



## **NASA Title IX Compliance Report**

**University of California, San Diego  
Department of Mechanical and Aerospace  
Engineering**

**National Aeronautics and Space Administration  
Office of Diversity and Equal Opportunity  
September 2018**

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University of California, San Diego  
Department of Mechanical and Aerospace Engineering  
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## **I. INTRODUCTION**

Between February 28 and March 2, 2017, NASA conducted an onsite compliance review of the University of California, San Diego (UC San Diego or UCSD) and its Department of Mechanical and Aerospace Engineering (MAE), 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.<sup>1</sup>

### **A. Background**

NASA Title IX regulations provide for periodic review of NASA grant recipients.<sup>2</sup> These regulations, which became effective in November 2000, were reinforced by the July 2004 report of the Government Accountability Office (GAO), which recommended that Federal agencies conduct onsite compliance reviews.<sup>3</sup> In addition, NASA's 2005 authorizing legislation requires the Agency to conduct at least two Title IX compliance reviews annually.<sup>4</sup>

### **B. Objectives and Scope**

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

Objective 1: Evaluate UC San Diego's compliance with Title IX and 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 program under review; and
- Evaluate the Department's provision of equal opportunity regardless of sex in the following areas of program administration: student and faculty recruitment, outreach, admissions,

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<sup>1</sup> 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.

<sup>2</sup> 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)).

<sup>3</sup> 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).

<sup>4</sup> See NASA Authorization Act of 2005, 42 U.S.C. § 16798(b), reenacted as 51 USC § 40909 (2011).

enrollment, retention, academic advising, research participation, classroom and lab experiences, student experiences relating to parental/marital status (“family friendly” policies and practices), and physical safety of the program environment.

**Objective 2:** Identify promising practices of MAE designed to promote gender equity, specifically to describe efforts consistent with the recommendations and focus of the July 2004 GAO report, and 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.

NASA’s standard methodology for conducting Title IX compliance reviews can be found in Appendix B.

## **II. COMPLIANCE REVIEW ANALYSIS**

This compliance review analysis provides an assessment of issues within the two focus areas of procedural compliance requirements and methods of program administration. Regulatory requirements and findings of fact are set forth as part of the compliance assessment under each main topic. In the “Yes” or “No” charts used for each section, a positive answer means that compliance is generally sound on a given area. A negative answer does not necessarily mean non-compliance, but does indicate a compliance issue or concern; however, the greater the number of negative responses, or the seriousness of a single negative response, the more likely NASA will find noncompliance in a given area. Note that in some sections of the report a “positive response” may be a “No” rather than a “Yes.” For example, in Section E, Program Administration and Environment, a response of “No” to a statement such as “NASA heard about instances of harassing conduct,” would be a positive response. The associated recommendations are intended to strengthen existing compliance. Promising practices associated with each of the compliance areas are also reported.

### **A. Designation of Official for Title IX Coordination and Enforcement**

#### ***1. Compliance Requirements and 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.”<sup>5</sup> The recipient must notify all students and employees of the Title IX Coordinator’s name, office address, and telephone number. NASA reviewed the University’s dissemination of contact information for its Title IX Coordinator and the extent to which MAE faculty, staff, and students are aware of her and her office’s role on campus. In addition to the contact information dissemination requirement, for purposes of this review, NASA focused on the following key aspects of Title IX coordination: (1) effective implementation of key responsibilities for administering and implementing the University’s Title IX grievance process, including the application of relevant skills and competencies; (2) the authority and access of the Title IX Coordinator to university senior leadership needed to effectively perform roles and responsibilities; and (3) appropriate training of faculty, staff, and students.<sup>6</sup>

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<sup>5</sup> Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(a).

<sup>6</sup> 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 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” provision (DOJ, “Questions and Answers Regarding Title IX Procedural Requirements” (Title IX Q&A), accessed at <http://www.justice.gov/crt/about/cor/coord/TitleIXQandA.php>. More recently, in April

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

<i>Review Criteria: Provision of Title IX Training</i>	<i>Yes</i>	<i>No</i>
1. Title IX Coordinator provides appropriate training to faculty, staff, and students.	X	
2. Students interviewed recall having had education and awareness opportunities on:		
a. Sex discrimination	X	
b. Sexual harassment	X	
c. Sexual assault awareness	X	
d. Implicit (unconscious) bias		X
e. Other		X
3. If training is provided, is it mandatory?	X	
4. If training is provided, are there education and awareness modules designed to resonate with science, technology, engineering, and mathematics (STEM) students and faculty, e.g., using hypothetical examples of inappropriate conduct or actions that might occur in a STEM setting such as a lab?		X

**Observations:** NASA finds that the current UCSD Title IX Coordinator possesses the requisite skills to perform the requirements of her position and that she is placed at a level in the organization that provides the needed access to top University leadership. Regarding Title IX coordination efforts as referenced in the NASA regulations, the Agency also addressed the effectiveness of the contact information dissemination requirements of the regulations. NASA finds that many MAE Departmental faculty, students, and staff were not familiar with the name and/or office of the Title IX Coordinator, i.e., the Office for the Prevention of Harassment and Discrimination (OPHD). The Title IX Coordinator and OPHD should take steps to address this by working to disseminate contact information more broadly and more often (see Recommendations, below).

Regarding another critical responsibility of the Title IX Coordinator, the provision of Title IX-related training, NASA finds that, in general, the University and Department's efforts are more than adequate. According to the University, all incoming freshmen and transfer students take a mandatory online program provided by OPHD entitled "We Are Tritons," which introduces the University's nondiscrimination policies and policies prohibiting dating violence, domestic violence,

2015, the U.S. Department of Education (DOEd) Office for Civil Rights (OCR) offered a Dear Colleague Letter (DCL) and Resource Guide specifically addressing Title IX coordination, focusing on the authority, responsibilities, and training of Title IX Coordinators (accessible at <http://www2.ed.gov/about/offices/list/ocr/letters/colleague-201504-title-ix-coordinators.pdf> and <http://www2.ed.gov/about/offices/list/ocr/docs/dcl-title-ix-coordinators-guide-201504.pdf>).

sexual assault, and stalking. It includes information about definitions, reporting options, red flag behaviors, bystander intervention strategies, and information about confidential resources. If a student does not complete the training within the time period established, the student is not able to register for classes until training is completed.

New graduate students receive information during orientation from OPHD and the Cognitive Assessment and Risk Evaluation (CARE) program. Students who are teaching assistants receive additional training on referring and reporting incidents of sexual violence to appropriate departments on campus. Faculty and supervisors are required to complete two hours of sexual harassment prevention training every two years, and new faculty and supervisors are required to take training within the first two months of hire. Continuing staff receive training annually. All non-supervisory employees, including student employees, are required to complete mandatory annual sexual violence and sexual harassment prevention training. Graduate students interviewed by NASA confirmed that they have taken the required training and have some recollection of its content.

