Best Practices for an Inclusive Climate

Introduction

In order to promote productivity, collegiality, and the best possible chance of professional success for all members of a department, it is crucial that the climate be equitable and welcoming for members at all career levels. This document presents the best practices that the AAS Climate Site Visit Oversight Committee has been able to glean from the literature – especially the APS CSWP recommendations – and from our experience. We thank members of the AAS CSMA, CSWA, SGMA, WGAD, and the graduate education task force for their valuable comments and insight on this document.

This document, although mainly written from the point of view of university departments, is also meant to apply to other types of organizations, such as large research organizations or collaborations. In other settings, a department could be a research group headed by the principal investigator of a large grant or some other grouping, and “faculty” could refer to tenured or other senior research staff. If non-university settings include visiting students or other trainees, those sections of this document apply to them as well.

In the following, “staff” is intended to include adjunct faculty, lecturers, postdoctoral fellows, planetarium directors, grant-funded staff, professional, and other scientific staff.

Best practices for everyone

The culture of an institution affects all of its members, and there are certain initiatives that can be undertaken to ensure the safety and comfort of everyone. Onboarding is essential to introduce new members of the institution to the culture and sets the tone for their tenure at the institution.
Newcomers will only feel welcome if members of the department are actively welcoming.

Administrative staff are a part of the institutional culture yet are often overlooked in discussions about equity and inclusion. It is important to consider their needs when drafting policy and attempting to create an inclusive culture. The following are recommendations that can be applied across the institution for all members.

Communicate to everyone in the department why climate issues are important and how a welcoming and mutually supportive environment helps the department recruit diverse, high-quality students. In turn, an inclusive environment enables the success of students and faculty. The entire faculty, staff, and student body play a part in determining the atmosphere in the department, and everyone in the department needs to realize the importance of professional behavior at all social events, as well as in professional settings. Individuals need to be encouraged to take responsibility for their actions.

Be prepared for and welcome change. Change often means progress, and progress is one of the great reasons to strive for diversity. Different people with different backgrounds will have different styles. These different ideas will change your department for the better and make it more attractive to people at all career levels. Embracing diversity, in all its forms, and striving to build a healthy, inclusive climate may mean change. This change will allow for integrating different people with different backgrounds, styles and ideas. The climate you create and foster will make your department more attractive to students and faculty at all levels.

Develop clear policies for paid parental leave, dependent care leave, and other medical-related leave for all faculty, staff, and graduate students. Policies should be disseminated to every individual in the organization so they understand they are entitled to such leave; they should not be asked whether they have dependents. As needed, enhance policies offered by the broader institution to bring all individuals to a consistent level. We recommend, for example, at least a semester’s leave from teaching. A one-year delay of time requirements for tenure (for faculty) or time to degree (for graduate students) upon birth, adoption of a child, disability, gender transition care, or other life events covered by the Family and Medical Leave Act of 1993 (FMLA) should be available at the option of the department member. Ensure organization-provided healthcare covers gender transition healthcare for trans people. Faculty and external evaluators should be advised not to count the delay time in evaluating
accomplishments. Postdocs and other grant-funded staff should be offered the same benefits as faculty; this may require supplemental funding from the institution, for example to extend the term of a postdoc appointment.

Create a welcoming environment and facilitate integration of new department members, at all career levels. Establish orientation programs for new members at each level, and educate more senior personnel who will be their colleagues. At this time, provide resources, including lists of contacts should any issues arise (whom to ask about health care, whom to report to in the event something bad happens, like harassment). Clearly define expectations. Include new research personnel in group grants and local collaborations, where appropriate. Consider establishing and publicizing community values, and ensure organization members and visitors are briefed on and agree to abide by these behavior expectations (e.g., KICP’s recent adoption of community values and visitor expectations).

Provide newcomers with networking opportunities inside and outside the department. Members of marginalized groups are often relatively isolated in a nearly homogeneous discipline. Establish a cultural practice of making new additions feel included, including tenured faculty. Pay special attention to postdocs, who may be prone to isolation. Monitor satisfaction with the climate of the department and academic or career progress, and provide constructive feedback and evaluation to all department members. Develop and maintain email distribution lists for students, postdocs, researchers, faculty, and other members of the organization.

