



University of California, Los Angeles Title IX Compliance Report



Department of Earth and Space Sciences

**Office of Diversity and Equal Opportunity
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I. INTRODUCTION

NASA conducted a compliance review of the University of California Los Angeles (UCLA or the University) Department of Earth and Space Sciences (ESS, 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, extracurricular, research, occupational training 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 conducted this compliance review pursuant to its Title IX regulations, which provide for periodic review of NASA grant recipients.² NASA's Title IX compliance program received further impetus with the July 2004 recommendation of the Government Accountability Office (GAO) that Federal agencies conduct onsite compliance reviews.³ In addition, the NASA authorizing legislation requires NASA to conduct at least two Title IX compliance reviews annually.⁴ The Agency has been involved in many Title IX related compliance activities since the regulations were issued in August 2000, conducting a number of limited-scope "desk-audit" and 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 UCLA's compliance with NASA Title IX regulations, specifically to:

- assess the Title IX Coordinator's function and responsibilities; confirm the existence of Title IX policy and procedures and the quality of their dissemination; to evaluate Title IX grievance procedures and the effectiveness of their implementation; and to review Title IX self-evaluation efforts, specifically regarding the UCLA programs under review; and
- evaluate the Department's provision of equal opportunity on the basis of sex in the following areas: student recruitment, admissions, enrollment, retention, faculty recruitment efforts, academic advising, research participation, classroom experiences, policies/procedures and student experiences relating to parental/marital status ("family friendly" policies), and physical safety of the Program environment.

¹ Title IX of the Education Amendments, as amended (20 U.S.C. §§ 1681-1688); Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 14 C.F.R. Part 1253; NASA Policy Directive 2081.1A, Subject: Nondiscrimination in Federally Assisted and Federally Conducted Programs of NASA - Delegation of Authority.

² See 65 Fed. Reg. 52,859 (Aug. 30, 2000). Enforcement Procedures, 14 C.F.R. § 1253.605 (incorporating compliance requirements of Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d)).

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).

Objective 2

To identify promising practices of the ESS Department designed to promote gender equity; to identify 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 diversity in the Program, including for both students and faculty.

C. Methodology

1. Pre-onsite Review Activities

NASA developed a Title IX compliance review plan (CRP) to identify potential issues, relevant regulatory requirements, and the 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, the lead agencies on Title IX investigations.⁵

The CRP identified two focal points for compliance assessment: Title IX procedural compliance requirements and program administration (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 graduate students.

2. On-site Compliance Review Activities

NASA conducted an on-site review of the UCLA ESS Department on May 11-14, 2009. During its visit, NASA staff conducted one-on-one interviews with nine ESS faculty and staff members (all three of the female ESS faculty members, five of the male ESS faculty, including the ESS Department Head, and one female staff member), as well as the UCLA Title IX Coordinator. NASA also conducted one-on-one interviews with 11 ESS graduate students (five women and six men), and seven undergraduates (four women and three men).

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. Regulatory Requirements/Guidance

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.”⁶ The recipient must notify all students and employees of the Title IX Coordinator’s name, office address, and telephone number.

⁵ It was also formed, in part, by a Title IX literature review that NASA conducted to better understand concerns regarding gender and STEM, and ways to address such concerns, including Title IX compliance efforts in the STEM context. (See Appendix A for a summary of the literature review.)

⁶ Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(a).

2. Findings of Fact

The UCLA Title IX Coordinator is officially the University's Sexual Harassment and Title IX Officer. She heads up UCLA's Sexual Harassment Prevention Office. The Title IX Coordinator is a member of the Chancellor's office and reports directly to the Vice Chancellor of Legal Affairs.

3. Compliance Assessment

NASA's compliance assessment focused first on the Title IX regulatory requirement to disseminate contact information for the Title IX Coordinator and her office.⁷ In this regard, NASA notes that the Title IX Coordinator's name and contact information are readily available on the website of the Sexual Harassment Prevention Office. The office's website is readily accessible by conducting a Google search for "UCLA" and "sexual harassment." However, the Office is not particularly easy to find through any other means, unless one knows the name of the Title IX Coordinator. Moreover, virtually all of the information on the website pertains to sexual harassment. In this regard, NASA notes that, while sexual harassment prevention is a critical matter, the heavy focus on sexual harassment may obscure other forms of gender discrimination (see "Recommendations," below).

NASA's review revealed that, outside of the internet, the Title IX Coordinator's name, office address, and telephone number are not well disseminated. For example, this information does not appear anywhere in UCLA's Statement of Nondiscrimination, (which is published on page 627 of the 2009-10 General Catalog, pages 7-8 of the Graduate Student Financial Support for Continuing Students and in other publications). The statement does provide the name, office address, and telephone number of the Americans with Disabilities Act/Section 504 Coordinator.

Regarding ESS, while students interviewed during the onsite did not know the name or the office of the Title IX Coordinator, NASA has found in its Title IX reviews that this is to be expected at a large institution. In addition, none of the students interviewed stated that he or she had ever had occasion to report discrimination or harassment. Nonetheless, it appears that the UCLA Title IX Coordinator's office may need to take further steps to better ensure that students are provided with this contact information. (see "Recommendations," below).

