directed to UK’s Office of Institutional Equity and Equal Opportunity or to the Director of the Office for Civil Rights, U.S. Department of Education, and Washington, D.C.”
considerations for Federal agencies evaluating recipient compliance with the Title IX Coordinator regulatory provision. These additional considerations appear in DOJ’s document, “Questions and Answers Regarding Title IX Procedural Requirements” (Title IX Q&A). For purposes of this review, NASA focused on the following areas, in addition to the regulatory requirement for contact information dissemination, identified in DOJ’s Title IX Q&A:

- Effective functioning, including skills and competencies, regarding the administration and implementation of UK’s Title IX grievance process;
- The authority and access of the Title IX Coordinator to university senior leadership needed to effectively perform roles and responsibilities; and
- Appropriate training of faculty, staff, and students.

(i) Effective Oversight of the Grievance Process

Based on UK’s responsive information, including resumes of staff with Title IX coordination responsibilities, and interviews with these staff, NASA finds that the Vice President for IEEO and his staff possess the appropriate knowledge base and expertise, as well as a proven ability to properly implement the UK internal grievance procedures. (See Section II.B. for a detailed discussion of the University’s internal discrimination complaints procedures.)

(ii) Authority and Access to Senior Leadership

With regard to the authority and access of the Title IX coordinators, IEEO reports that, as a central administrative unit of UK, interaction with the President, Provost, Vice President for Institutional Diversity staff, and administrators at all levels throughout the university is continuous. Policy issues as well as daily operational issues are frequently discussed. Monthly staff meetings are held by the Executive Vice President for Finance and Administration. IEEO officials also serve on University-wide standing committees to promote equity including, but not limited to, UK Equal Opportunity Panel (chair), UK Employee Benefits Committee, UK Safety and Environmental Health Committee, and Parking and Transportation Appeals Committee. The office maintains a close working relationship with the Office of Legal Counsel. NASA finds that, in this regard as well, the head of IEEO possesses the appropriate level of access and the necessary frequency of interaction with the University’s head to facilitate effective Title IX coordination.

(iii) Training, Education, and Awareness Efforts

The compliance team also examined the training efforts that IEEO undertakes on a regular basis, since training is a critical part of the tasks and responsibilities of Title IX coordination efforts. IEEO reports that Title IX is covered in its Discrimination and Harassment training campus-wide, although training has not been conducted solely based on Title IX. IEEO also reported that there has been no specific effort restricted to UK CoE personnel. Rather, information dissemination is conducted campus-wide such as during orientations for new students, teaching assistants, and new employees, including CoE students and employees.

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8 See Executive Order 12250, 3 C.F.R., 1980 Comp. 298. Section 1-203 of the Executive Order states that “[t]he Attorney General shall develop standards and procedures for taking enforcement actions and for conducting investigations and compliance reviews.”

9 This document is accessible at http://www.usdoj.gov/crt/cor/coord/TitleIXQandA.htm.

10 See Title IX Q&A, “Designation of Title IX Coordinator – What factors should a recipient consider in designating a Title IX Coordinator?”
IEEO reports further that Discrimination and Harassment training is presented to all new supervisory personnel on an ongoing basis through a program called SuperVision. Training is provided at the beginning of each academic year to all teaching assistants and many new faculty. An in-house online Discrimination and Harassment training program was developed and is required for all new staff within their first 90 days of employment. Cooperative Extension Service employees undergo a civil rights training module that includes discrimination and harassment training material. Upon receipt of complaints, IEEO staff assess the need to conduct remedial or professional development training for the unit(s) involved. Annually, UK Safety and Security Department, UK Dining Services, UK Residence Life, and many other organizational units receive discrimination and harassment training through IEEO upon request. During the 2010-2011 academic year, 37 training sessions were conducted for the University community.

A matrix covered in the training highlights employment discrimination laws such as Title VII and the Age Discrimination in Employment Act of 1967. Title IX is referred to among “Other Laws.” IEEO may wish to consider modifying the information to more precisely and thoroughly describe Title IX, as well as other similar grant related civil rights laws applicable in the education context (see Recommendations below).

During interviews with ME program faculty and students, faculty could not recall having received training on sexual harassment, gender discrimination or subtler forms of bias in recent years. Most undergraduate students believed they had received a module on sexual harassment at student orientation. One comment consistently heard was that the training delivered on discrimination and harassment was informative but not engaging or particularly memorable. Some students indicated that they thought the orientation training could be strengthened if it was more interactive and less “outdated.” Still another comment was that the training focused too much on egregious, or obvious, examples of harassment, to the exclusion of more subtle matters, such as unconscious bias (to be fair, this is another subject matter altogether). One faculty member suggested that something along the lines of what to be more conscious of in the academic environment would be helpful. Another stated that informal “group discussions” among faculty might be useful.

While addressing matters of discrimination and harassment are by no means the primary concern for students during their academic careers, it is crucial for members of the academic community to have an appreciation for what conduct is acceptable and what is not, and what avenues are available to them if a concern should arise. Therefore, while NASA commends UK on its extensive training efforts, a closer examination of the form and content of the training, for example, consideration of more interactive modules, may be useful (see “Recommendations” below).

2. **Recommendation**

*Enhancements to Training Modules.* To better ensure that training, education, and awareness efforts achieve their intended objectives, IEEO may wish to review its various training modules to see if enhancements to any of them may be needed, and to ensure that training provided to students and faculty is consistent. Regarding form, consideration may be given to methods that tend to engage the learner, such as interactive exercises. Regarding content, Title IX should be precisely and thoroughly described, rather than described among “other laws.” In addition, consideration should be given to course designs with illustrative examples of discrimination and harassment that will resonate with the intended audience. In this regard, course curricula may be most effective when shaped by student participation in the design, for example, student focus groups that may offer insights into “real world” experiences. It is also important to clearly distinguish in the name of the training that sexual harassment and unconscious bias are different, just as harassment and intentional differential treatment are not the same thing.
Other universities reviewed by NASA have found it helpful to imbue training with the subtleties that are more likely to be familiar to today’s student body. For instance, the examples might focus more on unintended actions that may still have a detrimental effect, such as responding more favorably to members of one gender in the classroom setting, or providing more encouragement to members of one gender in the advising setting. In the harassment context, the illustrative examples should also be designed to reflect the range of inappropriate remarks and behavior, rather than a focus only on the most egregious examples.