Strive for transparency in organizational governance by developing clear written procedures, especially where they concern advancement in the profession: progress to the degree for students, support for postdocs and researchers, tenure and promotion for faculty members. One approach would be to appoint a Chair’s Advisory Committee to help understand personnel issues and to increase communication, and another would be to encourage department members to seek appropriate leadership positions. Everyone, and in particular those belonging to underrepresented and/or marginalized groups, will do best in a well-run department where everyone is given opportunities to contribute to the department.

Consider establishing an Equity, Diversity, and Inclusion Committee, including students, postdocs, faculty members, and staff, charged to be proactive in seeking continual improvement in organizational climate. Favor open communication across the organization when possible; for example, consider sponsoring town halls that engage all members in discussion of current issues. Events in society that may at first seem unconnected to
science disproportionately impact members of marginalized groups and need to be addressed within the institution.

Proactively identify and remove barriers to access for all. Ensure all departmental spaces, facilities, and events are accessible for people with disabilities.

Include every member in organizational social activities, ensuring that publicity is adequate and that the activities are inclusive and accessible for everyone. Be cognizant that it may be uncomfortable for queer, LGB, or trans people to bring along or talk about family members in these spaces.

Provide opportunities for informal student-faculty interaction – for example at a coffee hour, annual picnic, holiday party etc. Ensure that cultural, religious, or other food preferences are respected, and work with the Disability Services Office to ensure that people with disabilities or food allergies are not excluded. Communicate to everyone in the organization the importance of professional behavior at all social events, as well as in professional settings.

Provide training in recognizing and combating microaggressions, implicit bias, and stereotype threat. All members of the organization, especially professorial faculty, should have periodic training covering sexual harassment, bystander intervention, and the importance of inclusive academic spaces. By “periodic,” upon arrival to the institution, annually or every two years thereafter, is recommended. Periodically reminding everyone of available free, confidential campus resources is also recommended.

Stay well-versed in current training best practices, as recent studies have tested the efficacy of various forms of training (for an overview, see Sorlet 2017). For example, bystander intervention training has recently been shown to be particularly effective, e.g., Potter and Moynihan 2011, Carnes et al. 2015. Department chairs in particular should receive this training, as well as training in effective personnel management and specific guidance on how to resolve conflicts or report incidents (including recognizing when to escalate response).

Encourage anyone in a mentoring/instruction role to pursue training and professional development opportunities in creating inclusive classrooms and group spaces. Support organization members in getting mentorship training, especially training that focuses on how best to mentor students from backgrounds different from their own (e.g., CIMER, NRMN Culturally Aware Mentorship training).
Ensure that everyone understands all organizational policies, which include but are not limited to: sexual harassment, discrimination policies, and reporting procedures. In the United States, any organization receiving federal funds must follow Title IX of the Education Amendments of 1972 and Title VII of the Civil Rights Act of 1964. Make sure everyone knows whom to contact with any complaints.

Make the importance of diversity and inclusion to the institution clear to candidates and current faculty members. Achieving diversity does not require compromising quality; rather, it augments excellence. Do not allow successful candidates to suffer the "poster child" syndrome: be careful of expecting faculty from underrepresented groups to represent their group. Treat individuals as individuals. Members of underrepresented groups do not want to achieve admission as a student or a postdoc or attain a faculty position because of their identity, nor have to live with the perception that they did.

Evaluate the effectiveness of diversity recruitment efforts by monitoring race, disability status, gender, sexual orientation, veteran status, and religious affiliation in applications, enrollment, and retention. Much of these data are provided to the University upon application; work with admissions and HR to prioritize privacy, potentially waiting until several years have been aggregated to ensure anonymity. Within the organization, maintain a roster to keep track of members’ career paths.

Within the organization, check for diversity in discretionary career-influencing decisions, such as: nominations for awards, prizes, membership or Fellowship in societies, prestigious university-level committees, and leadership positions. Maintain a standing “nomination committee” charged with keeping track of opportunities that organization members may be eligible for, and ensure that the nominations process is equitable for everyone.