One concern is that none of the training modules were designed specifically to resonate with STEM students and faculty. Instead, all of the training provided is predicated on a “one size fits all” mentality. As reflected in the compliance assessments below, MAE Department interviewees and survey respondents raised concerns related to subtle gender bias, as well as more overt forms of bias. Consequently, more targeted training that can resonate with this population is needed (see Recommendations, below and in Section II.E.2).

## **2. Recommendations**

**a. Strategic Efforts to Enhance Contact Information Dissemination.** The Title IX Coordinator and OPHD should undertake strategic efforts to better disseminate information about the Title IX Coordinator and her office – targeted especially to the MAE Department and other STEM programs. NASA recommends that the Title IX Coordinator work with the various colleges and programs of the University to ensure that Title IX information is distributed to all students. For example, an email could be sent to faculty and students every semester as a reminder of what their rights and responsibilities are under Title IX and whom to contact if they have questions or wish to file a complaint. Such emails should come from Department chairs or higher officials, so there is a greater likelihood that they will be opened and read. Other forms of communication from such officials also should be provided on these topics (e.g., all-hands meetings, departmental colloquia).

**b. STEM-Centric Sexual Harassment and Discrimination Training.** NASA recommends that the Title IX Coordinator work with the MAE Department to develop education and awareness opportunities that resonate with a STEM audience by using specific examples, case studies, or scenarios in settings recognizable to a STEM faculty (e.g., classrooms, labs, and professional conferences). Such training may be in the form of all-hands meetings or colloquia and should focus both on subtle forms of gender bias that can pervade STEM program environments, as well as on more egregious examples of sexual harassment. NASA also recommends utilization of its “Unconscious Bias in STEM” learning tool, accessible at: <http://missionstem.nasa.gov/eLearn.html>.

## **B. Adoption of Grievance Procedures and Policy Dissemination**

### **1. Compliance Requirements and 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.<sup>7</sup> 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 the recipient 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.<sup>8</sup> The University's compliance with regard to (a) the content of the grievance procedures and how they are implemented, and (b) policy dissemination, is discussed below.

The U.S Department of Education's (ED) Office for Civil Rights' (OCR) guidance emphasizes the need for recipient institutions to have "well-publicized" grievance procedures.<sup>9</sup> 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."<sup>10</sup> Importantly, OCR stated in its Revised Sexual Harassment Guidance (2001) that 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; and identifying individuals who can explain how the procedures work.<sup>11</sup> DOJ regulations also make Federal funding agencies and recipient institutions responsible for disseminating information materials, e.g., handbooks, manuals, and pamphlets, to ensure program beneficiaries are aware of their rights pursuant to civil rights laws.<sup>12</sup>

NASA's compliance assessment seeks to ensure that the University 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.<sup>13</sup> As the regulations do not provide any further specificity regarding the procedures, NASA looked to key guidance documents from DOJ and the ED OCR. These guidance documents provide additional considerations on the basic components of effective (i.e., prompt and equitable) grievance procedures in the discrimination and harassment contexts.<sup>14</sup> In addition, NASA reviews how well the procedures are implemented in the Department under review. NASA's review of UCSD's formal written policies and procedures is summarized in the tables below.

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<sup>7</sup> Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(b).

<sup>8</sup> Dissemination of policy, 14 C.F.R. § 1253.140.

<sup>9</sup> See OCR Revised Sexual Harassment Guidance, Preamble, "Enduring Principles from the 1997 Guidance."

<sup>10</sup> *Ibid.*, § V(D), "The Role of Grievance Procedures."

<sup>11</sup> *Ibid.*, § IX. Prompt and Equitable Grievance Procedures.

<sup>12</sup> Public dissemination of Title VI information, 28 C.F.R. § 42.405(c).

<sup>13</sup> 14 C.F.R. § 1253.135(b).

<sup>14</sup> DOJ 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 DOJ, Title IX Q&A, "Grievance Procedures."

a. *Grievance Procedures – As Written and Disseminated*

<i>Review Criteria: Grievance Procedures As Written – Required by OCR</i>	<i>Yes</i>	<i>No</i>
<i>In evaluating whether a school's grievance procedures are prompt and equitable, thus satisfying the Title IX requirement, NASA looks to applicable DOJ and OCR guidance to determine whether the procedures provide for:</i>		
1. Notice of right to file with appropriate Federal agency, either simultaneously or after unsatisfactory resolution of internal grievance. <sup>15</sup>	X	
2. Notice to students and employees of procedure, including where complaints may be filed.	X	
3. Application of procedure to complaints alleging harassment carried out by employees, other students, or third parties.	X	
4. Provisions for adequate, reliable, and impartial investigation of complaints, including the opportunity to present witnesses and other evidence.	X	
5. Designated and reasonably prompt timeframes for the major stages of the complaint process.	X	
6. Written notice to complainant and alleged perpetrator of the outcome of complaint.	X	
7. Assurance that the school will take steps to prevent recurrence of any harassment and correct its discriminatory effects on the complainant and others, if appropriate. <sup>16</sup>	X	
8. Appeals, if included, must be accorded equally between the parties.	X	

<i>Review Criteria: Grievance Procedures As Written – Recommended Best Practices</i>	<i>Yes</i>	<i>No</i>
<i>Although not required by OCR, NASA recommends that grievance procedures include the following:</i>		
1. Definition of sexual harassment.	X	
2. Explanation as to when conduct creates a hostile environment.	X	
3. Reporting policies and protocols, including provisions for confidential reporting.	X	
4. Identification of employee(s) responsible for evaluating requests for confidentiality.	X	
5. Notice of:		
• Title IX prohibition against retaliation.	X	
• Student's right to file a criminal complaint and Title IX complaint simultaneously.	X	
• Available interim measures that may be taken to protect the student in the educational setting pending resolution of the student's complaint.	X	
• Appropriate remedies for individuals found to have been treated improperly.	X	
• Appropriate sanctions against individuals (employee?) found to have behaved inappropriately	X	
6. Sources of counseling, advocacy, and support.	X	

<sup>15</sup> DOJ, Title IX Q&A, "Grievance Procedures."

<sup>16</sup> See OCR Revised Sexual Harassment Guidance, § IX. Prompt and Equitable Grievance Procedures (citations omitted).

<i>Review Criteria: Policy Dissemination</i>		Yes	No
1. The University's grievance procedures have been appropriately disseminated and efforts have been made to ensure ease of access and understanding. <sup>17</sup>			X
2. Title IX policies and procedures are posted in the following locations:			
a. On University Web site for Title IX Coordinator		X	
b. On University Web site for Student Affairs or other office		X	
c. In University handbook and/or catalog		X	
d. In the Department under review (i.e., on a poster or other notice)			X
e. Other: brochure		X	
3. The Title IX procedures are easily found through a search on the University Web site.		X	
4. There is a readily accessible (web), easy-to-understand summary of the process that can be understood by the average person.			X
5. Students are regularly reminded of Title IX policies and procedures via email or letter (e.g., at the start of each semester).		X	
6. Students interviewed seem to understand the process for filing a Title IX complaint.			X
7. Faculty members interviewed seem to understand the process for filing a Title IX complaint.			X

**Observations:** In response to NASA's information request for this review, UCSD provided a complex web of interconnecting policies and procedures. Some of these are applicable when the complainant is an employee, some when the complainant is a student. Some are applicable only to UCSD, others to the entire University of California System. For example, the "Procedures for Discrimination and Harassment Complaint Resolution," dated February 2011, revised August 2013, procedures apply to any member of the University community; however, it is unclear whether these procedures apply regardless of whether the alleged perpetrator is a member of the faculty, staff or another student. Another set of procedures, "University of California – Policy PPSM-70, Complaint Resolution," lays out the procedures in detail for an employee raising a complaint against another employee, but this is unclear from the title – "Complaint Resolution." UCSD needs to do a better job of setting forth the general processes to be followed when individuals seek to raise concerns.