B. Adoption of Grievance Procedures and Policy Dissemination

1. Compliance Assessment

Regulatory requirements and findings of fact are set forth as part of the compliance assessment. The NASA Title IX regulations require that recipient educational institutions 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. The regulations do not specify a structure or format for the grievance procedures. NASA’s Title IX regulations also require grant recipients to take specific and continuing steps to notify students, employees, applicants for admission and employment, and unions or professional organizations having collective bargaining or professional agreements with the recipient, that it does not discriminate based on gender in the educational programs or activities that it operates, and that it is required by Title IX not to discriminate in such a manner.

a. Grievance Procedures

NASA’s compliance assessment seeks to ensure that UK has developed and is implementing procedures that afford a grievant “prompt and equitable” resolution of student and employee complaints alleging any action that would be prohibited by the Title IX regulations. As the regulations do not provide any further specificity regarding the procedures, NASA looked to the DOJ Title IX Q&A and OCR’s Revised Sexual Harassment Guidance, which provide additional considerations on the basic components of effective, i.e., prompt and equitable, grievance procedures in the discrimination and harassment context. In its Revised

12 In May 2012, UK informed NASA that in late summer and fall 2012 IEEO will begin mandatory training of all faculty and staff on Title IX issues and other forms of discrimination. The Provost has approved these efforts on a regularly recurring basis and mandatory sessions for all new employees and targeted annual training in some specific areas; i.e. student affairs, student health. In addition, UK has in the planning stages (in coordination with Student Affairs and the Violence Intervention and Prevention or VIP Center) training for student groups to include new incoming students and other student groups, those living and working on campus in some capacity, and student organizations, including sororities and fraternities. See Patty Bender, Assistant VP for Equal Opportunity, email to David Chambers, Senior Civil Rights Analyst, NASA ODEO, re: NASA U Kentucky Title IX Draft Report, May 14, 2012.
13 Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(b).
14 Dissemination of policy, 14 C.F.R. § 1253.140.
15 14 C.F.R. § 1253.135(b).
16 For example, the Title IX Q&A states that recipient grievance procedures are a mechanism used to determine whether a particular act, policy, or practice of a recipient complies with Title IX regulations. See, Title IX Q&A, “Grievance Procedures.” The Title IX Q&A states that for those recipients who do not have Title IX grievance procedures or for those recipients who want to refine existing procedures, the Department of Education’s guidance document, “Title IX Grievance Procedures: An Introductory Manual,” (Education Manual) provides some of the basic components for such procedures. This document is accessible through the U.S. Department of Education at http://eric.ed.gov/. The grievance procedures should also provide the steps necessary to correct the policy or practice that does not comply with Title IX regulations. See, Education Manual. Additionally, recipients should inform the grievant of the right to file a discrimination complaint with an appropriate Federal agency, either simultaneously with
Sexual Harassment Guidance, OCR identified a number of elements in evaluating whether a school's grievance procedures are prompt and equitable, including whether the procedures provide for:

- Notice to students, parents of elementary and secondary students, and employees of the procedure, including where complaints may be filed;
- Application of the procedure to complaints alleging harassment carried out by employees, other students, or third parties;
- Adequate, reliable, and impartial investigation of complaints, including the opportunity to present witnesses and other evidence;
- Designated and reasonably prompt timeframes for the major stages of the complaint process;
- Notice to the parties of the outcome of the complaint; and
- 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.17

Importantly, OCR states that “[a] grievance procedure . . . cannot be prompt or equitable unless students know it exists, how it works, and how to file a complaint. Thus, the procedures should be written in language appropriate to the age of the school's students, easily understood, and widely disseminated.”18 OCR further states that “[m]any schools also provide an opportunity to appeal the findings or remedy, or both.”19 However, OCR does not specifically include appeal rights among the elements it recommends in evaluating whether a recipient’s procedures are prompt and equitable.

(i) Procedures as Written

UK’s Administrative Regulations (AR) apply to governance of the entire institution. Human Resources policies apply specifically to employees, and are written in accordance with the AR. UK’s Title IX grievance procedures for students, employees and staff are embodied in its Discrimination and Harassment Procedure in support of the University’s AR 6:1, dated August 2010.20 UK internal discrimination procedures are consistent with NASA regulations and relevant ED OCR requirements in that they:

- prohibit discrimination and harassment based on sex;
- define relevant terminologies;
- provide reasonable timeframes for the completion of intermediary steps in the process (e.g., investigative report completed within 90 days of receipt of allegation, final report sent to the Provost within 30 days of reviewing body’s receipt of investigative report); and
- provide both the complainant and the respondent an opportunity to present relevant information, consistent with OCR’s recommendation for ensuring adequate, reliable, and impartial investigation of complaints.

As stated above in the discussion on Title IX coordinator contact information dissemination, information regarding the filing of discrimination complaints, including contact information for IEEO, as well for the filing of an internal grievance or after the unsatisfactory resolution of a grievance. See also, U.S. Department of Education, Office for Civil Rights, “Revised Sexual Harassment Guidance: Harassment of Students by School Employees, Other Students, or Third Parties,” (Jan. 19, 2001), § IX. Prompt and Equitable Grievance Procedures (accessible at http://www.ed.gov/about/offices/list/ocr/docs/shguide.html.) (OCR Revised Sexual Harassment Guidance).

17 OCR Revised Sexual Harassment Guidance, § IX. Prompt and Equitable Grievance Procedures (citations omitted).
18 Ibid.
19 Ibid.
OCR in Washington, is electronically disseminated annually via the Office of the Registrar’s Kentucky Bulletin to all University of Kentucky students. IEEO reports that complainants are not specifically advised that they can file a complaint with NASA, including the 180-day timeframe, if they receive unfavorable resolution in a grievance or appeal process. Reference to other Federal funding agencies is not among the considerations DOJ or OCR set forth in guidance on effective grievance procedures. Nonetheless, UK may wish to consider referencing these other agencies since much of the Federal financial assistance received by UK comes through them and not the Department of Education (see Recommendations below).

UK reports that nonacademic relations between the University and students enrolled in the Main Campus, Medical Center and in any UK program at another campus are covered under “Code of Student Conduct: Rules, Procedures, Rights and Responsibilities Governing Nonacademic Relationships,” which are adopted and may only be amended by the UK Board of Trustees. When a student raises an allegation against another student, the Office of the Dean of Students is involved and the final outcome is determined based on the University’s judicial process as applied in the Code of Student Conduct Procedures. NASA notes also that OCR considers the use of student conduct code procedures for addressing matters in which a student is the respondent to be appropriate. OCR states in this regard: “Title IX also permits the use of a student disciplinary procedure not designed specifically for Title IX grievances to resolve sex discrimination complaints, as long as the procedure meets the requirement of affording a complainant a "prompt and equitable" resolution of the complaint.”

