

Title IX and Access to Courses and Programs in Science, Technology, Engineering, and Math (STEM)

Office for Civil Rights, Department of Education
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Notice

- This presentation provides general information about federal civil rights laws.
- Determinations of compliance depend on specific facts evaluated on a case-by-case basis.
- The language used in these slides does not constitute legal advice. It is approved for general information purposes only and should not be used for other purposes.

Overview of the Presentation

- This presentation provides information and practical examples of how the requirements of Title IX relate to STEM. It also offers recommendations to assist schools in ensuring that their STEM courses and programs do not have the purpose or effect of discriminating on the basis of sex.
- This presentation is aimed at principal investigators, faculty, and administrators at postsecondary institutions.

Overview of the Presentation

- This presentation is part of a multi-agency initiative to develop consistent and consolidated technical assistance as it relates to STEM. The goal of this multi-agency collaboration is to reduce the burden on schools and institutions, who may benefit from common guidance about their Title IX responsibilities and ways to improve access and outreach to women and girls in STEM fields.
- The information provided in this presentation is based on the Title IX regulations which were issued in 1975. Nothing in this presentation should be interpreted as an imposition of quotas or caps in STEM.

What is Title IX?

- Title IX prohibits sex discrimination in the programs and activities of all educational institutions, including school-sponsored activities or travel that occur away from school, so long as the institution receives federal financial assistance.
- Title IX also prohibits sex discrimination in the education programs and activities of non-educational institutions that receive federal financial assistance (e.g., museums, libraries).

How Does Title IX Apply to STEM?

- Title IX prohibits different treatment on the basis of sex in all aspects of a school's education programs or activities.
- Title IX also sometimes prohibits policies and procedures that disproportionately affect women or girls in an adverse way.

How Does Title IX Apply to STEM?

- Title IX prohibits retaliation against an individual for opposing or reporting discrimination, complaining about discrimination, or participating in a discrimination investigation.
- Title IX requires schools to adopt policies and procedures that are important for the prevention and correction of sex discrimination.

How Does Title IX Apply to STEM?

As it relates to STEM, Title IX prohibits sex discrimination in the following areas:

- Admissions;
- Recruitment and Retention;
- Scholarships and Fellowships;
- Counseling and Appraisal Materials;
- Administration of Courses;
- Marital/Parental Status and Pregnancy;
- Harassment; and
- Employment.

Title IX also prohibits retaliation.

Title IX Regulations - Admissions

- At the postsecondary level, institutions must not discriminate on the basis of sex in admissions to public coeducational undergraduate institutions, and public and private institutions of professional, graduate, and vocational education. (34 C.F.R. § 106.21(a))
- These institutions must not use any test or criterion for admission to a school or degree program that has a disproportionately adverse effect on individuals of one sex unless certain criteria are met. (34 C.F.R. § 106.21(b)(2))

STEM Examples - Admissions

- If an undergraduate STEM program requires previous classes, tests, or specific experiences in STEM subjects for admission, this might lead to an under-enrollment of women in the program if they have taken fewer advanced STEM classes and AP tests in high school.
- A school's computer science program could decide to eliminate prior programming as a prerequisite for the major. To meet the needs of students entering with varying backgrounds, the college could create multiple first year courses that students could self select depending on their level of prior experience in computer programming.

STEM Examples - Admissions

- Schools should examine their admissions criteria to ensure that they are neutral in application or effect and are valid predictors of success. Schools should also consider whether there is an adverse impact on one sex resulting from any of their admissions criteria.
- A graduate astronomy department might consider using a multi-factorial admissions process to ensure that no one criterion is accorded undue weight instead of rejecting every applicant who does not meet a certain math score on the GRE without regard to their GPAs, essays, references, and other information.

STEM Examples - Admissions

- Schools might want to examine whether there is gender diversity on their admissions committees.
- When doing this, schools should keep in mind that if there are fewer female faculty in STEM departments, they may become overloaded with non-teaching and non-research work such as participating on various committees. To address this problem, schools might consider asking female faculty from related departments to sit on admissions committees.