While the NASA Title IX regulations do not provide further specificity regarding the role and effective functioning of the Title IX Coordinator, the U.S. Department of Justice (DOJ), which has oversight responsibility for all Federal Title IX compliance and enforcement activities, has provided additional considerations for Federal agencies evaluating recipient compliance with the Title IX Coordinator regulatory provision.⁸ These additional considerations appear in DOJ's document, "Questions and Answers Regarding Title IX Procedural Requirements" (Title IX Q&A).⁹ For purposes of this review, NASA focused on the following areas identified in DOJ's Title IX Q&A: 1) effective functioning regarding the administration and implementation of UCLA's Title IX grievance process; 2) the provision requiring the training of UCLA faculty and staff; and 3) the authority and access of the Title IX Coordinator to university senior leadership needed to effectively perform roles and responsibilities. NASA reviewed these roles and responsibilities in light of interviews with the Title IX Coordinator, review of information provided, and the breadth and depth of actions taken regarding this review.

⁷ 14 C.F.R. § 1253.135(a).

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>.

NASA finds that the Title IX Coordinator effectively performs her duties regarding the implementation and administration of the grievance process (see “Grievance Procedures” section, below). The Title IX Coordinator possesses the skills and competencies necessary for the effective administration of the grievance process and related activities, including an in-depth knowledge of the Title IX regulation, a thorough knowledge of UCLA’s Title IX grievance procedures and processes, including the filing and investigative stages, and knowledge of UCLA personnel policies and practices. She possesses a ready knowledge of the details pertaining to complaint processing, e.g., determining jurisdiction, as well as the approximate number of grievances filed per year and the number currently in the system. In addition, she maintains a complaints database that has helped her to observe complaints trends.

Importantly, it appears the Title IX Coordinator possesses the authority and access to top institutional leadership needed to effectively perform her duties. For example, the Title IX Coordinator is part of the Chancellor’s office and reports directly to the Vice Chancellor of Legal Affairs. In addition, investigative reports prepared by the Title IX Coordinator’s office are reviewed by the Vice Chancellor for Academic Personnel, with whom the Title IX Coordinator interacts on a daily basis while investigations are pending. In addition, she interacts with the President and other UCLA leadership on a frequent basis. According to the Title IX Coordinator, being a part of the Chancellor’s office communicates a high level of appointment to the UCLA community. This is critical to her effective functioning in the role of Title IX Coordinator.

NASA also examined the training efforts that the Title IX Coordinator and partner offices undertake on a regular basis, since training is a critical part of the tasks and responsibilities of Title IX coordination efforts.¹⁰ The Title IX Coordinator stated that she spends about 25 percent of her time on training activities. For example, she provides training in academic courses, including a seminar discussion for a course in the Women’s Studies Department on gender discrimination.

In the fall, she runs a series of training programs geared toward teaching assistants (TAs), as she has found that TAs frequently play a role in Title IX investigations, often as witnesses. Importantly, the training developed by the Title IX Coordinator for graduate TAs regarding subtle bias that may occur in the classroom is very detailed and substantive. It provides specific examples of subtle bias to watch out for in the classroom, such as calling on students of one gender more frequently than the other, or responding more attentively to students of one gender than the other. Such specific examples may help faculty and TAs to be more aware of issues relating to bias and how it can impact classroom interactions (see also “Promising Practices,” below).

In addition, the training materials provide specific information on available campus resources, such as the Ombuds office. NASA notes, however, that the training materials do not include contact information for the Title IX Coordinator’s office (see “Recommendations,” below).

4. Recommendations

a. Name of the Title IX Coordinator’s Office. As the Title IX Coordinator’s role and responsibilities extend beyond sexual harassment to cover other forms of gender discrimination, UCLA may wish to consider revising the name of the office to reflect this.

b. Broader Dissemination of Title IX Coordinator Contact Information. The Title IX Coordinator’s office should expand its efforts to ensure that contact information for the office and the Title IX Coordinator is broadly disseminated, for example, in training materials provided during TA trainings. While contact information for the Title IX Coordinator is available online through the Office of Human Resources, UCLA

¹⁰ See Title IX Q&A, “Designation of Title IX Coordinator – What factors should a recipient consider in designating a Title IX Coordinator?”

should ensure broader dissemination of this information through posting on the Diversity website, inclusion in the Statement of Nondiscrimination, and via periodic, e.g., annual, email messages to students and faculty.

5. Promising Practice

Strong Title IX Coordinator Role in Education and Awareness Activities. It is clear that the Title IX Coordinator plays an important role in the development and implementation of training resources to students, in both the orientation and academic course settings. The trainings developed by the Title IX Coordinator's office are imaginative and innovative, as well as substantive and detailed. For example, the training module "Avoiding Sexual Discrimination in the Classroom" includes specific examples of bias in the classroom setting, e.g., habitually recognizing and calling on men more often than women in class discussions, interrupting female students more often than males, or allowing others in the class to do so. Also, the breadth and depth of the training across the campus community, from TA orientation to Women Studies Program courses, is exemplary.

B. Adoption of Title IX Grievance Procedures and Title IX Policy Dissemination

1. Regulatory Requirements/Guidance

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.¹¹ 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.¹²

2. Findings of Fact

a. Grievance Procedures

UCLA's Title IX grievance procedures are embodied in UCLA Procedure 230.1: Student Grievances Regarding Violation of Anti-Discrimination Laws or University Policies and Sex, Ethnic, or Disability Discrimination (Student Grievances). These procedures were issued in 1978, and updated in 1998. The procedures are laid out with a Purpose, Background, Definitions and Informal and Formal Grievance procedures. The procedures specifically reference Title IX as one of the anti-discrimination laws covered. In addition, UCLA has a separate set of procedures for sexual harassment, UCLA Procedures 630.1: Responding to Reports of Sexual Harassment (see "Promising Practices," below).

b. Policy Dissemination

UCLA policies and procedures pertaining to Title IX appear quarterly in student publications such as orientation materials and course catalogues. Also, UCLA's Statement of Nondiscrimination specifically delineates forms of discrimination prohibited by Title IX, such as sex, gender identity, pregnancy

¹¹ Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(b).