For the reasons stated above, NASA finds that UK’s Discrimination and Harassment Policy and Procedures are consistent with NASA’s Title IX regulatory requirements regarding internal discrimination procedures. UK’s procedures provide a clear statement of the prohibition against discrimination and harassment, appropriately define these terms, communicate the process in clear and concise language, and provide reasonable timeframes for process elements such as investigations. Additionally, we note that UK’s procedures rely on a “preponderance of the evidence standard,” consistent with recent guidance from OCR.

(ii) Procedures as Implemented

When an employee or student allegation is against an employee of the University or another student in his/her status as an employee, the outcomes are recommended by IEEO following the investigation under the University’s discrimination and harassment procedures AR 6:1. Students found in violation of AR 6:1 in the context of employment on campus may be, for instance, disciplined or separated from their employment yet remain a student. The determination as to whether IEEO or the Dean of Students’ Office handles student issues, that is when the student is accused of discrimination or harassing conduct, is made based on the student's status at the time of the behavior being investigated. For example, an allegation involving a student who is employed in UK’s food services accused of sexually harassing another student.

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21 These procedures are accessible at http://www.uky.edu/StudentAffairs/Code/.
22 Ibid.
23 See U.S. Department of Education, Office for Civil Rights, “Dear Colleague” letter (April 4, 2011), stating: “[I]n order for a school’s grievance procedures to be consistent with Title IX standards, the school must use a preponderance of the evidence standard (i.e., it is more likely than not that sexual harassment or violence occurred). The “clear and convincing” standard (i.e., it is highly probable or reasonably certain that the sexual harassment or violence occurred), currently used by some schools, is a higher standard of proof. Grievance procedures that use this higher standard are inconsistent with the standard of proof established for violations of the civil rights laws, and are thus not equitable under Title IX. Therefore, preponderance of the evidence is the appropriate standard for investigating allegations of sexual harassment or violence.”
employee on the job would be handled under AR 6:1. On the other hand, if the behavior reported is solely in the context of student activity it would be handled under the Student Code.

IEEO reports that, in determining whether alleged conduct constitutes harassment, the record as a whole is considered. The nature of the alleged conduct and the context in which it occurred is examined and evaluated to determine whether the totality of circumstances of the conduct created a violation of University policy. A prohibited act against any other member of the University community is subject to disciplinary action and appropriate sanctions up to and including termination or expulsion. Other resolutions include mediation, reprimand, probation, suspension, training/counseling, and no violation of University policy.

A student complaint of discrimination or harassment may be initiated by contacting any dean, director, faculty member, department head, manager, supervisor, or other individual with supervisory or administrative responsibility. Under the University’s procedures, any such individual who receives a complaint of discrimination or harassment is to report the allegation to the IEEO. Over the past five years the IEEO has handled 807 complaints. (See Table 1 below.) There have been no complaints in the ME Department during this time period.

Table 1. UK 5-Year Discrimination Complaint Breakdown

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Source: University of Kentucky, Office of Institutional Equity and Equal Opportunity.
b. Policy Dissemination

Relevant ED OCR and DOJ guidance also informed NASA’s assessment of UK compliance with the regulatory provision requiring dissemination of Title IX policy. This guidance clarifies the regulatory requirement. For example, OCR’s guidance emphasizes the need for recipient institutions to have “well-publicized” grievance procedures. In addition, OCR states, “without a disseminated [sexual harassment] policy and procedure, a student does not know either of the school’s policy against and obligation to address this form of discrimination, or how to report harassment so that it can be remedied.” Importantly, OCR states:

Distributing the procedures to administrators, or including them in the school's administrative or policy manual, may not by itself be an effective way of providing notice, as these publications are usually not widely circulated to and understood by all members of the school community. Many schools ensure adequate notice to students by having copies of the procedures available at various locations throughout the school or campus; publishing the procedures as a separate document; including a summary of the procedures in major publications issued by the school, such as handbooks and catalogs for students, parents of elementary and secondary students, faculty, and staff; and identifying individuals who can explain how the procedures work.

DOJ regulations also make Federal funding agencies and recipient institutions responsible for disseminating information materials, e.g., handbooks, manuals, pamphlets, to ensure program beneficiaries are aware of their rights pursuant to EO law.

As stated above in the assessment of Title IX coordinator contact information dissemination, information regarding the University policies under Title IX is disseminated thoroughly through means of electronic and print media. Importantly, UK’s Discrimination and Harassment Procedures are easily accessible from the IEEO Web site, which is relatively easily found from the University’s home page. A simple search for the word “discrimination” takes the browser directly to the IEEO page. In this regard, NASA finds that UK’s efforts are consistent with guidance interpreting the NASA Title IX regulatory requirements for policy dissemination (see “Compliance Assessment” below).

NASA notes, however, that both ME Department students and faculty interviewed stated that they did not have specific knowledge of the processes for filing complaints. A majority indicated that they felt confident that they would know “where to look” online should the need arise. NASA’s reviews typically show a low level of knowledge about discrimination and harassment processes, which suggests that interviewees have not had occasion to avail themselves of the procedures. Nonetheless, UK may wish to consider additional policy dissemination efforts regarding its NASA funded programs (see “Recommendations” below).

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26 Ibid., § V(D), “The Role of Grievance Procedures.”
27 Ibid., § IX. Prompt and Equitable Grievance Procedures (emphasis added).
28 Public dissemination of Title VI information, 28 C.F.R. § 42.405(c).
29 See Section I.A.1.a, above.
2. **Recommendations**

   a. *Enhancements to Internal Grievance Procedures.* UK may wish to consider referencing other Federal funding agencies in addition to ED OCR as direct points of contact for filing discrimination complaints externally. Since much of the Federal financial assistance received by UK comes through these agencies, they have a stake in ensuring equal opportunities are afforded to all at UK. Information regarding filing such a complaint with NASA is provided at: [http://odeo.hq.nasa.gov/documents/nondiscrimination.pdf](http://odeo.hq.nasa.gov/documents/nondiscrimination.pdf).

   b. *Dissemination of NASA's Title VI/Title IX Brochure.* UK, through the IEEO, may wish to fully disseminate among academic departments receiving NASA financial assistance a NASA brochure on nondiscrimination and equal opportunity for beneficiaries of NASA assisted programs, both electronically and in print. These steps are consistent with guidance interpreting the NASA Title IX regulatory requirements for policy dissemination.30

3. **Promising Practices**

   a. *Policy on Sexual Assault.* UK has a policy on sexual assault and violence separate and apart from its policy and procedures for sex discrimination and non-violent harassment. This is important because it sends a clear message to the campus community that UK will not tolerate sexual violence on campus and that it has in place appropriate policy and procedures to handle such violence should it occur. This is consistent with recent ED OCR guidelines for addressing these issues, discussed above. Importantly, UK’s Policy on Sexual Assault, Stalking, and Relationship Violence, issued in January 2009, provides clear definitions of prohibited acts, and multiple avenues for raising complaints, including the University’s Violence Intervention and Prevention Center. NASA commends UK for issuing this policy well before ED OCR’s guidelines were issued in April 2011.

   b. *Coordination Between Offices with Grievance Procedure Roles and Responsibilities.* At the beginning of each academic year, IEEO convenes University officials from the Dean of Students Office, Academic Ombuds Office, Disability Resource Center, and Office of Residence Life to discuss handling allegations of discrimination and harassment. This practice has worked extremely well over many years. IEEO staff also work very closely with University academic administrators and Human Resources Employee Relations on a continuous basis, and serve as Institutional Representative to the Kentucky Council on Postsecondary Education. According to IEEO, the annual meeting before each academic year reinforces UK’s commitment to equal opportunity for all members of the campus community and helps to ensure that everyone involved in student complaints/issues/affairs knows who needs to be involved and what needs to be done when any student makes a complaint of discrimination or harassment.