Nonetheless, UCSD current procedures satisfy minimum requirements and recommendations of ED OCR, as shown in the tables above. UCSD and the University of California as a whole are to be commended for their "Student Adjudication Model for Sexual Violence & Sexual Harassment Cases UC San Diego Implementing Procedures" (effective January 4, 2016), as it provides a separate set of procedures in this arena, especially important in light of the Violence Against Women Reauthorization Act of 2013.

In this regard, we note that the [OPHD Web site](#) offers a succinct statement of the policy for raising complaints of sexual harassment or sexual violence; however, it does not set forth a clear and easily understood summary of the process – for example: reporting; investigation; hearing; and timeframes for these process elements. Instead, it merely offers a statement that complainants may file with OPHD and provides links to the more complicated Title IX related policies that are not easily understood.

<sup>17</sup> 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." Revised Sexual Harassment Guidance, § IX. Prompt and Equitable Grievance Procedures.

While the University regularly informs the academic community about its Title IX policies, we identified two issues preventing individuals from having a full understanding of the university's Title IX programs. First, members of MAE interviewed did not understand the process for filing complaints, either with OPHD or with a Federal agency. NASA spoke to a number of students and some faculty who reported they were unclear on the process for filing a Title IX complaint. Second, there is no prominently-featured, easy-to-understand information on the OPHD Web site or the [OPHD Brochure](#) to explain what happens after the complaint report has been filed (i.e., lack of awareness of the complaint process) – this is a critical omission from a compliance perspective. Therefore, NASA recommends that UCSD correct these issues by offering a succinct, easy-to-understand, but more complete summary or recitation of the complaint process featured prominently on the OPHD site and in the OPHD Brochure, including timeframes. (See also Recommendations, below). Likewise, the site also does not lay out the procedures in an easy-to-understand matter.

*b. Grievance Procedures – As Implemented by OPHD in the MAE Department*

<i>Review Criteria: Grievance Procedures As Implemented by the Department</i>	<i>Yes</i>	<i>No</i>
1. In the Department in the past 5 years, there have been formal complaints of:		
• Sex discrimination	X	
• Sexual harassment	X	
• Sexual assault	X	
2. If yes, did the University follow the written Title IX procedures in addressing the incident(s)?	X	
3. Faculty, staff, and/or students reported other or potential incidents of:		
• Sex discrimination	X	
• Sexual harassment		
• Sexual assault	X	

**Observations:** UCSD reported addressing four allegations of sexual harassment or discrimination based on sex (or sexual orientation) arising in the MAE Department in the past five years (the period of NASA's review). In one instance, a particularly egregious situation involving inappropriate touching, the allegations were supported by the OPHD (Title IX Coordinator's office) investigation and a violation of the University's sexual harassment policy was found. In this instance, the respondent was terminated. Based on NASA's review of the case files provided and the steps taken to address findings of sexual harassment, NASA finds that OPHD is operating in accordance with the University's procedures and that it is taking all appropriate steps to address sexual harassment/sexual violence when it is found to have occurred in regard to the MAE Department.

**2. Recommendations**

**Dissemination of Information on Filing Discrimination and Harassment Complaints.** While NASA recognizes that the availability of multiple avenues to address discrimination and harassment concerns may make communication regarding these processes a challenge, nonetheless, the University needs to do a better job of clearly and concisely explaining the available options. NASA recommends that UCSD offer a

succinct, easy-to-understand, but more complete summary or recitation of the general processes to be utilized, one that is featured prominently on the OPHD site, including general timeframes and process elements, such as reporting, investigation, and hearing. OPHD should also re-do its brochure to lay out the procedures in an easy-to-understand matter.

NASA further recommends the University post the Agency's brochure on nondiscrimination under the grant-related civil rights laws (accessible at: [https://www.hq.nasa.gov/office/odeo/documents/2016\\_TVITIX\\_Brochure\\_TAGGED.pdf](https://www.hq.nasa.gov/office/odeo/documents/2016_TVITIX_Brochure_TAGGED.pdf)) on the MAE Department and other NASA-funded UCSD departmental Websites. It is also recommended that the University post the link to NASA's MissionSTEM webpage on "How to File a Complaint" (of discrimination or harassment) (<https://missionstem.nasa.gov/filing-a-complaint.html>) on the MAE and other NASA-funded department Web sites at UCSD.

### 3. Promising Practice

**Posted Annual Sexual Harassment Report.** The University has an annual online sexual harassment report with a listing of complaints that can help to keep the faculty, staff, and students informed on this critical issue, and how it is affecting the academic community at any given time.

## C. Self-Evaluation

### 1. Compliance Requirements and 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.<sup>18</sup> While grantees are 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 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. NASA's guide for conducting Title IX self-evaluations provides suggestions for areas to review, including:<sup>19</sup>

- Applications, admissions, matriculations, retention, and degrees earned rates (for men and women);
- The availability of mentoring relationships;
- The standards and practices used for faculty hiring and promotion decisions;
- Criteria for assignment of graduate students to researchers and advisors;
- Funding of students through assistantships, fellowships, and scholarships; and
- Allocation of lab space and experiences in the lab and classroom.

Participation in this Title IX review and reviewing the data requested by the NASA Office of Diversity and Equal Opportunity for conducting this review is a good start to conducting a self-evaluation. Continued efforts should be made to comprehensively review data regarding participation in STEM programs, by gender.

<sup>18</sup> Self-evaluation, 14 C.F.R. § 1253.110(c).

<sup>19</sup> NASA, Office of Diversity and Equal Opportunity, *Title IX and STEM: A Guide for Conducting Title IX Self-Evaluations in Science, Technology, Engineering, and Mathematics Programs*, June 2012, accessible at: <http://odeo.hq.nasa.gov/>.

<i>Review Criteria: Title IX Self-Evaluation</i>	<i>Yes</i>	<i>No</i>
1. The University has responded fully to NASA's Title IX compliance information request.	X	
2. The University has conducted a Title IX Self-Evaluation within the last 5 years in at least one of its STEM departments.		X
3. The University has conducted a climate survey or other survey relevant to Title IX within the last 5 years (e.g., sexual assault awareness survey, campus safety survey, etc.)		X
4. The University and/or Department regularly evaluate application and admissions data to ensure admissions decisions are gender-neutral.	X	

**Observations:** UCSD's responses to NASA information data requests during this review constitute a solid beginning to a Title IX self-evaluation in the key areas of admissions and enrollments of students.