¹² Dissemination of policy, 14 C.F.R. § 1253.140.

(including pregnancy, childbirth, and medical conditions related to pregnancy and childbirth) and sexual harassment. In addition, the policies are available on-line at the UC President's Office website and on the UCLA Sexual Harassment Prevention Office website, although it appears they are much easier to find by visiting the latter.

3. *Compliance Assessment*

NASA's compliance assessment seeks to ensure that UCLA developed and is implementing procedures that afford grievants "prompt and equitable" resolution of student and employee complaints alleging any action that would be prohibited by the Title IX regulations.¹³ As the regulations do not provide any further specificity regarding the procedures, NASA consulted the U.S. Department of Education (ED) Office for Civil Rights and DOJ publications for additional guidance. For example, ED OCR states in guidance that "[a] grievance procedure . . . cannot be prompt or equitable unless students know it exists, how it works, and how to file a complaint."¹⁴

In addition, NASA's assessment of UCLA compliance with the regulatory provision requiring dissemination of Title IX policy was also informed by relevant ED OCR and DOJ guidelines.¹⁵ This guidance emphasizes the need for recipient institutions to have "well-publicized" grievance procedures.¹⁶ ED states that "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."¹⁷ DOJ regulations 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.¹⁸

Regarding UCLA's grievance procedures themselves, as the regulations do not specify a structure for the procedures, NASA looked to the DOJ Title IX Q&A for additional considerations on the basic components of effective, i.e., prompt and equitable, grievance procedures.¹⁹ Based on these considerations, NASA finds that the procedures are consistent with requirements set forth in the NASA regulations and with additional considerations provided by DOJ and ED. For example, the procedures are clearly and concisely stated, helping to make them accessible to a broad audience. The procedures clearly state the anti-discrimination laws covered, e.g., Title IX. Finally, the procedures include specific timeframes for when the University will complete actions associated with the process.

¹³ 14 C.F.R. § 1253.135(b).

¹⁴ 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).

¹⁵ See, e.g., U.S. Department of Justice Civil Rights Division, *Title IX Legal Manual* (Jan. 11, 2001), § V.E., p. 111 (accessible at <http://www.usdoj.gov/crt/cor/coord/ixlegal.htm>); OCR Revised Sexual Harassment Guidance.

¹⁶ See, OCR Revised Sexual Harassment Guidance, Preamble, "Enduring Principles from the 1997 Guidance."

¹⁷ OCR, Revised Sexual Harassment Guidance, § V(D), "The Role of Grievance Procedures."

¹⁸ Public dissemination of Title VI information, 28 C.F.R. § 42.405(c).

¹⁹ 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 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 Ibid. Additionally, recipients should inform the grievant 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.

NASA notes, however, that the procedures do not specifically state that students may file a complaint with a Federal funding agency such as the U.S. Department of Education, nor is the Department of Education Office for Civil Rights mentioned on the Title IX's Coordinator's office website as a resource, while the website does mention the U.S. Equal Employment Opportunity Commission (see "Recommendations," below). However, the Title IX Coordinator reports that this information is provided to complainants when they seek information from her office.

With respect to complaints filed under the procedures, the Title IX coordinator and the ESS Department report one complaint alleging sexual harassment by a staff employee, filed in July 2005. A violation of the University's sexual harassment policy was found to have occurred and disciplinary action was taken. The complaint was handled in accordance with the University's Sexual Harassment Policy and the grievance procedures. No other complaints of sex discrimination or sexual harassment were filed in the ESS Department during the time frame of NASA's review (the past five years), and NASA does not view allegations of harassing conduct within ESS as a concern under the instant review.

Regarding dissemination of Title IX policy and procedures, a review of UCLA's website shows that UCLA sexual harassment policy and procedures are readily accessible online through the Sexual Harassment Prevention Office website, such that individuals wishing to raise an allegation of sexual harassment should be able to find them easily. However, students wishing to raise an issue of gender discrimination more generally may find the University general anti-discrimination grievance procedures difficult to access (see "Recommendations," below). In addition, NASA notes that ESS students generally were unaware of the procedures for filing grievances, although most stated that they believed they would know where to go find them, should they need them.

4. Recommendations

a. Information Regarding Complainant's Ability to File with a Federal Funding Agency. The Title IX Coordinator should ensure that individuals who raise a concern regarding discrimination or harassment with an office other than the Title IX Coordinator's, e.g., Ombuds, are provided with information regarding the right to file directly with a Federal funding agency. The University may also wish to consider revising its grievance procedures to incorporate information regarding the right to file directly with a Federal funding agency, to better ensure that individuals are aware of this right. In this regard NASA notes also that the website for the Sexual Harassment Prevention Office includes information on Federal and state law enforcement agencies, but is limited to those Federal agencies that handle complaints of employment discrimination, i.e., U.S. EEOC. However, Title IX covers both education and employment; and therefore, the website should include information on the U.S. Department of Education Office for Civil Rights, and ideally, other Federal funding agencies of UCLA, as well as EEOC.

b. Better Dissemination of General Anti-Discrimination Grievance Procedures. The UCLA general anti-discrimination grievance procedures (UCLA Procedures 230.1) are less accessible through an online search than are the University's procedures for responding to reports of sexual harassment (UCLA Procedures 630.1), as both sets of procedures are to be found most easily by conducting a web search for "UCLA" and "sexual harassment." UCLA should consider making the procedures more accessible by moving them to a more prominent place on the website for the Sexual Harassment Prevention Office website, and ideally the websites for the Division of Student Affairs.