If it is within the purview of the department or site, conduct exit interviews or surveys among department members at all levels. Faculty members who retire and graduate students who leave with a PhD should be included, but emphasizing people who leave prematurely, especially students who leave without obtaining their intended degree and postdocs who leave before the normal end of their appointment or who plan to leave the field after their appointment. It should be made clear between the interviewer and interviewee that mandatory reporting policies apply in this context and that issues could be raised that would require investigation Ensure that the
surveys are non-threatening, unbiased, and respectful. The results should be anonymous and responses retained until enough information is aggregated so that the data can be utilized without violating anonymity. Due to the sensitivity of the information that may be divulged during these interviews, it may best that they be carried out at the institutional level, rather than the department level.

Eliminate salary disparities between privileged and marginalized groups at all professional levels.

Treat accomplishments by all members in research, teaching, science communication, service, and professional development as cause for celebration. Distribute a periodic newsletter to acknowledge and congratulate contributions by all members. Organize regular social events to build community, celebrate, and make announcements about news in the institution.

Establish a culture of service, where efforts by all members to improve the institution are expected, recognized, and rewarded. Treat the outcomes of this work as you would research successes. Ensure that the majority of the labor is conducted by the most privileged members, rather than expecting marginalized groups to do so. Demonstrating that these activities are valued sets important behavioral norms for all members of the institution, which has a positive impact on the climate for members of marginalized groups.

Encourage all members to seek multiple mentors in addition to their research advisor, supervisor, or chair, and provide resources to do so. Members from marginalized groups should be connected with mentors from similar backgrounds and identities; this may require finding mentors outside the organization.

Do not tolerate bullying. Departments should have mechanisms in place to identify and eliminate bullying. Bullying can be perpetrated by supervisors, mentors, peers, or groups. Helpful measures include clear codes of conduct and strong social support networks, including mentorship networks.

Establish and publicize a process that enables members to use correct names and pronouns. Institutional leadership should lead by example, providing their correct pronouns on departmental directory pages.
Best practices for students

Undergraduate students

Undergraduates should be proactively supported and mentored while learning fundamentals of their discipline and working to find their path forward in academia or post-graduate careers. Below, ways to include undergraduates in departmental activities, effectively mentor, and provide career guidance are outlined.

Seek out, advise, and support undergraduate students according to their needs; recognize that some students need more support than others. Needing encouragement is not a sign of weakness; rather, some students come from backgrounds where pursuit of astronomy is not encouraged (as opposed to seemingly more practical subjects like medicine or engineering) or is not even in the picture. For these students, extra encouragement simply brings them to the same level as more privileged students.

Encourage undergraduates to join research groups, and encourage faculty to hire undergraduates in their research groups. Ensure that faculty members are aware of opportunities for funding undergraduate researchers (e.g., research experiences for undergraduates). Ensure that research group activities, such as group meetings, foster a culture of inclusion and give ample opportunity for undergraduates of marginalized identities to learn and express themselves. Participation in a research group is not only educational, but also enhances a sense of community.

Provide career planning and information for undergraduates, including graduate school planning and preparation resources as well as information about interdisciplinary careers, non-academic careers, and career options at the bachelor’s, master’s, and doctoral degree levels. For students interested in graduate school, prepare literature on the GRE, noting its demonstrated weakness in predicting research success as well as information on institutions that no longer require it. Provide GRE preparation resources for undergraduates who nevertheless wish to take it. Provide an environment where career exploration is encouraged and students have agency in choosing a career.

Although marginalized undergraduate students may have a supportive community, many, especially first-generation students, do not have access to networks with a strong understanding of mathematics. In such cases,
professors and peers can be instrumental in explaining concepts that would otherwise have been mastered. Course syllabi should state the specific mathematical concepts needed for the course, and instructors should be open to providing additional resources such as tutoring hours, practice problems, office hours, etc. Faculty and teaching assistants should also be aware of and advertise math resources provided by the university or institution. Faculty should be encouraged and provided with resources to develop undergraduate courses and to explore innovative pedagogy. Provide or connect faculty with resources to attend teaching workshops organized by professional societies (e.g., AAS, AAPT, APS, SACNAS, NSBP). Reward this activity as a valued contribution to the educational mission of the department.

Provide a suggestion box and an accessible ombudsperson for undergraduate students.

Provide an accessible, safe area for undergraduates to meet and study together. Ensure it is a safe space for everyone, especially people of marginalized identities, by establishing and affirming an inclusive culture that everyone must agree to in order to use the space.