## 2. Recommendations

**Regular Departmental Title IX Self-Evaluations.** The MAE Department, as well as other USCD STEM departments, should conduct robust self-evaluations on a regular basis. Departments should refer to NASA's guide, *Title IX and STEM: A Guide for Conducting Title IX Self Evaluations in STEM Programs* (accessible at [https://odeo.hq.nasa.gov/documents/TITLE\\_IX\\_STEM\\_Self-Evaluation\\_Fillable.pdf](https://odeo.hq.nasa.gov/documents/TITLE_IX_STEM_Self-Evaluation_Fillable.pdf)). As part of the self-evaluation effort, the University may wish to conduct a climate survey of the department or, perhaps more targeted focus groups, to determine if there are any areas of concern with regard to gender equity. NASA will check back with the MAE Department six months from the issuance of this report to learn about the results of the MAE self-evaluation.

## D. Recruitment, Admissions, Enrollment, Degrees Earned, and Faculty Recruitment<sup>20</sup>

### 1. Compliance Requirements and Assessment

The NASA Title IX regulations state that recipients may not discriminate on the basis of sex in admissions and recruitment. Specifically, the regulations prohibit educational institutions from such activities as:<sup>21</sup>

- Giving preference to one person over another on the basis of sex, by ranking applicants separately on such basis, or otherwise;
- Applying numerical limitations upon the number or proportion of persons of either sex who may be admitted;
- Administering or operating any test of other criterion for admission that has a disproportionately adverse effect on persons on the basis of sex;
- Making pre-admission inquiries as to the marital status of applicants for admission (including whether such applicant is "Miss" or "Mrs."); and

<sup>20</sup> All data in this section pertaining UCSD students was provided by the University in response to NASA's information request.

<sup>21</sup> 14 C.F.R. §1253.300–1253.455.

- Applying rules concerning actual or potential parental, family, or marital status of an applicant that treats persons differently on the basis of sex when determining whether a person satisfies admission criteria.

In addition, NASA’s regulations regarding the prohibition of discrimination on the basis of sex in employment in educational programs apply to the recruitment, advertising, and the process of application for employment.<sup>22</sup>

Consistent with these requirements, NASA reviewed the MAE’s student recruitment and admissions practices, as well as data on 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 five academic years: 2011-12 through 2015-16.

*a. Outreach and Recruitment*

<i>Review Criteria: Outreach and Recruitment</i>	<i>Yes</i>	<i>No</i>
1. The Department participates in programs to provide outreach to high school students (particularly for female students).	X	
2. The Department has undertaken recruitment efforts to attract more female applicants.	X	

**Observations:** UCSD has outreach programs provided by the School of Engineering’s IDEA (Inclusion, Diversity, Excellence, Achievement) Engineering Student Center, the mission of which is to “foster an inclusive and welcoming community, increase retention and graduation rates, and promote a sustainable culture of academic excellence among all engineering students at UC San Diego.”<sup>23</sup> In addition to providing resources for UCSD Engineering students, the Center has several outreach programs directed towards students in elementary, middle, and high school. The Faculty Director of the center is a member of the MAE faculty.

*b. Graduate Admissions, Enrollment, and Degree Progress*

<i>Review Criteria: Graduate Admissions, Enrollment, and Financial Aid</i>	<i>Yes</i>	<i>No</i>
1. Graduate admissions criteria appear to be neutral, valid predictors of success; are fairly applied; and have no adverse impact based on gender.	X	
2. There is no evidence of a gender-based differential between those accepted and those enrolling.	X	
3. Admissions processes and policies are set forth in writing and clearly described.	X	
4. Procedures for selecting students for fellowships, research assistantships, teaching assistantships, and other types of funding are set forth in writing and clearly described.	X	

<sup>22</sup> 14 C.F.R. §1253.500.

<sup>23</sup> UCSD, Jacobs School of Engineering, IDEA Student Center, “About IDEA,” accessed at <<http://jacobs.school.ucsd.edu/idea/about/aboutus.shtml>>.

**Observations:** Between 2011 and 2015, the percentage of female MAE graduate applications, acceptances, and new enrollments averaged 17 percent, 19 percent, and 20 percent, respectively. This is slightly higher than the nationwide graduate enrollment of females in aerospace and mechanical engineering programs, which are 14 and 15 percent, respectively.<sup>24</sup>

*c. Undergraduate Admissions, Enrollments, and Degree Progress*

<i>Review Criteria: Undergraduate Admissions, Enrollment, and Financial Aid</i>	<i>Yes</i>	<i>No</i>
1. Undergraduate admissions criteria are neutral, valid predictors of success; are fairly applied; and have no adverse impact based on gender.	X	
2. There is no evidence of a gender-based differential between those accepted and those enrolling.	X	
3. Admissions processes and policies are set forth in writing and clearly described.	X	

**Observations:** Over the past five academic years, women have accounted for approximately 50 percent of all applicants, admitted students, and new enrollments in the undergraduate MAE program. Although the percentage of females earning MAE bachelor's degrees increased from 16 percent to 24 percent between 2011 and 2015, and is higher than nationwide graduation rates, it remains significantly less than admittance and enrollment rates. During this time, women comprised 14 percent and 12 percent of those earning bachelor's degrees in aerospace and mechanical engineering, respectively, nationwide.<sup>25</sup> Nonetheless, retention of women students at UCSD, as in undergraduate programs nationwide, is a challenge. The UCSD MAE Department and the Jacobs School of Engineering have implemented several strategies to improve retention of female and minority students through their IDEA Center for Engineering Students.<sup>26</sup>

*d. Faculty Hires*

<i>Review Criteria: Faculty Hires</i>	<i>Yes</i>	<i>No</i>
1. Search committees receive training/education regarding diversity, unconscious bias, or implicit gender bias.	X	
2. Gender diversity a requirement for search committees.	X	
3. The University or Department tracks gender diversity of applicant pools.	X	
4. The University or Department takes steps to ensure the gender diversity of applicant pools.	X	

**Observations:** The Department earmarks a number of hires for individuals with proven awareness of diversity issues. Applicants are required to write a statement of diversity, by which the individuals make a case for their capacity to enhance diversity within MAE. NASA was informed by several faculty

<sup>24</sup> National Science Foundation, *Science and Engineering Indicators 2016*, January 2016, appendix table 2-24, accessed at <<https://www.nsf.gov/statistics/2016/nsb20161/#/data>>.

<sup>25</sup> National Science Foundation, *Science and Engineering Indicators 2016*, January 2016, appendix table 2-17, accessed at <<https://www.nsf.gov/statistics/2016/nsb20161/#/data>>.

<sup>26</sup> UCSD, Jacobs School of Engineering, IDEA Student Center, "About IDEA," accessed at <<http://jacobsschool.ucsd.edu/idea/about/aboutus.shtml>>.

members that the diversity statement is weighed heavily in the overall consideration for hiring. The University and Department appear committed to efforts to increase diversity among their faculty. NASA heard through its onsite interviews that women seem to be more closely scrutinized than men for hiring and promotions. NASA encourages the continuation of current efforts, as well as consideration of other ways of increasing faculty diversity.