C. **Self-Evaluation**

1. **Compliance Assessment**

   Regulatory requirements and findings of fact are set forth as part of the compliance assessment. The NASA Title IX regulations required recipient institutions to conduct a Title IX Self-Evaluation regarding admissions and treatment of students by September 29, 2001, and to keep the Self-Evaluation on file for three years.31 While UK is not obligated to conduct a further Title IX Self-Evaluation, such evaluations are very helpful to ensure, for example, that selection criteria and academic practices do not adversely impact

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30 This publication is accessible at [http://odeo.hq.nasa.gov/documents/nondiscrimination.pdf](http://odeo.hq.nasa.gov/documents/nondiscrimination.pdf) and hard-copies may be ordered upon request by contacting NASA ODEO.

31 Self-evaluation, 14 C.F.R. § 1253.110(c).
students on the basis of gender. They also provide an opportunity to evaluate trends over time and to develop mechanisms for proactively addressing emerging issues.

UK’s response to the NASA information data request under the instant review constitutes a solid beginning to a Title IX self-evaluation in the key area of admissions and enrollments of students. The University compiled student participation rates (including applications, matriculations, hires, enrollment, financial assistance, departures, and degrees earned) by gender. UK compared its ME female student enrollment rates with 17 comparator schools, at both the master’s and doctorate levels. At both levels, UK ranked 12th out of the 18 schools. UK stated that the disparity between male and female students’ participation in ME was not because of discrimination but because engineering is a predominantly male discipline. UK also cited its admissions requirements (primarily grade point average (GPA) and test scores) as objective and nondiscriminatory.

With regard to treatment of students, student climate surveys and other instruments that assess student perceptions of fair treatment can be valuable Title IX self-evaluation tools, if results are available by gender. In its written response to NASA’s request for information pertaining to self-evaluation, UK cited the campus climate surveys conducted annually by the Office of Institutional Research, Planning and Effectiveness (IRPE).

NASA looked at the IRPE Web site and found that a questionnaire is administered annually to graduating seniors to evaluate their satisfaction with instruction, programs, and services. The Web site provides overall survey results for graduating seniors for each academic year since 1997-1998. Results are also provided by College, including the CoE, for each academic year since 2001-2002. Results are provided by Department, including ME, within the CoE for only academic year 2008-2009.

The IRPE surveys of graduating seniors provide a wealth of information, including many questions that could greatly benefit a Title IX self-evaluation. Examples of relevant questions include: “Grading practices were appropriate and fair;” “Faculty gave helpful feedback on my academic progress;” “Faculty treated students with respect;” “I would recommend my major program to other students;” and “Faculty were accessible outside of the classroom.”

Although the survey asks student respondents to identify their gender, the online results of the surveys are not disaggregated by gender. During NASA’s interviews with faculty, there was no indication that survey results had been used to identify potential gender differences. Such an examination by ME, the CoE, and IRPE could greatly inform the Department and College’s efforts to ensure nondiscrimination on the basis of gender.

2. Recommendations

a. **Visible Leadership on Gender Equity at the Departmental Level.** The Department should meet with IRPE to discuss student survey results for ME by gender, if such data are available. The Department stated that the low enrollment rates of women in the program are the result of the national shortage of women in mechanical engineering. However, since the enrollment rate of women in ME is lower at UK than the average for comparator schools identified by UK, it would be instructive to find out whether male and

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32 14 C.F.R. § 1253.110(c).
33 UK response to NASA’s information request, March 2011, Tab III.B.2.
34 UK response to NASA’s information request, p.16.
35 Ibid.
36 Available at: http://www.uky.edu/IRPE/students/surveys/grad_sr.html.
female students differ in their perceptions of fair treatment. The fair and objective entrance requirements cited by UK (GPA and test scores) do not ensure equal treatment once students are enrolled.

b. **Periodic Title IX Self-Evaluations.** The ME Department should use results of the IRPE campus climate surveys described above, statistical trends of student admissions and enrollments, such as reported to NASA, and results of the CoE survey (see “Promising Practices” below), to periodically conduct comprehensive Title IX self-evaluations. NASA also offers its forthcoming publication, “A Guide for Conducting Title IX Self-Evaluations in STEM,” as technical assistance for conducting such an evaluation.37

3. **Promising Practices**

a. **IRPE Campus Climate Surveys.** As described above, the surveys provide a wealth of information and over ten years of results are shared on the IRPE Web site.

b. **CoE Survey Instruments.** The CoE retained a recent doctorate recipient in Higher Education Administration on a part-time basis to develop survey instruments to assess the effectiveness of College efforts and to develop programs to help the College strengthen its recruitment and retention of female engineering students.38

D. **Recruitment, Admissions, Enrollment, Degrees Earned, and Faculty Hires**39

1. **Compliance Assessment**

Regulatory requirements and findings of fact are set forth as part of the compliance assessment. The NASA Title IX regulations state that recipients may not discriminate on the basis of sex in admissions and recruitment.40 Consistent with this requirement, NASA reviewed ME’s student recruitment and admissions practices, as well as student departures and degrees earned. For graduate students, NASA also examined financial assistance awarded to students and success on the comprehensive and qualifying exams. The review was based on at least five academic years, and in some areas, six years of data were provided by the University.

a. **Graduate Admissions, Enrollments, and Departures**

An analysis of the graduate ME program (master’s and doctorate students combined) found that over a six year period (academic years 2006 through 2011), 97 of the 711 applicants were female (13.6 percent) and 72 of the 492 offers were made to female applicants (14.6 percent). Of the 97 female applicants, 74.2 percent received offers, compared to 68.4 percent of the 614 male applicants. However, of those who received offers, 26 percent of males enrolled, compared to a yield of 20.8 percent of females who received offers. The result for the six year period was 15 new female students, comprising 12.1 percent of new enrollments. Nine of those 15 new female students enrolled in a single year (academic year 2006). In the five years that followed, the average new enrollment of female graduate students in ME was only 1.2 females per year. At the master’s level, the average number of new female students in the five years following academic year 2006 was only 0.4 per year (none in three of the five years).