Pay attention to marginalized undergraduate students in the classroom. Create assigned study groups, and develop strategies for involving all students in learning. Ask students via confidential means (e.g., notecards or google forms) to provide their correct names and pronouns and normalize the use of correct pronouns. Every instructor should lead by example and state their own correct pronouns on the syllabus and at the beginning of the semester.

Refer students to appropriate university resources for addressing potential issues as early as possible (e.g. financial, physical/emotional health, career development). Foster relationships with on-campus groups such as the career center, counseling center, and identity/affinity groups and invite them to talk about their department during class time. Also provide resources and contacts for potential conflict resolution.

Graduate students
Graduate students should leave graduate school with a sense of accomplishment and confidence. To ensure that outcome for students from marginalized groups, we recommend the following.

Ensure that the graduate admissions process and criteria are designed
to build an inclusive student population. Make applications to the graduate program affordable: reduce or eliminate application fees and consider eliminating the requirement of the GRE. Many standard metrics used to evaluate whether undergraduates will be successful in graduate school are not only biased but counterproductive, automatically filtering out talented students with non-traditional backgrounds. For example, undergraduate GPA and grades have shown to correlate with success only in the first year of graduate school, and have no relationship with research success or completion of the PhD. Cutoffs based on GRE scores are well known to be biased against people from marginalized groups, and the use of GREs should be minimized (see recommendation from the AAS President, Levesque et al. 2015), and the fees represent a significant cost barrier for applicants. Review should be holistic and include assessment of non-cognitive attributes. The Fisk-Vanderbilt tool kit is a good start.

Develop a modern, updated graduate curriculum and exam sequence that prepares students for the 21st century. This might include flexibility to pursue research in interdisciplinary areas or to take courses that will be of use for careers in industry (e.g. business, computing). Required core courses may need to be re-evaluated, as well as preliminary examinations. Misuse of these requirements can delay even the best students from participating in research, extend the time to the PhD degree, and demoralize students needlessly.

Ensure that requirements for graduate degrees are clearly and consistently communicated to students and their advisers, and make sure that all students receive consistent information from their advisers. Inconsistent administration of a graduate program can be indicative of discrimination if only marginalized groups are being penalized.

Be intentional about dismantling the stigma associated with students switching advisors during their graduate career. Build in flexibility to accommodate anything affected by these changes, including deadlines for the qualifier exam and research progress, and gaps in funding. Students should not suffer penalties in funding, time, or reputation, for changing advisors.

Look for ways to provide mentoring and career advice for graduate students who want to pursue career paths other than teaching and research. Possible venues might include bringing alumni back to campus for talks and meetings, holding annual career days, and/or arranging mentoring sessions with visiting seminar or colloquium speakers. Work with university career
services, when available, and encourage students to explore alternative options. Careers outside academia should not be viewed as second rate or as a failure to succeed in academia.

Expect the same high achievement level from all students. Encourage all students to have high aspirations for themselves by providing role models and support. While hiring more faculty and postdocs from marginalized groups is the best solution, bringing in alumni and speakers from other institutions is also helpful. It is especially important to invite scientists from marginalized groups as colloquium speakers so that marginalized students feel represented and visible. Consider encouraging qualified colloquium speakers to give a separate talk on equity and inclusion issues, and offer speakers an honorarium for the additional labor.

Target recruitment of students from marginalized groups in order to increase the applicant pool of underrepresented candidates. Work with the university multicultural center or office of diversity to ensure that proper recruitment procedures are in place. Develop opportunities for promising candidates from marginalized groups who may not have had access to key courses or research experience as undergraduates. For example, provide funding, private instruction, and research opportunities for incoming graduate students to “catch up” the summer before their first semester.

Provide structured opportunities for students to socialize in various groups. No student should be socially isolated. Connect students from marginalized groups to peer groups in other astronomy departments or in other parts of campus. Encourage students to participate in affinity groups and establish connections with on-campus organizations to facilitate integration.

Hold regular meetings or informal lunches between the department chair and/or the graduate director and the graduate students to provide an opportunity to discuss issues of concern and suggestions for improvement.

Provide a suggestion box for students to submit anonymous feedback.

Provide an accessible, safe area for graduate students to meet. Ensure it is a safe space for everyone, and especially people of marginalized identities, by establishing and affirming an inclusive culture that everyone must affirm in order to use the space.

Make available an accessible ombudsperson for graduate students.