STEM Examples - Admissions

- Schools might want to examine whether there is evidence of a gender-based differential between those accepted and those enrolling in STEM programs.
- If schools find a disparity, they might develop mechanisms to further analyze the data and respond to any problems they find. For example, schools could survey accepted students who chose not to enroll and include questions to determine if their decision was influenced by gender issues instead of (or in addition to) other factors (e.g., the school they chose to enroll in was closer to family or offered a better financial aid package.)

Title IX Regulations – Recruitment & Retention

- Title IX prohibits schools from discriminating on the basis of sex in the recruitment of students. (34 C.F.R. § 106.23(a))
- A school might undertake additional recruitment efforts for one sex to overcome the effects of conditions that resulted in limited participation by one sex. (34 C.F.R. § 106.23(a))

STEM Examples – Recruitment and Retention

- Research suggests that women and girls experience subtle biases (both self-inflicted and from peers as well as faculty members) that discourage them from entering and staying in STEM courses and career tracks. (See, e.g., Noesk, B.A., Banaji, M.R., & Greenwald, A.G. “Harvesting implicit attitudes and beliefs from a demonstration web site” *Group Dynamics: Theory, Research, and Practice*, 6(1), 101-115 (2002); Valian, V. *Why so slow? The advancement of women*. Cambridge, MA: MIT Press (1998))
- Schools are encouraged to identify and implement strategies to address these recruitment and retention biases. Examples of strategies are discussed on the following slides.

STEM Examples - Recruitment

- Schools are encouraged to engage in targeted outreach efforts to encourage more women to apply to the school as STEM majors, particularly if the under-representation of women in STEM majors at a school results from an under-representation in the applicant pool.
- A school's STEM departments could engage in outreach during events for prospective students explaining the benefits of specific STEM careers, and counteract any stereotypes about the fields.

STEM Examples - Recruitment

- A college's geology department that has few women students but only recruits at the American Geophysical Society conference could consider attending other professional conferences, such as the Association of Women in Science or Society of Women Engineers.
- A college could partner with elementary, middle, and/or high schools in its community to support the preparation of all students for higher education in STEM fields, provide mentors, and recruit promising students for undergraduate study.

STEM Examples - Retention

- A school could create a gender-diverse network of faculty to serve as mentors to STEM majors and support them in their transition from high school to the rigorous demands of college-level STEM.
- Schools might also include private sector STEM professionals as mentors to offer students both industry and academic perspectives.

STEM Examples - Recruitment

- Schools could design STEM introductory courses to appeal to a diverse group of students, including presentations from diverse STEM academics and professionals for students considering careers in STEM.

Title IX Regulations – Scholarships and Fellowships

- Title IX generally prohibits schools from discriminating on the basis of sex in awarding financial assistance. (34 C.F.R. § 106.37)
- Sex-restricted scholarships are allowable if they are established by wills, trusts, bequests, or similar legal instruments provided that the overall effect of the award of such sex-restricted scholarships does not discriminate on the basis of sex. (34 C.F.R. § 106.37(3)(b)(1)). Schools must follow certain procedures for ensuring nondiscriminatory awards. (34 C.F.R. § 106.37(3)(b)(2)).
- Schools might, under certain circumstances, provide scholarships to women in programs that are traditionally dominated by men (such as certain STEM fields) “to overcome the effects of conditions that resulted in limited participation” by women. (34 C.F.R. § 106.3(b))

STEM Examples - Scholarships and Fellowships

- Schools should consider whether the procedures for selecting students for financial assistance contain clear criteria (nondiscriminatory in application or effect) that are set forth in writing and clearly described so that all students understand the process.

STEM Examples - Scholarships and Fellowships

- STEM departments could periodically review, by sex and other factors, both the proportion and amount of financial assistance provided to students. Data should be looked at for at least five years to assess any trends and anomalies.
- By periodically examining years of financial assistance data, STEM departments can ensure that subtle gender bias has not crept into the awarding of assistantships, e.g., female students primarily awarded teaching assistantships (TA) while male students receive research assistantships.