## **2. Recommendations**

**Undergraduate Student Retention.** While UCSD has several initiatives to support students in the Jacob School of Engineering, NASA recommends it strengthen efforts to retain women students, particularly in its undergraduate MAE program. NASA suggests UCSD begin with a self-evaluation, as recommended Section II.C.2, above. In addition, MAE should partner with organizations focused on women in engineering – both on campus and national organizations – to determine the reasons women leave aerospace and mechanical engineering programs and to develop additional programs focused on retention.

## **3. Promising Practices**

**a. Spatial Visualization Imaging.** On average, women perform lower on standardized visualization tests.<sup>27</sup> To address this issue, a member of the MAE faculty applied for a grant to develop training modules. With funding from the University's Qualcomm Institute, a team of programmers, faculty, and student workers developed an iPad app that teaches students how to sketch 2D and 3D shapes with their fingertip or stylus, which is important for learning spatial visualization.

**b. The IDEA Engineering Student Center.** The Center provides academic support and social engagement experiences for UCSD engineering students with a focus on diversity. Programs include mentoring, tutoring, industry events, technical training and scholarly talks for graduate students, and resources for student organizations.<sup>28</sup>

## **E. Program Administration and Environment**

### **1. Compliance Requirements and 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

<sup>27</sup> See, e.g., Peters, M., P. Chisolm, and B. Laeng, "Spatial Ability, Student Gender, and Academic Performance," *Journal of Engineering Education*, vol. 84, no. 1, 1995, pp. 69–73 and Sorby, S.A., and Baartmans, B.J., "The Development and Assessment of a Course for Enhancing the 3-D Spatial Visualization Skills of First Year Engineering Students", *Journal of Engineering Education*, July 2000, pp. 301-307.

<sup>28</sup> UCSD, Jacobs School of Engineering, IDEA Student Center, accessed at <<http://jacobsschool.ucsd.edu/idea/about/aboutus.shtml>>.

activity operated by the recipient.<sup>29</sup> NASA looks to the following to assess compliance in the program administration context:

- Denial of benefits/limitation on program participation: denying the benefits of its programs or services or otherwise limiting program participation based on sex, including sexual harassment and sexual violence.<sup>30</sup>
- Discriminatory effects: 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.<sup>31</sup>

To reinforce these requirements, in September 2018 NASA Administrator Jim Bridenstine issued a policy statement to NASA grant recipients reiterating the importance of ensuring equal opportunity to all Agency-funded program participants (see Appendix A). Administrator Bridenstine stated, in part:

At the National Aeronautics and Space Administration (NASA), we are committed to achieving our missions and realizing our vision to discover and expand knowledge for the benefit of humanity. To accomplish our missions and vision, we invest in programs and activities involving non-Federal institutions. As authorized by Federal laws and NASA civil rights regulations and policies, we are also fully committed to helping these partner organizations – that participate in NASA-conducted programs or receive funding from NASA – adhere to all applicable civil rights authorities, and refrain from discrimination on the bases of race, color, and national origin, sex (including sexual harassment), disability, and age.

The NASA Administrator’s reinforcement of Title IX’s prohibition against discrimination and harassment in academic programs reflects a key element of NASA’s compliance review team’s assessment of the program environment (i.e., the existence of or extent to which there are concerns among students regarding sexual harassment or sex discrimination in the program). The compliance team examined the MAE Department’s program administration in a variety of specific arenas, including academic advising,<sup>32</sup> research participation, classroom and lab experiences, “family friendly” policies, and physical safety of the program environment. These program aspects were examined to determine whether there was evidence of students being treated differently or otherwise limited in program participation, on the basis of gender. NASA’s Title IX student survey provided insight into several of these areas and supported the findings from the student interviews.<sup>33</sup>

The analysis in this section is based on NASA’s interviews with students and faculty and supplemented with information culled from the NASA survey deployed to 310 MAE students between February 6 and March 3, 2017. The response rate for the survey was 10.3 percent (32 responses). While this rate of response is too small for findings of statistical significance relating to students’ assessment of the program environment, we offer the results of the survey as anecdotal information. As such, we believe that it can

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<sup>29</sup> Education programs or activities, 14 C.F.R. § 400(a), (b)(7).

<sup>30</sup> *Id.*

<sup>31</sup> Enforcement procedures, 14 C.F.R. § 605.

<sup>32</sup> The Title IX regulations explicitly state that a recipient may not discriminate on the basis of gender with regard to career counseling or guidance. Counseling and use of appraisal and counseling materials, 14 C.F.R. § 1253.425.

<sup>33</sup> Information on NASA’s Title IX Compliance survey and response rates is in Appendix B.

provide some general guideposts for areas of concern. In turn, these can be used to evaluate the need for and craft changes in program policy or practice (see Recommendations, below).

*a. Academic Environment (Advising, Classroom and Lab Experiences)*

<i>Review Criteria: Advising</i>	<i>Yes</i>	<i>No</i>
1. The program has a written process for matching students to advisors.		X
2. There is a standard process for changing advisors, and students are able to do so without repercussions.		X
3. NASA heard gender-related concerns regarding one or more faculty advisors.	X	
4. Overall, students believe that faculty advising is fair and equitable regardless of gender.	X	

<i>Review Criteria: Classroom/Lab Experiences</i>	<i>Yes</i>	<i>No</i>
1. The program has incorporated methods to improve female undergraduate representation, such as providing dedicated resources or modified curricula to better engage women in STEM, especially in early in the program.		X
2. There is equal access to lab equipment and participation in labs.	X	
3. Students perceive gender bias in high-stakes exams.		X
4. Statistical data suggests differential outcomes based on gender in high-stakes exams.		X
5. Students of both genders feel as though interactions in the classroom and lab are generally appropriate and respectful.	X	
6. Students feel professors or TAs doubt their abilities because of gender.		X
7. Students have been “warned” to stay away from certain professors because of their treatment of or interactions with students (e.g., rumors of sexual harassment, etc.).	X	
8. NASA heard concerns regarding the following:		
• Professors/TAs recognizing and calling on one gender more often than another in class discussions.		X
• Professors/TAs interrupting students of one gender but not students of the other, or allowing others in the class to do so.		X
• Use of sexist stereotypes through subtle, often unintentional means.	X	
• Offensive jokes or inappropriate gender-related remarks in the lab or classroom.	X	
• Disrespect of abilities, based on gender (e.g., she got into that program because they’re saying “we need more women”).	X	
• Unfair grading, based on gender.		X
• Other inappropriate gender-related conduct or actions.	X	
9. The Department or Program has support organizations dedicated to gender equity, e.g., women in science and engineering.	X	

**Observations:** Title IX prohibits both intentional disparate treatment as well as methods of program administration that have the effect, although not the intent, of discriminating based on sex, for example, disparities in admission rates or testing outcomes. The law also prohibits denial of access or program limitation based on sex, for example, the presence of a hostile educational environment in

which sexual harassment is allowed to go unaddressed, or a student being downgraded or leaving the program as a result of gender bias.