c. Dissemination of Additional Title IX Informational Materials. UCLA may wish to develop and disseminate a poster on "Equal Educational Opportunity" under Title IX and related laws, and post it in high traffic areas, including common rooms in dormitories and the Student Union, similar to its "Equal Employment Opportunity: It's the Law" poster. UCLA may wish to use as a template NASA's poster "Equal Opportunity: It's the Law/Know Your Rights and Responsibilities." In addition, UCLA may wish to disseminate an

electronic version of the NASA brochure, “Nondiscrimination and Equal Opportunity in NASA Assisted Programs: Title VI of the Civil Rights Act of 1964 and Related Laws,” (which includes information on Title IX) by posting on the Title IX Coordinator’s office website and by forwarding the document to current students in the ESS Department working on NASA-funded research. Electronic copies of the posters will be provided to UCLA upon request.

5. Promising Practice

Procedures for Responding to Reports of Sexual Harassment. UCLA has taken an important and proactive step by having a separate set of procedures specifically for reports of sexual harassment. Such procedures elevate the importance of reporting allegations of sexual harassment and serve to put the University community on notice that sexual harassment will not be tolerated. They also serve to emphasize the University’s commitment to promptly and effectively addressing sexual harassment, where it is found to have occurred.

C. Title IX Self-Evaluation

1. Regulatory Requirements

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.²⁰ While UCLA is not obligated to conduct a further Title IX self-evaluation, such evaluations are very helpful to ensure, for example, that selection criteria or academic practices do not adversely impact students. They also provide an opportunity to evaluate trends over time and to develop mechanisms for addressing emerging issues.

2. Findings of Fact

UCLA reports that it has does not currently have a Title IX self-evaluation or remedial plan currently in effect. Further, aside from the response to NASA’s Title IX review information request, ESS has not participated in an assessment of climate, including admissions and treatment of students, with data broken out by gender.

However, UCLA reports that the ESS Chair regularly reviews admissions, enrollment and graduation data annually in late May and reports on the data to the Dean and other chairs in the Division of Physical Sciences. Most faculty members interviewed by NASA appeared to be unaware of this, stating that the Department does not regularly track its student data (e.g., application rates, enrollment rates, graduation rates) on the basis of gender. One faculty member stated that although, to his knowledge, the data is not reviewed formally every year, they try to “pay attention to it.” However, since the representation of female students is nearly at parity with male students, “it is not at the top of their list of priorities.”

3. Compliance Assessment

The UCLA responses to NASA’s information request under the instant review constitute the beginning of a Title IX self-evaluation of the ESS Department regarding two key components: admissions and treatment of students.²¹ ESS may wish to build on this by conducting further efforts to obtain data on critical program processes broken out by gender (see “Recommendation,” below).

²⁰ Self-evaluation, 14 C.F.R. § 1253.110(c).

²¹ 14 C.F.R. § 1253.110(c).

4. Recommendation

Continuing Self-Assessment Efforts. NASA recommends that the ESS Department continue to examine and evaluate admissions, enrollment, retention rates, graduation rates, and other statistical data on a regular basis as required under NASA's regulations.²² The University and the ESS Department need to use the data to identify whether there are barriers to equal opportunity based on gender. If the data show declining numbers of women in the graduate program, the University needs to explore the reasons, and ensure it is not the result of intentional or unintentional gender bias in Departmental processes, procedures, or practices. Continuing to undertake this analysis on a regular basis, as ESS currently does, will enable the Department and the College of Engineering to stay informed on emerging trends and react appropriately. In addition, given that most faculty appear to be unaware of the Chair's data tracking, the Chair may wish to share his annual findings with the faculty.

D. Recruitment and Outreach, Admissions, Enrollment, Degrees Earned, and Faculty Recruitment

1. Regulatory Requirements

The NASA Title IX regulations state that recipients may not discriminate on the basis of sex in admissions and recruitment.²³ Consistent with this requirement, NASA reviewed the ESS Department's student recruitment practices and examined graduate male and female participation rates in the areas of admissions, enrollments, graduation rates, and graduate assistantships. NASA requested and received five years of data from the University for academic years 2004 through 2008.

2. Findings of Fact

a. Recruitment and Outreach

NASA heard from several faculty members, including the ESS Chair, that the Department does not have a recruitment plan nor does it have a formal outreach program. The Department relies heavily on students to make initial contact through email and follow up with campus visits. One faculty member stated that he believes the ESS website to be their most effective recruitment tool. In addition, about every third year, the Department hosts a booth at the American Geophysical Union (AGU). The AGU Conference is huge, with approximately 15,000 participants, according to one faculty member, including a high representation of women.

Students interviewed by NASA made similar statements with regard to recruitment by ESS. Most said they had made the first contact with the Department via email and/or campus visits. Reasons given by students for applying at UCLA included: a welcoming environment, highly rated program, proximity, area of research interest, and desire to work for a particular professor.

b. Admissions

Because students do not apply for admission to ESS as undergraduates, NASA examined applicant rates, admitted rates, and matriculation rates only for the graduate ESS Program. Over the five year period, more men than women applied to the Program (61 percent to 39 percent), and the higher male applicant rate was observed in each of the five years. The gender gap narrowed in 2007-08 to 58 percent male and 42 percent female.

²² This is required under the NASA regulations at 12 C.F.R. § 1253.605. Note that the requirements to collect such data are codified in NASA's Title VI regulations at 14 C.F.R. § 1250.105(b).