Title IX Regulations – Counseling and Appraisal Materials

- Schools are prohibited from discriminating on the basis of sex in the counseling or guidance of students or applicants for admission. (34 C.F.R. § 106.36(a))
- Schools are required to develop procedures for ensuring that their counseling and appraisal materials do not discriminate on the basis of sex. (34 C.F.R. § 106.36(b))

Title IX Regulations – Counseling and Appraisal Materials

- Schools that use testing or other materials for appraising or counseling students are prohibited from using different materials for students on the basis of their sex. (34 C.F.R. § 106.36(b))
- If a school finds that a particular class or course of study contains a disproportionate number of students of one sex, it must take action to assure that the disproportion is not the result of sex discrimination in counseling or appraisal materials or by counselors. (34 C.F.R. § 106.36(c))

STEM Examples - Counseling and Appraisal Materials

- Schools' materials and websites for STEM programs should highlight gender diversity and give equal visibility to the achievements of male and female faculty and students.
- Schools' academic advisors must not steer girls away from STEM courses or majors. If, for example, a school finds that a majority of students enrolled as chemistry majors are men, it must review its policies and materials to ensure that this is not due to academic advisors steering girls and women away from enrolling in the major.

STEM Examples - Counseling and Appraisal Materials

- Many STEM programs require students to have an advisor. Schools should examine whether:
 - they have a written description of the non-discriminatory procedures for matching students to advisors;
 - students may request a change in advisor, and if so, what is the process for doing so; and
 - students tend to have problems with particular advisors, and if so, how has the department ensured that the reason(s) is/are not related to gender issues.

STEM Examples - Counseling and Appraisal Materials

- To ensure that students are not subject to sex discrimination by their advisors, STEM departments should consider automatically granting requests by students to change advisors, with no questions asked. STEM departments should also encourage students to seek advice from other faculty members in addition to their formally assigned advisor.
- A school's STEM department could add "life counselors" in addition to formal faculty advisors. Life counselors provide advisement in areas such as social networking, financial responsibility, and career choices. Life counselors benefit the entire student body, and particularly female students who may feel isolated.

STEM Examples - Counseling and Appraisal Materials

- Schools are encouraged to provide training to counselors, advisors, faculty members, department chairs, and other administration officials on the effects of implicit bias (both self-inflicted and from others) and strategies for broadening girls' and women's interest and participation in STEM fields.

Title IX Regulations – Administration of Courses

- Schools are prohibited from discriminating on the basis of sex in any aspect of course administration. (34 C.F.R. § 106.31)

STEM Examples - Administration of Courses

- Students in STEM courses must not be subject to discrimination on the basis of sex in the allocation of textbooks; necessary technology; laboratory equipment or other course-related resources; in the qualification or credentials of their STEM course teachers and professors; or in the determination of grades for the course.

STEM Examples - Administration of Courses

- STEM departments could consider how to make better use of their existing class and program evaluation tools to assess whether their program administration is treating female and male students differently.
- If existing evaluation tools cannot be modified, STEM departments could consider administering regular climate surveys that can be disaggregated by the department on the basis of sex. Survey questions could relate to whether grading practices were appropriate and fair, whether faculty provided helpful feedback, and whether faculty treated students with respect.

Title IX Regulations - Marital and Parental Status

Schools are prohibited from:

- Applying any rule concerning a student's actual or potential parental, family, or marital status that treats persons differently on the basis of sex. (34 C.F.R. § 106.40(a); 34 C.F.R. § 106.21(c)(1))
- Making a pre-admission inquiry as to the marital status of an applicant for admission. (34 C.F.R. § 106.21(c)(4))

STEM Examples – Marital and Parental Status

- A school must not require female STEM majors who are parents to take a part-time course load while not requiring male students who are parents to do the same.
- A graduate program in computer science must not ask applicants for admission whether they are married.

