Consistent with the orientation of publications referenced in this document (Turner, 2002; Stewart & Valian, 2018; Laursen & Austen, 2020), we seek to foster an academic engineering system that supports engagement and success of diverse individuals, rather than seek to fit diverse individuals into a biased system. In developing this checklist, we sought to answer the question, “What strategies help to foster inclusion, a sense of belonging, and success of diverse women faculty in engineering?” In answering this question, consistent with a key principle promoted by Stewart and Valian (2018), we encourage an orientation of “universal design” with intention to address concerns that may disproportionately affect diverse women but for which a well-designed solution will serve all faculty better. Although not intended to be exhaustive, the strategies provided offer some great suggestions for action, recognizing that engineering colleges are at various places in the diversity, equity, and inclusion journey.

The EDGE Action Checklist is organized based upon the EDGE Change Model in which faculty gender diversity at the college level is recognized as a multi-dimensional process that requires attention to three primary areas: Recruitment, new Faculty Orientation, and Retention. Recruitment and Retention are further divided into subcategories (see Figure 1.)

EDGE Change Model (Figure 1.)
Adapted from “Guiding Institutional Efforts to Promote STEM Faculty Diversity” by APLU K. Griffin & A. Mabe, APLU INCLUDES, 2019. CC BY-NC-SA.

The resulting checklist of actions engineering college leaders can take to advance faculty gender DEI is then ordered within each category, according to “Good,” “Better,” and “Best,” practices, consistent with Turner’s (2002) seminal work, Diversifying the Faculty: A Guidebook for Search Committees (Appendix A, pages 31-32). In this Checklist, Turner’s recommendations are reinforced and expanded based on the recent work by Stewart & Valian (2018), An Inclusive Academy: Achieving Diversity and Excellence; and Laursen and Austen (2020), Building Gender Equity in the Academy: Institutional Strategies for Change.

Note: Action items are taken directly, in part, or in full, from the above references.
Key Steps


Good

☐ Incorporate the university’s commitment to diversity, equity, and inclusion (DEI) into college and community addresses and publications
☐ Clearly articulate campus rationale for support of faculty diversity
☐ Develop and distribute a presidential statement outlining meaningful steps to be taken to achieve greater diversity among the faculty

Better

In addition to the above:

☐ Incorporate the college’s diversity statement, connected to the college mission and diversity strategic plan, along with the university’s commitment to DEI into college and community addresses and publications
☐ Dean clearly articulates rational for supporting faculty diversity, and the process to be followed, including the fact that the dean will “fail” a search that does not meet diversity inclusive search guidelines
☐ Develop and distribute a dean statement supporting DEI, as articulated in the college’s diversity statement and strategic plan.
Consider potential candidates already within the ranks of graduate students, post-docs, adjunct, part-time, and research associates.

Develop and continually provide a college (and ideally, campus) comprehensive plan to assess and show commitment to DEI in every area of college (campus) life.

Best

In addition to the above:

- Secure all resources needed to conduct a comprehensive search
  - Travel funds to send search committee members to targeted conferences for recruitment
  - Travel funds for diverse candidate visits (repeat, if necessary)
  - Travel funds for candidate’s partner
  - Funds for a “Cohort hire” of diverse candidates
  - Potential dual-career hire funds
  - (See Dean Sharon Walker’s evidence-based hiring strategy—which include a unique “incentive” package)

- Establish a vita bank, especially of diverse candidates interested in your college
  - Consider hosting a “Visiting Scholars” Faculty Fellows and/or ABD Fellowship program with future recruitment in mind

- Establish a college-wide funding pool to cover departmental expenses for costs associated with the broad marketing/advertising and off-campus recruitment travel-costs; and engagement of potential candidates
  - Consider regular recruitment trips to universities which prepare a significant number of women and URM engineering PH.D. graduates

- Establish and cultivate ongoing and routine relationship with local and national minority organizations and special interest groups, as well as with graduate students/faculty at colleges and universities that graduate diverse engineering students (women and/or students of color)

- Establish a search committee process that reviews and incorporates finding and data about previous searches.