Extend opportunities for graduate students to serve on such relevant
committees as graduate admissions, faculty search, equity and inclusion, etc. Their input is essential, and their participation provides leadership and training opportunities. To ensure an equitable division of labor, the bulk of the work should be done by faculty in consultation with graduate students -- especially those of marginalized identities. Make it clear that exclusion of graduate students from these activities creates real barriers.

Support and develop roles for an astronomy graduate student association (GSA). Appoint a faculty member to attend GSA meetings and keep other faculty abreast of current issues. Encourage participation by graduate students and emphasize the importance of advocating for their needs.

Encourage participation in professional meetings, associations, collaborations, and opportunities beyond the university, especially those targeting marginalized groups. Acquire funding so that marginalized students can participate in affinity conferences (e.g., NSBP, SACNAS) and support their attendance by accompanying them. Prioritize provision of this funding. If only insufficient funding can be obtained and when absolutely necessary, provide ample support and opportunities for students to apply for resources. While self-provision of funding can be desirable in terms of proposal-writing experience, it places a significant time burden on already potentially overwhelmed students. Respect students’ wishes, comfort, and safety by not insisting on shared accommodations with other group members/through conference housing forums to save money.

If they do not exist already, support the creation of local chapters to support marginalized groups (e.g., SACNAS, NSBP, AWIS, SPS, oSTEM). Local chapters provide invaluable on-campus support and engagement that graduate students aren’t often encouraged to seek out and take advantage of. Support student efforts to form their own groups in addition to local chapters of national organizations; cohort-building and peer mentoring are incredibly important.

Implement and support Bridge programs and collaborations in partnership with minority serving institutions.

Provide medical, parental, and family leave for graduate students similar to what is available to faculty.

Establish a “safety net” so that students are not dependent on only one person for funding support. For example, a pool of grant overhead funds could be set aside for emergency support of the occasional student who is
making good progress toward the degree but whose adviser loses funding, changes fields, fails in mentorship toward the student, or leaves.

Make sure students know about institutional support outside of the department: women in science/engineering organizations, the career center, the disability/accessibility office, the counseling center, other diversity-supporting organizations, the campus **Title IX** office, ombuds office, affinity groups, etc.

**Best Practices for Postdoctoral Researchers, Research Scientists, and Lecturers**

Postdoctoral fellows, research faculty, and staff are the drivers of many departments’ research and teaching activities. Despite their importance to home departments and institutions as well as representing the future of astronomy, members of these groups often have a poorly defined status, receive inadequate mentoring, and have low professional profiles. Improved mentoring and networking can increase their likelihood of continuing in science, especially for members of marginalized groups. To support these scientists’ success, the following steps are recommended.

Provide opportunities for postdocs and research scientists to teach courses, publish independently, serve as mentors to undergraduates and graduate students, and serve as P.I.s on grant and observing proposals. Advertise and encourage participation in professional development opportunities provided by the university. These activities will be a significant advantage in job searches and should be provided before postdocs start applying for permanent positions in academe or in industry. Postdocs should receive mentoring and training in all such skills.

Perform evaluations for all postdocs and research scientists at least annually, with constructive feedback, and with an opportunity for discussion of career goals. Faculty should be trained on how to effectively mentor postdocs and give constructive performance reviews. Postdocs should be given the reciprocal opportunity to evaluate their mentors and faculty advisors. In general, expectations should be clearly defined and agreed upon.

Include research scientists in department social activities and in department committee activities, including student thesis committees. Involve senior research faculty in the mentoring and evaluation of junior
research faculty in order to help junior and senior researchers feel included and to promote uniformity of research standards throughout the department. Research faculty should be involved in department self-governance and provided with appropriate training. Ensure that research scientists have a well-established career path within a department (e.g. Postdoc, Research Scientist, Senior Research Scientist, Faculty Adjunct). These individuals should get advice and feedback on the steps they would have to take to advance within the research scientist structure, or alternatively to secure an independent permanent position should they so desire. Clearly defined career paths enable career development, including for long-term staff, and ensure that research staff who are qualified for faculty positions are able to secure them, whether in the department or elsewhere.