We note at the outset of this discussion that, although NASA received anecdotal information during the review regarding concerns with inappropriate gender related remarks, the concerns presented do not establish a denial of student access or opportunity; nor do they reach the level of a statistically significant impact based on a departmental policy or practice. In fact, the majority of MAE students and faculty reported a positive climate in the learning environment in terms of both advising and classroom and lab experiences. This included instructor treatment of students (both male and female), availability and access to laboratory equipment, quality of relationships with their student peers and instructors of both sexes, as well as the extent to which their input was taken seriously in the classroom.

In general, students also reported relationships with their advisors that were fair, respectful, and equitable. However, in at least one instance a student sought a new advisor due to a “toxic relationship” with an advisor that may have been influenced by gender. As the reasons for this change are not clear and NASA did not see any evidence that there were negative repercussions for changing advisors, our main concern here is that there does not seem to be a standard process for changing advisors that would promote greater transparency in and important academic process (see Recommendations, below).

An additional positive indicator for the environment: the vast majority of survey respondents and students interviewed reported sexually harassing behaviors as never or rarely occurring. There was a difference between genders in terms of the inclination to report gender discrimination and sexual harassment. Male students reported being notably more comfortable about reporting gender discrimination and sexual harassment than were female students. This seems to point to the fact that male students feel less likely to be the target of sexual harassment.

NASA learned about concerns with inappropriate gender-related comments in the program in a few of the student interviews and survey responses. While the comments were limited to a handful of interviewees and respondents, they are cause for concern. For example, in the open-ended comments section of the survey this statement was made: “Sometimes, male dominance in engineering makes ‘male jokes’ or ‘male curse words’ to be ‘normalized’ even though there are both women and men present. I tolerate it, but definitely would like us to get over with that. Its (sic) part of culture, I understand, but would like to change it anyway. It specially bothers me when women make that kind of jokes.” During interviews, some faculty members also noted they observed what they considered to be inappropriate gender-related comments occurring among students, especially undergraduates. NASA heard from both male and female interviewees that the use of sexist stereotypes through subtle, often unintentional means is very much present in the MAE environment.

NASA also heard from some student interviewees that female peers at the University are not planning to go into academia but rather industry because, to paraphrase, “[t]hey see what the female faculty members have to go through and they don’t want to go through that.” Several pointed to the fatigue of being a woman or a minority in the Department, with one describing it as “a death by a thousand cuts.” Interviewees also spoke of perceiving the presence of an “old boys club” attitude on the part of some of the faculty. There was reference as well to the seemingly ever-present reality of professors having too much power over their students, which could have a chilling effect on filing a discrimination or harassment complaint, among other downsides. However, students raising these concerns stated they did not believe they had reason to file a complaint or that they were experiencing a denial of or limitation on program access.

Also of concern, there were several incidents reported by interviewees of remarks such as “you probably got that job because you are a woman.” These comments were most often attributed to other students. NASA heard of several instances where women in MAE had experiences with male students who did not want to work with a woman or who expressed a belief that women should be subordinate; generally, such comments were attributed to the cultural differences of Eastern-acclimated men in the Department. Several interviewees also noted a lack of female professors and women in the program, and male and female respondents felt this was detrimental to the experience of women in the program.

As stated, the concerns presented regarding the environment in MAE were anecdotal in nature and do not appear to reach the level of a statistically significant impact based on a departmental policy or practice, nor do they indicate a denial of or limitation on program participation, prohibited by Title IX. Nonetheless, there seems to be real concern among both faculty and students, of both genders, that the environment suffers from what may be described as a kind of subtle, and sometimes not-so-subtle, gender bias present in the department that is evident in certain disparaging gender-related remarks and attitudes at least in part shaped by gender stereotypes. The Department, in collaboration with OPHD, should do much more to address these concerns as detailed in the recommendations below. These efforts should be strategic and multi-pronged in nature. For example, they should be inclusive of additional individualized education and awareness sessions for the MAE faculty conducted by the Title IX Coordinator. Further, MAE departmental leadership should encourage faculty and students to take the Harvard Implicit Association Test (accessible at: <https://implicit.harvard.edu/implicit/canada/takeatest.html>), to engage in departmental discussions at all levels on the results, and to deploy a departmental climate survey as part of the Title IX self-evaluation recommended in Section II.C.2 above). This should be followed up with program policy and practice interventions based on the results (see Recommendations, below).

#### *b. Parental/Marital Status (“Family Friendly” Policies)*

The NASA Title IX regulations include detailed provisions on matters pertaining to marital and parental status.<sup>34</sup> 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. The regulations also require that pregnancy and childbirth be treated in the same manner and under the same policies as any other temporary disability or physical condition.<sup>35</sup> 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... 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.”<sup>36</sup> More recently, in its “Dear Colleague” letter of June 25, 2013, and the accompanying technical assistance document, “Supporting the Academic Success of Pregnant and Parenting Students,” OCR provided a wealth of guidance and information to educational grant recipients on Title IX requirements pertaining to pregnancy and parental status.<sup>37</sup>

<sup>34</sup> Marital or parental status, 14 C.F.R. § 1253.445 and 1253.530.

<sup>35</sup> Admission, *Prohibitions relating to marital or parental status*, 14 C.F.R. § 1253.300(c)(3).

<sup>36</sup> Marital or parental status, 14 C.F.R. § 1253.445 (b)(5).

<sup>37</sup> The Dear Colleague letter is accessible at <<http://www2.ed.gov/about/offices/list/ocr/letters/colleague-201306-title-ix.pdf>>; “Supporting the Academic Success of Pregnant and Parenting Students” is accessible at <<http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf>>.

Review Criteria: Family Friendly and Parental Leave Policies	Yes	No
1. The institution has a separate leave policy that addresses parental/family status.	X	
<ul style="list-style-type: none"> <li>• If yes, does the parental/family leave policy treat pregnancy and child birth in the same manner as any other temporary disability or physical condition?</li> </ul>	X	
<ul style="list-style-type: none"> <li>• If no, does the Program treat pregnancy as a justification for a leave of absence for as long a period of time as deemed medically necessary by the student's physician and that allows for reinstatement to the status she held when the leave began?</li> </ul>	N/A	
<ul style="list-style-type: none"> <li>• Does the policy explicitly cover all members of the university community (e.g., faculty, staff and students)?</li> </ul>		X
2. The Program regularly disseminates information to program participants, including faculty and students, regarding pregnancy-related policies.		X
3. The individual situations NASA heard about involving pregnancy indicate that individual faculty members are responding appropriately and consistent with Title IX requirements.		X

**Observations:** As with its Title IX grievance procedures and sexual harassment policy and procedures, the University provided numerous policy documents relating to parenting, pregnancy, and childbirth. These range from family accommodation procedures to utilization of lactation facilities. As a general matter, these documents align with current law. For example, the UCSD Family Accommodation Policy treats pregnancy as a temporary disability, as required by Title IX. Lactation facilities are required under the Affordable Care Act.