²³ Admission, 14 C.F.R. §1225.300; Recruitment § 1253.310.

As a percentage of those who applied, female students were consistently admitted to the Department at higher rates than males. Thirty-three percent of female applicants were admitted, compared to 27 percent of the male applicants.

In terms of matriculation rates (percent of admitted students who enrolled), male and female rates were very close for the five year period. On average, 39 percent of admitted male applicants enrolled in the Department, compared to 37 percent of admitted female applicants.

Students interviewed by NASA consistently stated that they found the application process to be fair and impartial on the basis of gender.

c. Enrollment

In both the undergraduate and graduate programs, female students comprised 45 percent of ESS enrollment for the five year period, with 55 percent male enrollment. With the exception of academic year 2005-06, undergraduate and graduate female enrollment in ESS trended upward each year. In the most recent year of the review period, female students outnumbered male students 33 to 31 at the undergraduate level and 46 to 40 at the graduate level.

d. Degrees Earned

At the undergraduate level, the percent of ESS degrees earned by males and females closely matched their enrollment rates, with males earning 56 percent and females 44 percent of the degrees. At the graduate level, however, the percent of degrees earned by female students (40 percent) was lower than their enrollment rate (45 percent) for the five year period. A higher rate for degrees earned by females would be expected in the next few years, due to the upward trend in the female enrollment rate.

e. Graduate Assistantships

NASA also examined data for graduate research assistantships and graduate teaching assistantships received by students in the ESS Department. The rates were very consistent with the enrollment rates described above. Female students received 46 percent of the graduate research assistantships and 47 percent of the graduate teaching assistantships.

f. Faculty Recruitment

At the time of NASA's review, the ESS faculty included three women out of a total of 34 (8.8 percent). Because of the low number of women, NASA looked at the Department's efforts to increase gender diversity on its faculty. In the past three years, the Department made eight faculty hires, including three females and five males. There were also three declinations of offers, including one female and two males. According to one long-term faculty member, the Department has "a great record at hiring good people, but loses them when others discover they are good." She went on to say that the Department had three female faculty members when she started 40 years ago, and it now has the same number. It had been as high as five female faculty, but "they have lost good people."

NASA repeatedly heard that a major problem for ESS in terms of hiring and retaining women faculty is the "two body problem" (i.e., women seeking employment for their spouses, often within the same Department). ESS recently lost both female faculty and applicants to universities that were able to hire the woman's husband. In addition to the two body problem, the ESS Chair noted that the applications received for faculty positions in the past three years were only about 23 percent female.

3. *Compliance Assessment*

a. Recruitment, Admissions, Enrollment and Degrees Earned

In a comparison with other earth science and space science (astrophysics) programs, NASA found that the percent of graduate degrees earned by women in the UCLA Program compared favorably with national numbers.²⁴ Despite the lack of a formal recruitment plan, ESS has attracted a high number of male and female students. Although more males apply, females are admitted at higher rates, and their enrollment has trended upward over the past five years. As noted above, the percent of ESS graduate degrees earned by females should increase in coming years, to more closely reflect their upward-trending enrollment rates. This bears monitoring by the Department, however, and is an example of why ongoing self-evaluation is recommended (see “Title IX Self-Evaluation, Recommendation,” above).

Because the Program website is one of its main recruitment tools, the Department has plans to “spruce it up,” making it “more up to date” and “rich.” A review of the ESS website shows that the Department can do a better job of displaying images of gender diversity (see “Recommendations,” below).

b. Faculty Recruitment

NASA consistently heard from the Department that it wants to increase the number of women on its faculty. The Chair of the Department expressed frustration that they are losing female faculty as well as female applicants (to whom they have made offers) because of the two body problem. The ESS Department does not have resources available to hire the spouse of a qualified applicant, and offers must be made quickly to compete with other universities. NASA agrees with the Chair that this problem is larger than the ESS Department, and that it needs institutional leadership to make a stronger commitment to assist the science departments in addressing the two body problem.

NASA also heard that the Department does not use family-friendly policies (e.g., stopping the tenure clock for child-bearing, housing and child care allowances) in its efforts to attract more female applicants for faculty positions. The Department has many family-friendly policies and practices for faculty, but does not formally advertise their availability, or use them as a recruiting tool during new faculty searches.

4. *Recommendations*

- a. Develop Greater Institutional Coordination to Help Increase Number of Female Faculty. Given the nature of the concerns raised by ESS leadership and faculty regarding the two body problem and the serious detrimental effect it is having on increasing female faculty in the science departments at UCLA, the University should take steps to address this concern at the institutional level. For example, the University may wish to consider establishing an advisory body comprised of chairs of the science departments which would make recommendations to the Dean of the Division of Physical Sciences on how to best address this concern. ESS may also wish to work with other institutional partners, such as the Title IX Coordinator’s office, on strategies to address the issue.

²⁴ Because of the dual focus of ESS (earth and space science), identifying a comparator benchmark was challenging. NASA first looked at the degrees earned in earth sciences, as reported by the National Science Foundation (Division of Science Resources Statistics, 2008. Science and Engineering Degrees: 1966–2006. Detailed Statistical Tables NSF 08-321. Arlington, VA. Available at <http://www.nsf.gov/statistics/nsf08321/>). In 2006, women earned 41 percent of the undergraduate and 42 percent of the graduate degrees in earth sciences. NASA was also able to determine that women earned 36 percent of the doctorates in earth science and astrophysics combined by using the 2006 Survey of Earned Doctorates, by the National Science Foundation, National Institutes of Health, U.S. Department of Education, U.S. Department of Agriculture, National Endowment for the Humanities, and NASA.