Consult the National Postdoctoral Association (NPA)’s updated (2017) recommendations on policies to address the needs of postdocs. While the recommendations are aimed at institutions, some could be implemented at the departmental level. In any case, departments should push for these recommendations to be adopted at the institutional level. For example, the NPA recommends that institutions have a postdoctoral association and an active, dedicated postdoc office housed in their administrative structures. The administrator of the postdoc office can exercise broad oversight to ensure that the institution is serving the needs of its postdocs.

Establish policies to deal with grievance-prone issues such as authorship disputes and termination because of causes such as loss of grant funding.

Specify a minimum stipend for postdocs and a required annual increase.

Ensure that all postdocs and research scientists receive equal benefits to tenure-track faculty, regardless of their funding source. Benefits, such as health insurance, for individually- and externally-funded postdocs are sometimes available nonuniformly or not at all; they should be provided uniformly to all postdocs and supplemented if necessary.

Define and enforce uniform position titles for postdocs so that they can be tracked in the institution’s personnel records and their status monitored. Collect data, or push for the institution to collect data, on the disability status and socioeconomic status of postdocs. In the big picture of diversity and inclusion, data are most lacking along these axes.
Best Practices for Faculty

Departments should aspire to a positive environment in which all faculty members are treated with respect. The chair and other faculty leaders should set a high standard and work actively toward this goal. If this cannot be achieved easily, help can be solicited either by appointing a chair’s advisory committee drawn from the faculty leadership and charged with bringing about change, or by utilizing the institution’s equity and inclusion resources or by arranging an AAS Climate Site Visit, or by other means. Specific recommendations about how to achieve an inclusive environment for faculty follow.

Hire a critical mass of faculty members who have the skill and motivation to improve the climate in your department, using the methods given in "Inclusive Hiring for the Most Qualified Faculty" and any other approaches that are useful.

Develop good mentoring practices for all faculty. Many members of underrepresented groups will benefit from formal mentoring because informal mentoring is either unavailable or sparse. One way of establishing mentoring relationships is matching with senior faculty from outside the department. Or, with care and appropriate training, senior faculty can serve as mentors for new faculty from marginalized groups. It is important not to overburden senior faculty members who belong to underrepresented and/or marginalized groups. Peer mentoring programs and mentoring networks should also be provided to help ensure that faculty from underrepresented or marginalized groups are not socially isolated. The mentor should, at a minimum:

- provide clear guidelines on criteria and timelines for promotion and tenure and provide examples of successful cases
- check career expectations regularly (decreasing expectations are a negative sign)
- check progress regularly, and provide early intervention where apparent progress is below standards
- offer assistance with preparation of grant proposals and provide examples of successful cases.

Provide diversity and inclusion workshops as part of faculty development, and reward activities that enhance the climate and promote diversity. For example, attach value to diversity recruitment by providing
resources and rewards: a budget and a plan for diversity recruitment, teaching remission for active recruitment activities, and recognition for recruitment activities in promotion cases. In particular, reward faculty members for formal and informal mentoring of faculty, postdocs and students. Use salary increases and/or relief from teaching as a reward for those who contribute to the betterment of the department as a whole, and hence as an incentive for others to contribute their share. When considering tenure cases, be open-minded regarding what counts as “service,” and consider including mentoring and improving departmental climate.

Include members from underrepresented and/or marginalized groups on key departmental committees and in leadership roles, to give them a voice in the department and enable them to serve as role models. Such service should be rewarded appropriately, but do not overburden underrepresented faculty members by asking them to serve on too many committees. Choose the committees strategically, or, even better, develop a more diverse faculty.

Make sure that faculty members from marginalized groups have access to the same space, matching funds, and hiring opportunities in their efforts to grow their research programs as do the often better politically connected white male faculty.

Work with the dean’s office to develop innovative programs, such as an inclusive visiting scientist program, to attract senior scientists by providing additional support for them to take sabbatical leave at your institution. This could lead to a lively intellectual program, which exposes the department faculty and students to astronomers of many identities. A well-regarded visiting program would be a great opportunity to identify potential future hires. Lastly, in any initiatives for recruitment, bear in mind and be prepared for the potential for dual hire opportunities.

Additional References

1. LGBT+ Inclusivity in Physics and Astronomy: A Best Practices Guide
https://arxiv.org/abs/1804.08406
2. AAS Site Visit Oversight Committee inclusive hiring practices guide
3. Inclusive Astronomy 2015 Nashville Recommendations