Title IX Regulations – Pregnancy

- Schools are prohibited from discriminating against or excluding any person from its education program or activity on the basis of pregnancy (or a related condition). (34 C.F.R. § 106.40(b))
- Schools may provide separate programs or activities for pregnant students only if the pregnant student's participation is completely voluntary and the separate portion is comparable to that offered to non-pregnant students. (34 C.F.R. § 106.40(b)(3))
- Schools must excuse a student's absences because of pregnancy or childbirth for as long as her doctor deems the absences medically necessary. When the student returns to school, she must be allowed to return to the same academic and extracurricular status as before her medical leave began. (34 C.F.R. § 106.40(b))

STEM Examples – Pregnancy

- A physics professor cannot refuse to allow a student to submit work that she missed because of absences due to pregnancy or childbirth.
- Similarly, if a professor's grading is based in part on class attendance or participation, the student must be allowed to earn the credits she missed, so that she can be reinstated to the status she had before she took pregnancy leave.

Title IX - Harassment

- Sexual harassment is a form of sex discrimination covered by Title IX.
- Sexual harassment is conduct that:
 - is sexual in nature or is gender-based;
 - is unwelcome; and
 - interferes with or limits a student's ability to participate in or receive the benefits, services, or opportunities of the school's program or activity.

Title IX - Harassment

Conduct denies or limits participation or benefits when:

- An employee conditions a student's participation or bases an educational decision or benefit on the student's submission to sexual conduct; or
- An employee, another student, or a third party creates a hostile environment that is sufficiently serious that it interferes with or limits a student's ability to participate in or benefit from the school's program or activity.

Title IX - Harassment

- While sexual harassment is a concern for schools generally, it could be of particular concern in the area of STEM because there are frequently small numbers of women in STEM courses or departments.
- These small numbers increase the potential that female students may become targets of harassment.

Title IX - Harassment

- Title IX also prohibits gender-based harassment.
- Harassing conduct based on sex, even if the harassment is not sexual in nature.
- Examples include:
 - A student harassing a fellow student by altering his/her lab results because of his/her sex.
 - A student harassing another student and refusing to be his/her lab partner in a physics class because s/he thinks s/he will not be able to handle the work seriously because of his/her sex.

Title IX - Harassment

- Schools must take immediate and appropriate action to investigate or otherwise determine what happened.
- The inquiry must be prompt, thorough, and impartial.
- If harassment occurs, schools must take prompt and effective steps reasonably calculated to end the harassment, eliminate any hostile environment, and prevent it from happening again to the victim or to others.

STEM Examples - Harassment

- If a chemistry PhD student files a sexual harassment complaint with the school against her advisor and the school determines that a hostile environment has been created, it must take steps to end the harassment, eliminate the hostile environment, and prevent its recurrence. Potential remedies should include allowing the student to have a new advisor.
- If a school is made aware that a particular faculty member denigrates the answers that are provided by female students but not similar answers by male students and this causes a hostile environment, it must take steps to end the conduct, eliminate the hostile environment, and prevent its recurrence. This may include speaking with that faculty member and providing appropriate training.

Title IX Regulations - Employment

- Schools may not discriminate on the basis of sex in employment or recruitment, including but not limited to hiring, promotion, consideration of and award of tenure, grants of leave, benefits, and selection and financial support for training. (34 C.F.R. § 106.51)
- Schools are prohibited from applying policies or employment actions concerning the marital, parental, or family status of employees or applicants that treat persons differently based on sex, or that are based on whether the employee or applicant is the head of household or principal wage earner. (34 C.F.R. § 106.57)

STEM Examples - Employment

- A school cannot base a hiring or promotion decision for a STEM faculty position on stereotypes about a woman's ability to perform her job because she has children.
- Schools should also consider implementing family friendly policies, e.g., policies that allow faculty to “stop-the-tenure-clock” for family reasons.

STEM Examples - Employment

- Schools might want to consider utilizing professional societies aimed at women in STEM to increase the number of women in the applicant pool.
- To increase the number of highly qualified female faculty in STEM departments, schools could apply for a National Science Foundation ADVANCE grant.