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37 The Guide will be published and disseminated to NASA grant recipients in June 2012. It will also be posted on the NASA Web site at: [http://odeo.hq.nasa.gov/](http://odeo.hq.nasa.gov/).
38 UK response to NASA’s information request, p.5.
39 All data in this section was provided by the University in response to NASA’s information request.
40 Admission, 14 C.F.R. §1225.300; Recruitment § 1253.310.
In terms of overall enrollment in the graduate program, 11.7 percent of ME enrollments during the six year review period were female and 88.3 percent were male. Female participation was lowest in 2008-2009 at 8.3 percent and highest in 2010-2011 at 13.9 percent. Department officials interviewed by NASA repeatedly stated that female participation in the program was consistent with UK’s comparator schools. However, the ratio of women in the graduate ME program at UK was actually below the average of its comparator schools for the four years of comparative data provided by UK. At the master’s level, the average ME female enrollment for the comparator schools was 13.2 percent, compared to 11.6 percent at UK. At the doctorate level, the average female ME enrollment for the comparator schools was 13.8 percent, compared to 12.0 percent at UK.41

The above data suggest that ME should undertake targeted recruitment efforts to expand the number of women applying to the program. ME officials stated in their response to NASA’s information request and during interviews that the Department does “relatively little in the way of formal recruiting” because it generally has “far more applicants than [it] can accept.”42 Although 13.6 percent of the applicants were females, their low yield rate has resulted in an enrollment rate for females that is below the average of UK comparator schools. In addition, ME should try to find out why female students receiving offers are less likely to enroll than male students. It was widely assumed by those interviewed that the female students received better offers elsewhere, but that was admittedly speculative. Follow up with applicants who decline offers would help assure the Department that the reasons are not related to gender.

NASA examined departure rates of graduate students from ME, including those who left the Department and those who left UK. Female students’ departure rate (9.5 percent) was lower than their enrollment rate (11.7 percent), while male students departed at rates above their enrollment percentages (90.5 percent vs. 88.3 percent). Reasons for voluntary departures were not identified by UK. None of the departures was involuntary, e.g., due to suspensions.

b. Graduate Financial Assistance, Exams, and Degrees Earned

NASA reviewed six years of financial assistance provided to graduate students, including fellowships, research assistantships (RAs), and teaching assistantships (TAs). Female ME students received 23.5 percent of the fellowships, well above their overall enrollment rate (11.7 percent) for the six year period. They also received 14.1 percent of the TAs and 8.6 percent of the RAs. Combining the three types of assistance, female graduate students received 13 percent of the financial assistance, which is above their participation rate in the Program.

NASA looked at student success on the qualifying and dissertation exams, disaggregated by gender. Since all students who took the exams passed on their first try, this was not an area of concern for NASA.

A final indicator of female participation in the graduate program examined by NASA was the percent of degrees awarded to male and female students over a five year period (2006-2010). Women earned 14 of 91 master’s degrees (15.4 percent) and four of 33 doctorate degrees (12.1 percent), for a combined total of 18 of 125 advanced degrees (14.5 percent). The total percentage of degrees earned by female graduate students is above their enrollment rate, a good indicator that women have been succeeding in the program. However, NASA is concerned that this success is being carried by the earlier years of the period reviewed. In the last two years (2009 and 2010) of data provided by UK, no women earned advanced degrees in ME.

41 UK response to NASA’s information request, Tab III.B.2. Note: UK provided four years of data for ME and its comparator schools, from 2004 through 2008, resulting in slightly different averages of women at UK than in the six years of data provided to NASA for the ME program.
42 UK response to NASA’s information request, p.7.
out of the 25 degrees awarded (10 doctorate, 15 master’s).\textsuperscript{43} No explanation for the recent dearth of
degrees earned by women was provided by ME, other than perhaps the end of the Kentucky Scholarship
Program a few years earlier. NASA heard that the Scholarship Program used to attract a lot of female
students from India who are no longer enrolling due to lack of funding.

c. Undergraduate Admissions, Enrollments, and Degrees Earned

From 2006 through 2011, the ME undergraduate program received 1,728 applications from students
interested in an ME major, including 177 female students (10.2 percent). Students were admitted if they
met the requirements (2.5 GPA or above and appropriate coursework). UK admitted 152 of the female
applicants into the program (10.4 percent of total admitted). About half of the female students who were
admitted ultimately enrolled (74, or 9.3 percent of all new enrollments). The yield for female applicants
(enrollments divided by admitted) was 48.7 percent, compared to 54.9 percent for male applicants.

NASA is concerned with the undergraduate admissions and enrollment data for several reasons. The initial
application rate of female undergraduate students (10.2 percent) is lower than the national average of
dergraduate ME majors (12.0 percent).\textsuperscript{44} The percentage of those who ultimately enrolled (9.3
percent) is even lower. This is troublesome because UK has made a concerted outreach effort to interest
Kentucky middle and high school girls in engineering (see Promising Practices below). Secondly,
according to ME officials, the undergraduate program is a major source of applicants for their graduate
program. This being the case, the lower than average ratio of female ME majors in the undergraduate
program is a likely contributor to the lower than average ratio at the graduate level.

For the five year period reviewed by NASA, females earned 11.1 percent of the undergraduate ME degrees.
This average was raised considerably by the comparatively large number/percent of women who earned
ME degrees in 2009-10 (19 degrees earned, for 17.6 percent of the total). Enrollment data for women in
the undergraduate program in recent years (8.8 percent for 2009-2011) would seem to indicate that the
percent of bachelor degrees earned in ME by women is likely to decline for the next few years.

d. Faculty Hires

At the time of NASA’s campus visit, UK had 36 faculty members, including professors, lecturers, adjunct,
and research professors. Six of the 36 faculty members were female (16.7 percent), a relatively high
number for a mechanical engineering department. Several faculty members (both male and female)
interviewed by NASA stated that the presence of women on the faculty was important for the success of
female students.

According to interviews with ME faculty, the Department had only two female professors for many years,
until around six years ago. The current CoE Dean has been very proactive about hiring female faculty and
has addressed the dual career challenge by hiring several couples over the years (see “Promising Practice”
on page 21). The Department has also, on occasion, been able to take advantage of an “opportunity hire,”
which is funding from the College for a faculty hire that helps to increase diversity.