- b. Institutionalized Budgeting of Resources. Resources for hiring spouses need to be budgeted in advance, since the promptness of an offer is usually critical in the highly competitive environment.
- c. ADVANCE Grant. UCLA should consider applying for an ADVANCE grant from the National Science Foundation to help it understand and address issues of gender equity in the recruitment and retention of female faculty in the physical sciences.
- d. Family-Friendly Benefits. ESS should take a more formal approach to using its family-friendly benefits when recruiting for faculty positions. While the two body problem may be the major issue, increasing the percentage of female applicants is also critical. The availability and advertisement of these types of benefits would signal the Department's commitment to a family-friendly environment which would likely be attractive to women whether or not they intend to use the benefits.
- e. Greater Gender Diversity on Program Website. ESS, which is currently undertaking a re-design of its website, should consider displaying images showing the gender diversity of the Program. The ESS website is often the first impression prospective students have of the Department. In this regard, showing gender diversity may help prospective students to view the Program as welcoming and inclusive regardless of gender.

E. Program Administration and Academic Environment

1. Regulatory Requirements

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.²⁵ The Title IX regulations explicitly state that a recipient may not discriminate on the basis of gender with regard to career counseling or guidance.²⁶

The NASA Title IX regulations include a detailed provision on matters pertaining to marital and parental status.²⁷ 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.

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.²⁸

On the basis of these provisions, NASA examined the overall academic environment in the ESS Department, including academic advising, career counseling, research participation, classroom experiences, parental/marital status ("family friendly") policies and physical safety of the program environment.

²⁵ Education programs or activities, 14 C.F.R. § 400(a), (b)(7).

²⁶ Counseling and use of appraisal and counseling materials, 14 C.F.R. § 1253.425.

²⁷ Marital or parental status, 14 C.F.R. § 1253.530.

²⁸ Enforcement procedures, 14 C.F.R. § 605.

2. Findings of Fact

a. Academic Advising and Career Counseling

NASA's interviews with faculty and students regarding graduate advising focused on the experiences of students in the advising process. Male and female graduate students interviewed described positive and productive advising relationships and stated that they observed no differences based on gender in the way they were advised. Students interviewed also stated that they did not notice any difference based on gender with respect to receiving job search assistance from faculty. No faculty member or teaching assistant stated that a student had come to them with a concern regarding discrimination or harassment in recent memory.

b. Research Participation and Classroom Experiences

NASA spoke with students about their experiences and observations in the lab and the classroom, and with faculty and administrators about their efforts with regard to research participation of students and classroom interactions. Students interviewed reported no observable differences based on gender in the way students are treated, with one exception. NASA heard during interviews of instances where some students perceived that female students' questions in certain math and science heavy classes at the undergraduate level were treated with less deference than male students. This was a perception on the part of the students interviewed, but may be something ESS wishes to address in some fashion, e.g., education and awareness efforts on subtle bias to watch out for in the classroom (see "Compliance Assessment," and "Recommendations," below).

c. Parental/Marital Status ("Family Friendly" Policies)

UCLA reports that it does not have a parental leave policy applicable to graduate students. Leave for TAs is governed by the provisions of the collective bargaining agreement between the University of California and the UAW. Although UCLA does not have a formal parental leave policy applicable to graduate students, ESS reports that it makes every effort to accommodate specific requests pertaining to parental status. For example, an ESS graduate student recently requested space for nursing her newborn. The student was provided a private office with a couch for the duration of her graduate study, which enabled her to provide for child care as she complete her dissertation and Ph.D.

d. Safety

UCLA includes in its Orientation Handbook for Entering UCLA Graduate Students a discussion on safety measures taken by the University. The section on safety notes that crime prevention literature is available at the University Police Department lobby, online, and throughout the campus. The Police Department also offers a number of crime prevention programs and workshops each quarter on topics including: personal safety, sexual assault awareness and prevention, hate crimes and drug and alcohol awareness. In addition, the Police Department has a special Crime Prevention Unit dedicated to developing and coordinating activities to meet the needs of the campus community, and it too offers presentations and workshops on a number of issues regarding personal safety, including prevention of workplace violence, and rape/assault prevention. The campus also offers a walking nighttime escort service and evening van service to provide a safe means of transportation during evening hours. Maps of the van routes are available online.

During interviews, some students raised concerns around physical safety. For example, the proximity of the nearest parking lot to the ESS building was raised, as well as lighting near the ESS building. Finally, a few students suggested that the campus shuttle hours should be extended past 7:00 p.m.

e. Overall Academic Environment

ESS has been generally supportive of efforts of students and faculty to establish a Women in Science and Engineering (WISE) chapter. UCLA WISE was initiated in 2007 through the efforts of an ESS graduate student and female faculty member. Both the Earth and Space Sciences Student Organization (ESSO) and WISE hold events that encourage women's participation. WISE specifically targets female students to participate in campus science networking and also engages K-12 students through participation in events such as the annual Sally Ride Festival.

Critical to the ESS curriculum at both the undergraduate and graduate levels are field trips involving overnight travel in which both students and faculty participate. The field trips are designed to provide hands-on experience to geology students in conducting geological research activities. During student interviews, NASA heard about what appear to be isolated instances of inappropriate gender related remarks occurring on geology field trips and in one case in a Department-sponsored social event. Students who described the incidents stated that faculty who have been within earshot of the remarks have not sought to address the remarks to the students' knowledge, with one student stating that faculty "just tend to shake their heads" (see also "Compliance Assessment" and "Recommendations," below).