- Incorporate college level data and information in the charge to the search committee

- Incorporate new research findings and data about women and URM faculty into everyday practices in the college (e.g., convene information forums, roundtables, retreats, present emerging research and successful practices)

- Showcase the research of diverse women prior to opening a search

- Collect, review, and act upon information of faculty satisfaction within the college, especially for women and URM faculty. The best recruitment information is found in retaining your diverse faculty.
**Key Steps**

**Good**

- Create a search committee that is enthusiastic committed to faculty diversity
- Charge the committee to do everything they can to create a diverse candidate base, and articulate a clear commitment of faculty diversity as the goal
- Make sure the NOV and job description is geared toward diversity, equity, and inclusion
- Mail position announcements to minority groups and organizations; university and local organizations, such as minority alumni; and local minority churches and organizations.

**Better**

In addition to the above:

- Write a position description that attracts a diverse group of applicants (i.e., the more open, and flexible the NOV, the better; with an orientation clearly towards diversity);
- Contact by letter and phone previous faculty of color, visiting scholars and/or individuals who have made diversity-related presentations on campus;
- Use listservs, bulletin boards, and other forms of technology to announce positions and recruit potential candidates (work with disciplinary professional societies)
- Create a search committee with a track record for successful diverse faculty hires
  - Ideally select a woman/ URM senior faculty member as Chair (consider buying out time if this person is on a number of committees), or select majority member male, with track record of commitment to diversity, as chair
  - Incorporate a senior faculty “Diversity Advocate”
  - Identify a person who will serve as “Devil’s Advocate” to help members articulate their decision rationale as based in candidate information (as opposed to the “fit” is good).
- Identify diverse members to serve on the committee—faculty, administrators, students from minority and majority backgrounds, discipline and non-discipline specific people
- Make sure the search process is also framed as a critical retention tool
- Require search training for the CHAIR and COMMITTEE members

**BEST**

In addition to the above,

- Consider cluster hiring, especially as a means to combat experiences of underrepresented faculty as being “the only” or “the first” person of their background in a college or department.
- Require search training for the CHAIR and COMMITTEE members
  - Implicit Bias Training incorporating information on bias including common cognitive bias (e.g., confirmation bias), recommendation letters, publication records, & skill development components
    - Example training: Big 10 Professorial Advancement Initiative—Search Committees: [https://www.btaa.org/leadership/pai/search-committees](https://www.btaa.org/leadership/pai/search-committees)
STRIDE Strategies and Tactics for Recruiting to Improve Diversity and Excellence

Resources: https://faculty.northeastern.edu/advance/faculty-recruitment/stride-faculty-search-committee-workshop/

- Diversity and the Law

- Create ongoing education/discussion DEI opportunities and DEI skill development & practice opportunities, including affirmative action and legal issue topics (see AAAS recent report)
  - Where possible, buy-out time or reduce time-demand on those involved in search decision making (time pressure creates “fast-thinking” which produces biased results)
  - Utilize personal/professional networks to seek leads to potential minority candidates
  - Evaluate the effectiveness of the search process in order to avoid future missteps; acknowledge the successes and failures and share that information with other search committees;
  - Dean “fails” searches that do not produce diverse candidates with in all pools

OUTCOME
(Getting applicants to accept offers)

Key Steps

Good:

- Cover the cost of the candidate's expenses related to the interview hotel, food, and travel.
- During the campus visit, make sure that all interactions with the candidate are honest and genuine.
- Offer to make available a person of similar background, interests, ethnicity, or gender to give their perspective on the campus and local community climate.

Better

In addition to the above:

- Have all candidates meet with a HR specialist to answer any questions the candidate may have re: dual career hiring policies and practices, family-friendly policies, and candidate questions

Best

In addition to the above:

- Advise the candidate of any incentives that might be negotiable in the salary package (reduced workloads, grant-funded opportunities, etc.);
- Cover the cost of an additional campus/area visitation (e.g., to explore housing, bring a partner/spouse...)
- Provide dual-career support; consider flexible and/or joint appointments
  - Be sensitive to “gendered” dual career hiring packages that may assume that the “male” partner/spouse will not accept anything less than a tenure-line position; and that the “female” partner/spouse will be willing to accept a non-tenure-line position
- Provide successful departments with recognition and additional dollars to support their operating budget;

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**FACULTY ORIENTATION**
(Fostering smooth and welcoming entry into the college and campus community)

**Key Steps:**

**Good:**
- Honor all start-up conditions mentioned in the final letter of agreement.
- Do not overload the new hire with excessive service demands, committee memberships, advising, etc.