Of concern, however, is the fact that the Family Accommodation Policy appears to apply only to “academic appointees.” It is unclear whether academic appointees are inclusive of graduate research assistants and teaching assistants as the term is not clearly defined in the policy. Assuming that the policy does cover graduate students “appointed” by the University, it does not appear that the policy covers students, for example, undergraduates, who are not appointed into positions covered by the policy. This is not compliant with Title IX, which requires that all students be covered insofar as pregnancy and parenting, and that pregnancy be treated as a temporary disability for all students.

Further, as with the grievance procedures, there is not an easy-to-understand description for processing a request for pregnancy and parenting accommodation among members of the MAE community. Many of those interviewed were unaware of family and childbirth policies. The University should make regular, consistent efforts to disseminate information to students and faculty regarding pregnancy-related policies.

Of even greater concern, NASA heard during interviews that to have children while participating on a research project generally would be to “go against the dominant culture of the Department.” This is of concern because it points to the kind of structural issue facing those seeking to advance in academic careers in the STEM fields, that is, that parenting and STEM research are not conducive to one another, particularly for women academics. Given that some interviewees explicitly stated they sought industrial rather than academic careers for this reason (see “Observations” for II.E.1.a, above), this is indeed a cause for some concern from a Title IX perspective. In addition to the need for greater policy dissemination and focus on students, the department should include specific questions relating to this issue in a climate survey conducted as part of its Title IX self-evaluation (recommended in II.C.2 above) and should engage in other means of addressing the issue, such as carefully considering whether grant award vehicles provide for time off for family related responsibilities, and consulting with gender

equity related professional engineering organizations, such as the Society of Women Engineers, for policy recommendations.

*c. Campus Safety*

<i>Review Criteria: Campus Safety</i>	<i>Yes</i>	<i>No</i>
1. Students believe the campus is a safe environment (e.g., has night-time shuttle service, night-time escort, police cars on patrol, information dissemination about safety issues)	X	
2. Information on safety policies is disseminated to students.	X	
3. Students are aware of the following safety measures and believe they are working well:		
• Night-time shuttle service	X	
• Night-time escort service	X	
• Night-time campus lighting		X
• Regular security/police patrols on campus	X	
• Regular security/police patrols in buildings where students work at night	X	
• Dissemination of information about safety issues	X	
• Controlled-access/security of buildings and labs		X

**Observations:** Overall, survey respondents did not report physical safety on campus as being a major concern, although a few comments in the open-ended response section suggest the need for the University to give some consideration to specific interventions in this arena. Sixty-five percent of respondents reported that they were not concerned at all or concerned very little with physical safety (67 percent of male respondents and 60 percent of female respondents). Similar results were obtained for safety in dorms/housing area, off-campus housing locations, and off-campus University-sponsored events.

The survey offered an “open-ended” question requesting respondents to provide “further detail on any situation or location on or near campus grounds where you are concerned for your safety.” Among the responses were the following: “Walking through campus at night in areas that are not well lit or have many blind corners (e.g. the walk paths through the medical campus, near the grad housing, have overgrown plants which block views)” and “Since it is an open campus and during my first year I stayed until very late studying, it was kind of an afterthought but walking or biking home was always a worry.” During interviews, a few students raised concerns with security in the MAE building, particularly lighting at night and the overall security of the building. Given the specific nature of the concerns, NASA requests USCD and MAE give consideration to addressing the need for better night-time lighting and greater controlled access to the MAE building (see Recommendations, below).

**2. Requirements for Compliance and Additional Recommendations**

**a. Policy on Advisors.** Neither UCSD nor the MAE Department has a written policy or process for changing advisors. While we recognize this is not standard practice at most research universities, NASA recommends USCD/MAE consider creating such a policy in the interest of greater transparency and

consistency in processes that directly affect student success at both the graduate and undergraduate levels.

**b. Concerted Efforts to Address the Presence of Implicit Bias in the MAE Department.** NASA recommends that the MAE Department, in collaboration with the Title IX Coordinator's office, OPHD, undertake a series of efforts to address the presence of subtle gender bias in the MAE academic environment. These efforts should be strategic and multi-pronged in nature. For example, they may include colloquia on the topic of subtle or implicit bias, particularly as it relates to gender, for which the entire department is invited and encouraged to attend. The focus should always and explicitly be on awareness of the presence of subtle gender bias, delivered in a constructive manner that does not discourage individuals from having candid conversations.

In addition to addressing the topic through department-wide activities, there also should be separate discussions with the MAE faculty, as some of the concerns raised by interviewees during NASA's review directly involved faculty members. The Title IX Coordinator should conduct an additional individualized education and awareness session during an all-hands meeting of the faculty. In tandem with the Title IX Coordinator's session for MAE faculty, the departmental leadership should encourage faculty to take the Harvard Implicit Association Test (accessible at:

<https://implicit.harvard.edu/implicit/canada/takeatest.html>), to encourage their graduate students to do so as well, and to engage in departmental discussions at all levels on the results, as well as to deploy a departmental climate survey as part of its Title IX self-evaluation (see Section II.C.2, above), followed up with program policy and practice interventions based on the results of the self-evaluation and survey. Also, as mentioned in the recommendation relating to Title IX Coordination (Section II.A.2.b, above), the faculty and graduate students should be encouraged to view the NASA "Unconscious Bias in STEM" learning tool (accessible at: <http://missionstem.nasa.gov/eLearn.html>).

Additionally, OPHD and MAE may wish to view the NASA 2016 MissionSTEM Summit (accessible at: <https://missionstem.nasa.gov/MissionSTEM-Summit-2016.html>) for more ideas on how to address this issue. NASA will check back with USCD in six months from the date of this report to learn more about concrete steps taken by UCSD and MAE in this regard.

**c. Clarification of Pregnancy and Parenting Policies.** In order to be compliant with Title IX, the University must ensure that its policies are in conformity with Title IX as they relate to students, especially those who are not "academically appointed," e.g., undergraduates. NASA recommends that the University review the Title IX regulatory provisions, Marital or parental status, at 14 C.F.R. § 1253.445 and 1253.530, and OCR's June 2013 Dear Colleague Letter and technical assistance document, "Supporting the Academic Success of Pregnant and Parenting Students," which provide information on strategies that educational institutions may use and programs that can be developed to address the educational needs of students who become pregnant or have children. At a minimum the University's policy review should address whether the policy is clear on the following points:

- i. A school must excuse a student's absences, including both graduate and undergraduate and regardless of whether the student is "academically" appointed, because of pregnancy or childbirth for as long as the student's doctor deems the absences medically necessary. When a student returns to school, she must be allowed to return to the same academic and extracurricular status as before her medical leave began.

- ii. Schools must treat pregnant employees and students in the same way that they treat similarly situated students, that is, as temporary medical conditions.
- iii. A student who is pregnant or has given birth may not be required to submit medical certification for school participation unless such certification is also required for all other students with physical or emotional conditions requiring the attention of a physician.
- iv. Steps should be taken to ensure thorough dissemination of pregnancy policy, for example, through email, online and print communications. All faculty members and graduate teaching assistants should be provided with a copy of OCR's technical assistance document on supporting pregnant and parenting students. A simple and easy-to-understand rendering of the process for requesting and receiving parenting and pregnancy accommodation should be posted on the OPHD website.