3. Compliance Assessment

NASA examination of whether students were treated differently or otherwise limited, on the basis of gender, with regard to academic advising and research participation, including whether there were allegations of gender related inappropriate conduct by faculty or graduate students in positions of responsibility, showed no differences between males and female students' experiences. The same is true of the classroom setting with one exception. This was the perception among some students interviewed that female students' questions in certain math and science-heavy classes at the undergraduate level were treated with less deference than male students. ESS may wish to address this perception through greater efforts to raise education and awareness among faculty and graduate teaching assistants regarding subtle bias that may occur in the classroom (see "Recommendations," below).

Regarding UCLA policies and faculty/student experiences in the ESS Department pertaining to parental status, NASA's review indicated that ESS is generally supportive of family-friendly concerns, and the formal policy extending the tenure clock for pregnancy/childbirth is a promising practice. However, the University may wish to consider extending its parental leave policy to cover graduate students (see "Recommendations," below). Also, NASA heard from faculty that not everyone is aware of the tenure clock policy, which suggests the need for greater dissemination of this policy. Finally, NASA's review did not indicate different treatment, impact, or other limitation on program participation based on gender with regard to the University's or the ESS Department's policies relating to parental or marital status.

Regarding UCLA policies and student experiences in the ESS Department regarding safety, there are some concerns among students, with concerns expressed by both males and females. However, NASA's review did not indicate that any student's participation in ESS was limited based on gender with regard to UCLA or safety/security policies and procedures. NASA notes, however, that more female than male students raised concerns, particularly regarding the proximity of the parking lot to the ESS building. In light of these concerns, UCLA and ESS may wish to consider enhancements to safety measures (see "Recommendations," below).

As to the overall academic environment, NASA's review indicates that ESS provides a generally supportive environment for students, regardless of gender. However, there is some concern regarding the level of education and awareness of faculty and students regarding anti-harassment and related issues, based on student interviews. NASA heard about isolated instances of gender-related inappropriate

conduct/language occurring on field trips in which both faculty and students were present (see “Findings of Fact,” above). As noted above, the field trips are a critical part of the ESS curriculum at both the undergraduate and graduate levels, designed to provide hands-on experience to geology students in conducting geological research activities. Therefore, it is critical that faculty members fully understand that such remarks are not acceptable in the field trip setting and that they exercise their obligation to caution students not to make such comments.

UCLA policy requires that faculty receive biannual training on sexual harassment, and faculty members interviewed stated that they take this training according to schedule. However, some professors, when asked what they would do if an issue of harassment was raised, did not appear to know the proper channels to go through under the University sexual harassment policy. The Title IX Coordinator, working with the ESS faculty, may wish to consider enhancements to the training module, such as tailoring examples provided in the training to the experiences of ESS faculty (see “Recommendations,” below). Such training is important in ensuring that faculty and graduate students, especially those with teaching responsibilities, are fully aware of their roles and responsibilities in this regard.

In addition, to address some students’ perceptions regarding classroom interactions, the department may wish to consider education and awareness regarding gender bias in the classroom and what to watch out for in this regard (see “Recommendations,” below).

4. Recommendations

a. Parental Leave Policy Applicable to Graduate Students. UCLA may wish to consider a formal parental leave policy applicable to graduate students. Such a policy would help the University and ESS to establish a stronger family-friendly Program that could appeal to a more diverse student body. In addition, such a policy, and other policies relating to parental status, such as the faculty tenure clock extension policy, should be as widely disseminated as possible and used as a recruitment tool when recruiting graduate students and faculty.

b. Enhanced Night-time Safety Measures. UCLA may wish to explore ways to enhance such measures, including issues around the proximity of parking to the ESS building, better lighting both in the parking lot near the ESS Department and the campus generally, and consideration of extended campus shuttle hours.

c. Institutionalizing the Women in Science and Engineering Program. UCLA and ESS may wish to consider institutionalizing its Women in Science and Engineering chapter, which has been very successful during the two years the Department has been supporting it. In this regard, the University may wish to consider appointing a full-time WISE program director or taking other steps to ensure the continuation of the chapter after the current student leader departs.²⁹

d. Gender Related Issues: Policy Dissemination, Education, and Awareness. In addition to the biannual anti-harassment training provided to faculty pursuant to California law and University of California policy, ESS should annually disseminate UCLA’s anti-harassment policy to faculty and students to better ensure that all Program staff and participants are fully aware of the policy. ESS leadership should also take the opportunity to raise the policy in faculty meetings to better ensure that faculty are aware of the policy and

²⁹ Proposition 209 in California, prohibiting public institutions from considering race or sex in their policies and practices, may prevent the campus from institutionalizing a program that supports employees or students of only one gender. However, UCLA informs NASA that ESS will explore whether it might take other steps to assure the continuation of the campus chapter of Women in Science and Engineering after the current student leadership departs. See Pamela Thomason, UCLA Title IX Coordinator, email to David Chambers, Civil Rights Analyst, NASA, Nov. 3, 2009.

have taken appropriate training. ESS should work closely with the Title IX Coordinator's office to ensure that faculty and students, both graduate and undergraduate have regular opportunities for training regarding gender issues. For example, ESS may also wish to consider education and awareness opportunities on issues of gender bias as they may present in the classroom or other aspects of the Program environment. The Title IX Coordinator's office may wish to tailor training to the needs of ESS, e.g., providing examples of inappropriate conduct in settings relevant to ESS such as field trips.