**Better:**
In addition to the above:
- Follow-up with the new hire regularly to help with transitions and to answer any concerns that might develop in the first few days/weeks/months;
- Provide mentoring and professional development opportunities.

**Best**
In addition to all of the above:
- Provide the new hire with clearly stated standards and procedures regarding evaluation and performance;
- Sponsor campus and community-wide gatherings to highlight the research, teaching, and service contributions of diverse faculty.

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**Retention**
(Keeping faculty at the college)

- **Professional Development**
  (Building skill and professional development in teaching, service, and research)
- **Promotion & Advancement**
  (Successful navigation of tenure and promotion policies and processes, advancement (e.g., research/administrative leadership))
- **Satisfaction & Support**
  (Addressing sense of belonging and community, work-life balance, and satisfaction)
**Key Steps:**

**Good:**

- Routinize provision of information to faculty about key milestones in faculty progress (e.g., third-year review, tenure and promotion to full professor). Make the criteria associated with these milestones transparent.
- Where possible, provide faculty with support to participate in professional development programs of interest to them.
- Explicitly articulate the value of faculty development, and contributions to faculty development at college and department levels.
- Ensure that there is an oversight process for all college/department professional development programs.
- Ensure that all faculty interested in promotion and advancement have access to diversity, equity, and inclusion professional development opportunities, particularly as related to college and department business (e.g., teaching, search committees, P & T evaluation, faculty civility)

**Better:**

In addition to the above:

- Provide faculty with discretionary resources (e.g., funds, time-allocation) to participate in local, regional, and/or national professional programs of interest to them.
- Ensure that all who are promoted demonstrate ability to work with diverse individuals and create an inclusive working environment.
- Survey faculty to determine what type of professional development is desirable to them. If no faculty development program currently exists, set up a committee to evaluate alternatives, and, if needed, create, pilot, and support needed programs.
- Reward faculty for participating in professional development that reinforces DEI departmental expectations
- Ensure that data are collected and evaluated (i.e., where possible analyze according to race, gender, and intersectionality) to assess the value of the professional development program; and revise as needed.
- Recognize faculty who support development of colleagues (e.g., peer review of teaching, manuscript feedback etc.) by providing information, and constructive advice or feedback.

**Best**

In addition to all of the above:
- Provide financial, time, and other resources to faculty to develop and implement formal programs:
  - For new assistant professors (e.g., “launch” committees)
  - For all junior faculty (e.g., classical mentoring; or circles, advisors and/or peer mentoring networks)
  - For other faculty at key transitions in their careers
  - For all faculty to enhance teaching skills, especially to foster inclusive classroom environments.
- Provide funding (e.g., travel grants) and resources (e.g., access to care-providers) to support those with dependents to participate in local/regional/national professional development.
- Develop policy and procedures that require that all people serving as decision-makers actively engage in professional development to mitigate cognitive bias. Evaluate professional development training to ensure program effectiveness.
- Specifically look for opportunity to encourage and support professional development of underrepresented faculty, particularly as related to tenure-and promotion-specific requirements. Create and support majority member (i.e., male and/or white) engagement in ally and advocate professional development programs.

**Key Steps:**

**Good:**
- Foster support for promotion and advancement opportunities for all faculty (e.g., ensure that people are aware of and encouraged to support nominations for awards)
- Give faculty opportunities to develop and demonstrate leadership skills through high-profile administrative assignments.
- Give faculty opportunities to develop and demonstrate leadership skills through a few, carefully chosen participation or leadership opportunities on department-, college-, or university-level task forces, especially those related to research, governance, or university administration issues.
- Encourage and support participation in professional society committees and governing bodies.
- Recognize leadership achievements in departmental and college-level meetings and publications.

**Better:**
In addition to the above:

☐ Actively engage diverse individuals in leadership grooming and succession-planning opportunities.

☐ Support attendance of faculty at leadership workshops, conferences, and professional development opportunities.

☐ Establish a team to nominate faculty and staff for awards and important appointments, with special attention to ensuring diverse representation of talent.

☐ Provide support for preparation of large, collaborative program grants and rewards for getting them.