\textsuperscript{43} UK response to NASA’s information request, Tab I.B.2.h.
\textsuperscript{44} National Science Foundation, National Center for Science and Engineering Statistics (NCSES), Science and
National average of B.S. degrees earned in ME 2006 through 2009 was used to compare with UK data.
2. Recommendations

a. Periodic Examination of Student Data by Gender. The ME should conduct periodic examination of student data (such as was compiled for NASA’s review) to regularly assess trends of male/female participation in the program. If negative trends are noted and persist over time, the Department should investigate for root causes and take appropriate actions to ensure equal opportunity on the basis of gender. A good example of this is the zero graduate degrees earned by women in 2009 and 2010. ME should assess reasons for this outcome and take actions to ensure reversal of the trend.

b. Targeted Recruitment for Female Graduate Students. ME should seek to increase the number and percentage of female applicants to the graduate program (prior to making offers). For example, the Department should develop a strong and consistent presence at the annual national SWE Career Fair, as well as regional SWE events, to convey their commitment to gender diversity in the program. Participation in SWE events would enable faculty and prospective students to establish face-to-face contacts.

c. Follow Up With Applicants who Decline Offers. ME should make a concerted effort to follow up with applicants who decline offers to determine whether/how their reasons can be addressed, and to ascertain whether there is a gender difference in the reasons for applicants declining offers.

3. Promising Practices

a. Project Lead the Way. Project Lead the Way (PLTW) is a CoE program that provides outreach to approximately 90 Kentucky middle schools and high schools to encourage students in STEM. PLTW is not just for girls, but one of its goals is to prepare a more diverse group of students for success in engineering and engineering technology. PLTW creates partnerships between schools and industry and provides teachers with a hands-on, real-world curriculum.

b. Women in Engineering Fellowship. The graduate school offers “Women in Engineering” fellowships. ME has been successful in identifying highly qualified female candidates for the fellowships and submitting their applications.

c. UK Society of Women Engineers. The UK SWE Chapter is a leader on campus and organizes the main undergraduate career fair for the CoE. UK SWE is active in outreach activities such as “Bring a Girl to Engineering Day” and visits local schools to promote engineering. UK SWE provides a support network for undergraduate females considering engineering as a major by sending a letter to incoming female freshman who are planning to attend the UK CoE in the fall. The letter tells students about the SWE organization, encourages them to attend the first SWE meeting in the fall and invites them to join the Society. Each year, UK SWE hosts an event, called “Death by Chocolate With the Dean,” which provides an opportunity for new engineering students to meet with other incoming engineering students, upperclassman, CoE faculty, and the Dean. ME supports SWE events and participates in the Death by Chocolate meeting.

d. Opportunity Hires. The CoE has occasionally been able to support “opportunity hires” to increase faculty diversity, including female faculty in ME.

E. Program Administration and Academic Environment

1. Compliance Assessment

Regulatory requirements and findings of fact are set forth as part of the compliance assessment. The NASA Title IX regulations provide that a recipient shall not, on the basis of sex, exclude from participation
in, deny the benefits of, or otherwise limit any person in any advantage or opportunity pertaining to academic, extracurricular, research, occupational training, or other education program or activity operated by the recipient.\textsuperscript{45} The Title IX regulations explicitly state that a recipient may not discriminate on the basis of gender with regard to career counseling or guidance.\textsuperscript{46}

The NASA Title IX regulations include a detailed provision on matters pertaining to marital and parental status.\textsuperscript{47} Generally, under the regulations, a recipient may not apply any rule concerning a student's actual or potential parental, family, or marital status that treats students differently on the basis of sex. Regarding pregnancy and related conditions, the regulations state that a recipient may not discriminate against any student, on the basis of the student's pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery, unless the student requests voluntarily to participate in a separate portion of the program or activity of the recipient.

The regulations require that pregnancy and childbirth be treated in the same manner and under the same policies as any other temporary disability or physical condition.\textsuperscript{48} Further, Title IX requires that in the case of a recipient that does not maintain a leave policy for its students, or in the case of a student who does not otherwise qualify for leave under such a policy, “a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery from the termination of pregnancy as a justification for a leave of absence for as long a period of time as is deemed medically necessary by the student's physician, at the conclusion of which the student shall be reinstated to the status that she held when the leave began.”\textsuperscript{49}

In addition, the Title IX regulations incorporate, by reference, the NASA Title VI regulatory provision prohibiting a recipient from utilizing methods of administration which have the effect of defeating or substantially impairing accomplishment of the objectives of the program for an individual based on sex.\textsuperscript{50}

On the basis of these provisions, the compliance team examined UK and ME program administration and its impacts, both positive and negative, on the overall academic environment of ME, including academic advising, career counseling, research participation, classroom experiences, parental or marital status (“family friendly”) policies, and physical safety of the program environment.

\textit{a. Academic Advising and Career Counseling}

NASA examined the ME advising program, including policies and procedures, as well as student experiences and observations, to determine whether there was evidence of students being treated differently or otherwise limited, on the basis of gender. NASA specifically considered whether there were allegations of gender-related inappropriate conduct by faculty or graduate students in the advising setting. The review showed no evidence of any such conduct.

It is noteworthy that faculty and advisors shared consensus (as they have at other institutions NASA has reviewed) that, if they notice any differences at all between male and female students, it is that the women are more organized, better prepared, more communicative about the nature of their academic problems and concerns, and when discouraged by poor performance tend to blame themselves, whereas male students by and large will “blame the test” or another external factor. Overall, the confidence issue is one that the

\textsuperscript{45} Education programs or activities, 14 C.F.R. § 400(a), (b)(7).
\textsuperscript{46} Counseling and use of appraisal and counseling materials, 14 C.F.R. § 1253.425.
\textsuperscript{47} Marital or parental status, 14 C.F.R. § 1253.445 and 1253.530.
\textsuperscript{48} Admission, Prohibitions relating to marital or parental status, 14 C.F.R. § 1253.300(c)(3).
\textsuperscript{49} Marital or parental status, 14 C.F.R. § 1253.445 (b)(5).
\textsuperscript{50} Enforcement procedures, 14 C.F.R. § 605.
professional staff and faculty observed and commented on frequently in interviews (see Recommendations below for suggestions to UK ME about how the Department may wish to address the “confidence” issue).

b. Classroom Experiences and Research Participation

NASA’s examination of classroom experiences and research participation included a review of information provided by ME on academic requirements and research opportunities within the program. NASA’s review sought to determine whether, and if so the extent to which, students were treated differently or otherwise limited, on the basis of gender, with regard to research participation and classroom experiences. To this end, NASA’s interviews with ME faculty and students focused on the experiences of students in the classroom and lab.