5. Promising Practice

Extension of Tenure Clock for Pregnancy/Childbirth. UCLA has a formal policy in place extending the tenure clock for faculty for pregnancy/childbirth. This practice is critical to making the University's STEM programs more accessible to a more gender diverse faculty.

III. CONCLUSION

NASA finds UCLA to be in compliance with the Title IX regulations. While this report includes recommendations to assist UCLA in continuing to ensure equal opportunities regardless of gender, overall we find that UCLA is meeting regulatory requirements regarding its Title IX coordination, grievance procedures, policy dissemination, and self-evaluation efforts. The Title IX Coordinator's efforts are particularly strong with regard to education and awareness for the campus community on gender discrimination and sexual harassment.

In addition, although ESS has high participation rates of women at both the undergraduate and graduate levels, this success is not reflected at the faculty level. In fact, it appears the Department is facing serious challenges in attracting and retaining female faculty, a problem that appears larger than ESS. Beyond the small number of female faculty in the Department, it appears the environment may benefit from stronger education and awareness efforts around gender-related issues. Overall, however, elements of program administration are generally strong, with a supportive and welcoming program environment. NASA's recommendations in this report are designed to help the Program maintain this environment and continue to ensure equal opportunities regardless of gender.

APPENDIX A. 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.³⁰ The review assisted NASA to better understand concerns regarding gender and STEM and how Title IX compliance efforts can assist to address such concerns.

Recent Reports and Studies

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.³¹ 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.

NASA also relied primarily on a recent report of the National Academy of Sciences, National Research Council entitled *To Recruit and Advance: Women Students and Faculty in Science and Engineering* (hereafter cited as NRC Report). The NRC Report, issued in November 2006, was based on a comprehensive literature review and site visits to four universities “recognized for successfully advancing and retaining women students, faculty or leaders.”³² The report was a valuable tool to better understand women’s experiences in S&E studies and helped to guide NASA’s assessment of the AE Department’s promising practices regarding recruitment and advancement of women students in S&E programs.³³ For example, the report identified the need to create and institutionalize a sustained commitment to diversity among university leaders and administrators.³⁴ This commitment should be demonstrated by dedicating resources to that effort, e.g., Women in Engineering programs, and through ensuring visibility for women

³⁰ See generally National Academy of Sciences, National Research Council, *To Recruit and Advance: Women Students and Faculty in Science and Engineering* (2006); National Academy of Sciences, National Academy of Engineering and Institute of Medicine, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering* (2006); American Institute of Physics Statistical Research Center, *Women Physicists Speak Again*, April 2006 (accessible at: <http://www.aip.org/statistics/trends/reports/iupap05.pdf>); Ellen Sekreta, *Sexual Harassment, Misconduct, and the Atmosphere of the Laboratory: The Legal and Professional Challenges Faced by Women Physical Science Researchers at Educational Institutions*, 13 Duke J. Gender L. & Pol’y 115 (Spring 2006); Catherine Pieronek, *Title IX and Gender Equity in Science, Technology, Engineering and Mathematics Education: No Longer an Overlooked Application of the Law*, 31 J.C. & U.L 295 (2005); 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); American Institute of Physics Statistical Research Center, *Women in Physics Speak: The 2001 International Survey of Women in Physics*, 2001 (accessible at: <http://www.aip.org/statistics/trends/reports/iupap.pdf>); 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); Mildred S. Dresselhaus, Judy R. Franz, Bunny S. Clark, “Improving the Climate for Women in Physics: A Program of Site Visits Funded by the National Science Foundation” (American Physical Society and the American Association of Physics Teachers: 1995) (APS Program Summary, accessible at <http://www.aps.org/programs/women/sitevisits/summary.cfm>) (APS Program Summary).

³¹ 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).

³² NRC Report, Summary, p.2.

³³ NRC stated that it “sought to move beyond yet another catalogue of challenges facing the advancement of women academic in S&E to provide a document describing actions actually taken by universities to improve the situation for women.” Ibid., Preface, p. vii.

³⁴ Ibid., chap. 1, p.8.

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.³⁵ 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.³⁶

The NRC Report indicated that specific retention tools such as curricular modifications and “family friendly” policies may also be of assistance in increasing the numbers of women in S&E 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.³⁷ Another important tool for S&E departments is training to raise awareness among faculty and students on gender issues such as sexual harassment prevention.³⁸

Finally, the NRC report described issues that “may not be anticipated” influencing the working environment of the laboratory.³⁹ 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.

Overall Recommendations

What the research literature tells us is that there are some proactive steps that STEM programs can take, consistent with the purpose and intent of Title IX, to recruit and retain students in these fields, and provide equal opportunities regardless of gender. 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 Women in Engineering;
- Adopting policies that enable faculty, students and employees to combine work, family and other personal responsibilities.
- Conducting on-going self-evaluation efforts.

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.

³⁵ Ibid., chap. 2, p.47.

³⁶ Ibid.

³⁷ Ibid., chap. 3, pp. 53 (citing Busch-Vishniac, I., and J. Jarosz, *Can diversity in the undergraduate engineering population be enhanced through curricular change?* Journal of Women and Minorities in Science and Engineering 10:255–281, 258 (2004)), 55, 60 (citing Farrell, E. F., “Engineering a warmer welcome for female students,” Chronicle of Higher Education,” February 22, 2002).

³⁸ Ibid., chap. 4, p. 78

³⁹ Ibid., chap. 2, p. 41.

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.

We note also that the Program evaluated in this review exhibited these characteristics of positive climate, with many promising practices to report (see "Promising Practices" sections, above).