**c. Safety.** The University and the MAE Department should carefully review the NASA survey responses regarding physical safety to determine whether any additional safety steps are needed, for example, adding lighting to several dark campus locations. Consideration also should be given to ensuring greater controlled access to the building, especially after hours.

### ***3. Promising Practice***

**Cognitive Assessment and Risk Evaluation (CARE) Program and Advocates:** CARE, at the Sexual Assault Resource Center, provides free and confidential support as well as an explanation of each reporting option in detail, for victims of sexual assault, relationship violence, and stalking. A CARE Campus Advocate, available 24/7, can explain all of a victim's options, accompany the victim throughout any reporting processes (should they choose to report), and assist with academic, housing, or employment concerns.

### **III. CONCLUSION**

Based on this limited scope Title IX review of the University of California, San Diego and its Mechanical and Aerospace Engineering Department, NASA did not find evidence of non-compliance with basic institutional Title IX procedural requirements regarding coordination, grievance procedures, and self-evaluation. However, NASA has specific recommendations for strengthening the University's Title IX compliance. For example, the University should develop written guidelines relating to parenting and pregnancy for undergraduates. The University also should develop and post on the OPHD website, and publicize through other appropriate means to reach the academic community, a clear and simple rendering of the process for raising allegations of sex discrimination or sexual harassment, as well as for requesting and receiving accommodation relating to pregnancy.

With respect to the MAE Department itself, NASA also did not find a Title IX violation in that we did not find evidence of denial of program access or limitation on participation based on sex. However, we note that some female MAE students and faculty expressed concerns, in their responses to NASA's Title IX survey and interviews, about subtle forms of bias contributing to a program environment that is not

always welcoming for individuals. Consequently, we encourage the MAE Department to consider and address issues of both subtle and sometimes more overt gender bias that may be present in the Department's environment, before they amount to a Title IX violation as evidenced by decreased participation or advancement in the program for women.

NASA's recommendations regarding both procedural requirements as well as program administration are designed to assist UC San Diego and its MAE Department in furthering their efforts to ensure equal educational opportunity regardless of sex, as required by Title IX. NASA will assess the University's progress toward addressing the recommendations and strengthening Title IX efforts six months from the date of this report.

## APPENDIX A: September 2018 Policy Statement from the NASA Administrator to NASA Grant Recipients

National Aeronautics and Space Administration  
Office of the Administrator  
Washington, DC 20546-0001



### NASA POLICY STATEMENT ON ANTIDISCRIMINATION IN NASA CONDUCTED OR FUNDED PROGRAMS, ACTIVITIES, AND INSTITUTIONS

At the National Aeronautics and Space Administration (NASA), we are committed to achieving our missions and realizing our vision to discover and expand knowledge for the benefit of humanity. To accomplish our missions and vision, we invest in programs and activities involving non-Federal institutions. As authorized by Federal laws and NASA civil rights regulations and policies, we are also fully committed to helping these partner organizations – that participate in NASA-conducted programs or receive funding from NASA – adhere to all applicable civil rights authorities, and refrain from discrimination on the bases of race, color, and national origin, sex (including sexual harassment), disability, and age.

I would like to especially emphasize to beneficiaries of NASA funded programs and activities (e.g., students, faculty, and staff of academic institutions conducting Science, Technology, Engineering, and Mathematics (STEM) and other research, as well as visitors to science centers and museums) that their institutions are required under Federal civil rights laws to designate an administrative official responsible for administering antidiscrimination policies and programs (e.g., "Title IX Coordinator" responsible for administering Title IX (20 U.S.C. § 1681), prohibiting sex discrimination in education programs or activities receiving Federal financial assistance), including providing an internal administrative grievance process for filing complaints of discrimination or harassment.

Additionally, beneficiaries who believe they have been subjected to discrimination or harassment based upon race, color, national origin (including Limited English Proficiency), sex (including pregnancy, sexual harassment, sex stereotyping, sexual orientation, or gender identity), disability, or age may file a complaint directly with NASA. Information on filing a civil rights complaint is available at <https://missionstem.nasa.gov/filing-a-complaint.html>. For additional information or assistance, individuals may contact NASA's Office of Diversity and Equal Opportunity by e-mail at [AssistedProgramComplaint@NASA.gov](mailto:AssistedProgramComplaint@NASA.gov) or [LEP@NASA.gov](mailto:LEP@NASA.gov), or by telephone at 866-654-1440 or 202-358-2167.

For more information on legal authorities, rights and responsibilities, and resources relating to antidiscrimination in programs or activities conducted by or funded by NASA, I encourage all individuals to visit NASA's MissionSTEM Web site at <http://missionstem.nasa.gov/index.html> and <https://missionstem.nasa.gov/compliance-requirements-nasa-grantees.html>.

A handwritten signature in blue ink that reads "Jim Bridenstine".  
James F. Bridenstine  
Administrator

## **APPENDIX B: 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. 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 onsite visit to interview university officials, program faculty, and students. In addition, NASA developed a Title IX literature review to better understand national concerns regarding gender in science, technology, engineering, and mathematics (STEM) fields as well as strategies recipients should undertake to address such concerns, including stronger Title IX compliance efforts in the STEM context.

NASA, through its NASA Shared Services Center (NSSC), a professional survey administration organization, partnered with the University of California, San Diego in deploying an online survey or Title IX Compliance Review Data Collection. The purposes of the survey were to: 1) gain a greater understanding of gender dynamics in the University’s academic environment in support of the compliance review analysis and assessment; and 2) provide University’s administration with an additional tool for assessing the gender dynamics of their academic environment, as part of their efforts to better ensure equal opportunities regardless of gender. Thus, focal points of the survey were program climate, gender discrimination/harassment, and campus safety, including sexual assault and sexual violence. NSSC deployed the survey via email to students during the period from February 8 to March 3, 2017. The survey was sent to all UCSD MAE Department students. The response rate was 10.3 percent. Key findings of the survey are discussed in NASA’s Compliance Review Analysis (see Section II of the report).

### ***2. Onsite Compliance Review Activities***

The NASA compliance team conducted an onsite review of the University of California, San Diego, Mechanical and Aerospace Engineering Department from February 28 to March 2, 2017. During the visit, the compliance team conducted interviews with the Director of Student Conduct, MAE Graduate Affairs Committee Chair, Title IX Coordinator, and Complaint Resolution Officers, 16 faculty members, 3 post-docs, 12 graduate students, and 6 undergraduates. In addition to the one-on-one interviews, NASA reached other MAE Department students with our Title IX survey. The facts cited in our compliance analysis concerning the University’s Title IX compliance; student data (including recruitment, admissions, etc.); and program administration and academic environment were obtained from the University’s responses to our information request, onsite interviews, and the survey results, unless otherwise specified.