Both faculty and students interviewed reported no observable differences in this context. All students interviewed, both male and female, described classroom and research experiences in which they had not observed or experienced any concerns relating to gender occurring in the ME program. All interactions between male and female faculty, TAs, and undergrads were reported to be respectful, appropriate, and without indications of gender bias.

c. Parental/Marital Status (“Family Friendly” Policies)

Regarding UK policies pertaining to parental and marital status, IEEO reports that the University has a parental leave policy for employees, including faculty and staff, that is consistent with relevant Title IX regulatory requirements in that it does treat pregnancy and childbirth in the same manner and under the same policies as any other temporary disability or physical condition. The University’s lactation guidelines apply to everyone, faculty, staff and students alike. However, as to parental leave for students, while it appears that the ME program has appropriately accommodated the need for parental leave for graduate students when it has arisen, there is no formal policy and these matters are handled on a case-by-case basis between the advisor and the student. Under Title IX regulations, it is therefore incumbent on the University and the program to ensure that, for students, pregnancy and childbirth provide justification for a leave of absence for as long a period of time as is deemed medically necessary by the student's physician, at the conclusion of which the student is to be reinstated to the status that she held when the leave began.51

As noted, at UK, sick leave for graduate students, including for pregnancy and childbirth, is left to the discretion of the advisor. NASA’s review showed no evidence that UK and the ME program are not operating in accordance with Title IX requirements in this regard. Nonetheless, statements by graduate students who said they are not clear on what the policies provide for, whether the policies extend to students, and that there is general vagueness surrounding the policies, do not send a message that requesting an accommodation is acceptable (see “Recommendations,” below).

d. Safety

Regarding UK policies and student experiences in the ME department regarding safety, NASA’s review showed no indication of limitations on ME program participation in any way related to gender. All students interviewed reported feeling safe on campus, with sufficient lighting, building security, and other efforts mentioned. These included, for example, frequent email crime alerts, campus night time escorts for transport, and evening shuttle availability.

51 Marital or parental status, 14 C.F.R. § 1253.445 (b)(5).
e. Overall Academic Environment

As to the overall academic environment, NASA’s review showed no evidence that any student was being treated differently or limited in his or her program participation based on gender, or that the program’s methods of administration are differently impacting students based on gender. Having conducted a number of onsite Title IX compliance reviews of science and engineering programs across the country, NASA has some level of comparison when it comes to the overall academic environment. Some programs reviewed have been uniformly described by program participants as being free of any perceivable differences along gender lines, with no instances of even subtle or unconscious gender bias described in program settings. That is indeed the theme that emerged in UK’s ME Department. There were no instances of inappropriate gender related conduct in the ME Dept. All interactions between male and female faculty, TAs and undergrads were reported to be respectful, appropriate, and without evidence of gender bias, subtle or otherwise.

2. Recommendation

Parental Leave Policies and Resources. It is not clear whether adequate steps are being taken to appropriately disseminate policy in this area, including the extent of coverage for students and student employees. IEEO should work with ME and other academic departments to develop strategies for direct dissemination of the wealth of information already available online regarding pregnancy and child care for UK employees, such as the Web page providing child care information for expectant parents at http://www.uky.edu/HR/WorkLife/childcare_expecting.html. IEEO also may wish to collaborate with Human Resources to clarify the available benefits for students employees, and also to develop similar information on pregnancy and child care for students, letting them know about available resources, especially where such resources differ from those available to employees.

3. Promising Practice

Dual Career Hires. ME has been able to make several “dual career” hires over the past several years thanks in large part to strong support from the Dean of CoE. The trailing spouse issue is a difficult challenge for many of the schools reviewed by NASA and UK is to be applauded for its success in this regard.

III. CONCLUSION

NASA finds UK to be in compliance with the Title IX procedural requirements regarding coordination, grievance procedures, policy dissemination, and self-evaluation efforts. NASA also finds that UK is in compliance with requirements to provide for methods of administration that do not differently impact or otherwise limit program participation of beneficiaries based on gender. The recommendations in this report are therefore designed to assist UK and ME to enhance existing efforts to ensure equal opportunities regardless of gender. Finally, NASA observed a number of promising practices of both the University and the ME program, particularly around education and awareness efforts regarding sexual harassment prevention. NASA has noted these in its report and plans to incorporate them into a future publication on promising practices for ensuring equal opportunities in STEM programs.
APPENDIX: SUMMARY LITERATURE REVIEW

In developing its Title IX onsite review program, NASA conducted a review of literature regarding gender and STEM programs, including Title IX policy and enforcement in the STEM context. The review continues to be updated as new research and analysis on gender and STEM emerges. It also continues to assist NASA to better understand concerns regarding gender and STEM and how Title IX compliance efforts can assist to address such concerns.

Reports and Studies on STEM

In general, the studies and reports NASA reviewed in the literature describe a broad range of gender-related issues in STEM. For example, the 2004 report of the U.S. General Accountability Office (GAO) (referred to above) described participation rates by gender, observing continued low participation for women in certain STEM programs, such as physics and some engineering disciplines. The GAO report also noted the greater drop-off of women as compared to men at every stage, from high school to doctoral programs. The report highlighted the need for steps to help address this, such as strong outreach efforts to increase the interest of younger students in the sciences. In addition, the report recommended that agencies with science missions, such as NASA and the U.S. Department of Energy, conduct Title IX compliance reviews to ensure that grant recipient programs are providing equal opportunity regardless of gender.


53 U.S. Government Accountability Office (GAO) report, Gender Issues: Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX (July 2004).
The NRC Report was itself based on a comprehensive literature review and site visits to four universities “recognized for successfully advancing and retaining women students, faculty or leaders.” The NRC report was a valuable tool to better understand women’s experiences in science, technology, engineering, and mathematics (STEM) studies and helped to guide NASA’s assessment under the instant review of promising practices regarding recruitment and advancement of women students in STEM programs. For example, the report identified the need to create and institutionalize a sustained commitment to diversity among university leaders and administrators. This commitment should be demonstrated by dedicating resources to that effort, e.g., Women in Engineering programs, and through ensuring visibility for women students and faculty in communications materials and the Department’s Web site, which can help to show that the program is welcoming and inclusive of women. Another key strategy is to extend outreach to students at the K-12 and undergraduate levels in the form of summer science and engineering camps, lecture series, career days, and mentoring programs.