Title IX Regulations - Retaliation

- Schools are prohibited from retaliating against an individual because the individual has asserted a right protected by Title IX; made a Title IX complaint or participated in a Title IX investigation, hearing, or proceeding; or protested sex discrimination. (34 C.F.R. § 106.71; 34 C.F.R. § 100.7(e))

STEM Examples - Retaliation

- If a student files a complaint alleging that a school discriminated against her on the basis of sex when it allotted laboratory space and access, the school must ensure that the student is not subjected to retaliation.
- If a faculty member alleges that the school discriminates against women in its decisions regarding whether or not to award tenure in the computer science department, the school must ensure that the faculty member is not subjected to retaliation.

Title IX Procedural Requirements

Schools are required to comply with the following procedural requirements, which are important for the prevention and correction of sex discrimination:

- Publish a **notice of nondiscrimination**;
- Designate a **person to coordinate the school's compliance with Title IX** and notify all students and employees of the name or title and contact information for this person; and
- Adopt and publish **grievance procedures** providing for the prompt and equitable resolution of sex discrimination complaints.

Title IX Procedural Requirements – Notice of Nondiscrimination

- Schools are required to publish a notice of nondiscrimination stating that they do not discriminate on the basis of sex in the education programs and activities that they operate. (34 C.F.R. § 106.9)
- The notice must be widely distributed to students, employees, prospective students and employees, and other relevant individuals.
- The notice must state that inquiries concerning the application of Title IX may be referred to the school's Title IX coordinator or to the federal Office for Civil Rights and should include the contact information for the school's Title IX coordinator.

STEM Examples – Notice of Nondiscrimination

- It is recommended that the notice be prominently posted on school websites and at various locations throughout the school or campus and published in electronic and printed publications.
- Schools should include the notice in all STEM recruitment materials and on STEM program websites. Schools should also post the notice in buildings where STEM classes are held and in STEM labs.

Title IX Procedural Requirements – Title IX Coordinator

- Schools must notify all students and employees of the name or title and contact information of the person designated to coordinate their compliance with Title IX. (34 C.F.R. § 106.8(a))
- The coordinator's responsibilities include overseeing all Title IX complaints and identifying and addressing any patterns or systemic problems that arise during a review of such complaints.

Title IX Coordinator

- The Title IX coordinator must understand how the school's grievance procedures operate and receive adequate training on Title IX.
- The coordinator should be available to meet with students and employees as needed.
- If schools have more than one Title IX coordinator, the notice should describe each coordinator's responsibilities and one coordinator should be designated as having ultimate oversight responsibility.

STEM Examples – Title IX Coordinator

- The Title IX coordinator should take steps to determine whether there are formal or informal complaints related to sex bias or harassing conduct exist in STEM programs.
- The Title IX coordinator might use climate surveys; discussions with faculty and student organizations; focus groups; and periodic reviews of data disaggregated by gender on critical program processes, (e.g., admissions, recruitment, and retention) to determine this information.

STEM Examples – Title IX Coordinator

- The school, in conjunction with the Title IX coordinator should conduct regular education and awareness programs regarding harassment and bias and how to utilize mechanisms already in place (e.g., grievance procedures) for addressing such concerns.
- These programs could include training on subtle gender bias in the classroom setting (e.g., consistently recognizing and calling on students of one gender, listening less attentively to and responding less fully to a particular gender).

Title IX Procedural Requirements – Grievance Procedures

- Schools are required to adopt and publish grievance procedures providing for the prompt and equitable resolution of sex discrimination complaints. (34 C.F.R. § 106.8(b))
- The grievance procedures must apply to sex discrimination complaints filed by students and employees. (34 C.F.R. § 106.8(b))

STEM Examples – Grievance Procedures

- Schools should review grievance procedure complaint data to examine any trends applicable to STEM (e.g., recurring issues with sexual harassment, a particular lab or person) and determine what steps can be taken to address the concerns.

Contacting OCR

- The Office for Civil Rights at the Department of Education is committed to ensuring that schools are meeting their Title IX obligations in STEM fields.
- OCR also provides technical assistance to help schools, parents, and students understand their Title IX rights and responsibilities.
- If you would like technical assistance, please contact the OCR regional office that serves your state. You should also contact the OCR regional office if you wish to file a complaint. Contact information is available at <http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm>.