☐ Encourage the formation of internal “review committees” to informally peer-review papers prior to journal submission.

☐ Provide teaching release time for leadership assignments.

☐ Invite diverse aspiring leaders from your campus as well as other campuses to address department and college-wide visiting committees. Seek corresponding opportunities to have your diverse aspiring leaders speak on other campuses.

☐ Hold units accountable for fair and equitable promotion and advancement outcomes.

Best:

In addition to the above:

☐ Establish a mentorship program for faculty interested in considering leadership positions. Provide resources for executive coaching; leadership “shadowing” or internship; and/or national workshop opportunities.

☐ Provide teaching release time for leadership skills development.

☐ Require that all faculty seeking leadership positions receive professional development, and demonstrate skills in supporting, diversity, equity, and inclusion.

☐ Create a college-wide seminar series on leadership, with both internal and external speakers.

☐ Provide ongoing training for all involved in promotion and advancement decisions to mitigate cognitive bias.

☐ College and department leaders that foster a climate of informal and formal recognition of accomplishments.

☐ Track the distribution of awards, and analyze by race, gender, intersectionality variables to ensure that diverse faculty are recognized for their expertise.

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**Satisfaction & Support**

*(Addressing sense of belonging and community, work-life balance, and satisfaction)*

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**Key Steps:**
Satisfaction

Good:
- Treat faculty equitably and inclusively, and not a representative of a group.
- Proactively ensure that all faculty know how to communicate concerns of incivility, disrespect, and harassment; and ensure an equitable process is in place for dealing with complaints.
- Proactively ensure that all faculty receive information, advice, and assistance through a variety of avenues (e.g., mentoring programs, faculty support networks, annual review processes) across the lifecycle, especially those faculty on probationary status.
- Be alert to faculty member isolation or marginalization, and identify ways to engage those faculty members in key departmental activities of interest to them.
- Create and support programs that help develop and reinforce a climate of civility, respect, and freedom from harassment.

Better:
In addition to the above:
- Ensure that complaints of incivility, disrespect, and harassment are dealt with fairly, and quickly.
- Make decision making and allocation of resources transparent (e.g., through policy and procedure manuals)
- Provide probationary faculty with support and resources to optimize their success (e.g., learn new skills, create opportunity to showcase new skills)
- Collect data and regularly report on issues of diversity, equity, and inclusion (e.g., salary, workload, etc.) and climate, as well as policy use: act on finding proactively.

Best
In addition to all of the above:
- Provide faculty who have been found to be uncivil, disrespectful, and to have engaged in harassment with probationary opportunity to correct behavior; and if no corrective action is taken and/or there is evidence of recidivism, remove them from the department/college/institution.
- Make workload and allocation of resources transparent and equitable (e.g., faculty dashboards)
- Create and respect work time-boundaries so as to honor life-demands of all college employees (e.g., reduce early and late meetings, colloquium, and other speaker times if there is expectation for employees to participate.)
- Set a college and departmental norm of zero tolerance for disrespect, incivility, and harassment; and have policy/practice in-place to intervene and stop poor behavior (e.g., agree on departmental guidelines for dealing with disagreement, interrupt disrespect and incivility as it occurs, address complaints of harassment rapidly and fairly.)
Ensure all communication about important issues (e.g., tenure criteria and procedures, grievance procedures, family-friendly policies/practices) take place through multiple venues of communication (e.g., email, websites, annual reviews, mentoring meetings, departmental meetings)

Support

**Key Steps:**

**Good:**

- Provide local resources for available dependent care resources for faculty upon new faculty hiring, and on a college website
- Provide local resources for dual career support for faculty upon new faculty hiring, and on a college website
- Provide access to a variety of networks to support diverse faculty (e.g., faculty of color, LGBTQ faculty, women faculty, single parents, etc.)

**Better:**

In addition to the above:

- Provide on-site childcare for faculty
- Provide dual-career hiring support
- Actively support with funding or other resources faculty networks (e.g., faculty of color, LGBTQ faculty, women faculty, single parents, etc.)

**Best**

In addition to all of the above:

- Provide funding for on-site childcare for college employees
- Provide funding for dual career support
- Provide regular satisfaction surveys, and analyze the data by key demographic variables (e.g., race, gender, intersectionality) to ensure that desired faculty support is understood, and where possible, provided.