The NRC Report indicated that specific retention tools such as curricular modifications and “family friendly” policies might also be of assistance in increasing the numbers of women in STEM programs. For example, courses designed to emphasize the societal benefits or “real-world” applications of engineering have broadened the appeal of engineering studies, helping to create more diverse engineering student populations. Regarding “family friendly” policies, the UC Berkeley Report notes that to be in compliance with Title IX, recipients must: 1) treat pregnancy as a temporary disability for purposes of calculating job-related benefits, including any employer-provided leave, and 2) provide unpaid, job-protected leave for “a reasonable period of time” if the institution does not maintain a leave policy for employees. The UC Berkeley report also notes that, to help address family and care giving issues, institutions should have in place family responsive policies, benefits, and resources, including time-based policies and benefits such as stopping the clock (i.e., tenure-clock extension), various child care supports such as on- and off-campus centers, monetary supplements such as tuition remissions, and other resources such as lactation rooms.

Overall, the UC Berkeley Report, a major study on experiences of women scientists, found that unfriendly family policies—not lack of interest or commitment—are what turn many women away from academic science. Moreover, the report recommended universities adopt family supportive policies for all classes of researchers, not just faculty members, noting that graduate-student researchers and postdoctoral scholars receive the most limited benefits and yet are arguably the most important people affecting the future of U.S. science. In fact, the report found that this is the biggest leak in the pipeline: the point at which women who have received their Ph.D.s or are working as postdoctoral scholars are making the critical decision of whether to continue their careers in academic research. According to the report, too many of them are deciding not to, often because of their interest in starting a family.

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54 NRC Report, Summary, p.2.
55 NRC stated that it “sought to move beyond yet another catalogue of challenges facing the advancement of women academic in STEM to provide a document describing actions actually taken by universities to improve the situation for women.” Ibid., Preface, p. vii.
56 Ibid., chap. 1, p.8.
57 Ibid., chap. 2, p.47.
58 Ibid.
61 Ibid., p. 6.
Another important tool for STEM departments is training to raise awareness among faculty and students on gender issues such as sexual harassment prevention. NASA’s Title IX compliance review program has shown a number of instances where STEM departments may benefit from targeted training to address issues relating to inappropriate gender-related conduct occurring in program settings, such as study groups, labs, and field trips.

The NRC report also described issues that “may not be anticipated” influencing the working environment of the laboratory. For example, personal safety issues may be different for women working alone at night in a lab. One faculty member interviewed by NRC commented that whereas general safety issues had been “background noise,” as he put it, the issue of personal safety became a much higher priority when women students joined the lab.

Title IX compliance reviews are also recommended in the literature as a means of addressing environmental issues that may negatively impact women in STEM. For example, the AAUW report Why So Few? states “Title IX reviews can help identify institutional policies and practices that negatively, and in some cases inadvertently, affect personal choices in gender-specific ways. Simply put, Title IX can help create a climate where women and men of similar talent who want to be scientists or engineers have equal opportunity to do so.”

**Physics Programs**

**American Institute of Physics (AIP) Survey Results**

To be aware of experiences of women in the physics context, NASA reviewed data collected by the American Institute of Physics (AIP). This data showed some of the concerns of women physics students about their program experiences. For example, a 1993 AIP “climate” survey of physics programs showed that only 27 percent of women graduate student respondents in the U.S. believe that their department encourages self-confidence.

In its 2001 survey report Women Physicists Speak, AIP observed that: “[w]omen . . . face barriers in the form of strongly held beliefs that [they] are incapable of doing good science” and that “[c]onfidence in one’s ability can be especially important for female students when they confront the negative effects of sexism, which can cause women to question their ability or their right to pursue advanced degrees.”

And, in its 2006 report, Women Physicists Speak Again, the AIP continues to identify climate as one of the top reasons women physicists give for being discouraged about physics.

**American Physical Society Site Visit Program**

62 NRC Report., chap. 4, p. 78
63 Ibid., chap. 2, p. 41.
64 AAUW Report, p. 13 (citations omitted).
65 See Jean M. Curtain, Geneva Blake, and Christine Cassagnau, American Institute of Physics, “The Climate for Women Graduate Students in Physics,” Journal of Women and Minorities in Science and Engineering, vol. 3, pp. 95-117 (1997); see also ME Program Summary
In its literature review, NASA also relied on the summary report of the American Physical Society (APS) Committee on the Status of Women Site Visit Program. The report, “Improving the Climate for Women in Physics,” provides valuable information gathered by APS about women’s experiences in physics programs, based on site visits to over 40 university physics departments across the country since 1990. For each site visit, APS reviews quantitative and qualitative information to assess the climate for women at the host facility.

The findings generated from APS’s site visit program provide valuable context for gender equity issues in physics programs. According to APS, problems commonly experienced by women in the physics departments reviewed include instances of inappropriate behavior and attitudes such as pictures and computer printouts with inappropriate images of women in teaching assistants’ communal offices; thesis advisors who call their female students "honey" or the equivalent and “a prevalent assumption that all rewards obtained by women are "only because you are a woman." APS found that the long term effects of these experiences “takes much of the enjoyment out of the graduate experience of many female physics students and helps to explain why only the very committed and the very tough remain in physics.”

However, APS reports that the climate for women varies dramatically among the departments it has reviewed, with many positive climates reported. Based on its Site Visit Program, APS finds that important ingredients for a positive climate can include: at least several active, mainstream female faculty; a group of female students who interact regularly with each other; a supportive department chair who listens and responds to concerns of students; and efforts to create a safer physical environment.

Overall Recommendations

What the research literature tells us is that there are some proactive steps that STEM programs can take that are consistent with the purpose and intent of Title IX. A small sampling of these steps, representative of the larger themes in the literature on women and STEM, include:

- Engaging in targeted outreach and recruitment;
- Establishing mentoring programs;
- Sustaining strong partnerships with campus professional organizations, such as the Society of Women Engineers;
- Adopting policies that enable faculty, students and employees to combine work, family and other personal responsibilities.
- Conducting on-going self-evaluation efforts consistent with Title IX regulations, that is, a focus on admission and treatment of students, and employment.

Overall, NASA has found that Title IX compliance efforts of educational institutions can help to address such concerns regarding gender and STEM. For example, effective Title IX coordination can establish collaborative partnerships between the Title IX Coordinator’s office and academic departments, ensuring, among other things, appropriate training for faculty and students to raise awareness on gender issues, e.g., harassment and gender bias. Effective Title IX coordination may also ensure that individuals fully understand the process for addressing discrimination concerns, and how to avail themselves of it.

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69 APS Program Summary.
70 Ibid.
71 Ibid.
72 Ibid.
73 Ibid.
In addition, periodic self-evaluation can greatly assist efforts to identify concerns regarding admission and treatment of students, and help programs to address problem areas in a host of specific areas, from stronger outreach and recruitment efforts, to greater transparency in program policies and practices, to program participants’ perceptions of the program environment. NASA has found that the process of a Title IX review itself provides schools with an excellent opportunity to step back and assess their programs in these respects.