2012 - 2016 Strategic Plan
Department of Materials Science and Engineering

Revised: March 1, 2013

Strategic Objectives for 2012 - 2016

• Launch CEMAS as a vibrant College-level research center.

• Concentrate faculty and research investments in the areas of characterization, computation and advanced materials and processes.

• Develop and promote signature research themes based on integration of materials characterization and computation, and processing and performance of advanced structural materials to align with college and university initiatives in advanced materials and manufacturing.

• Develop research and clinical track faculty and research staff to increase access and effectiveness of departmental facilities to increase experiential learning opportunities, revenue-generating industry-based service work and long-term industrial research engagements.

• Develop asynchronous, web-based teaching and programming to support a distance MS program in Materials Science and Engineering aimed at practicing engineering professionals.
MSE Vision

We seek to create and sustain an environment that brings together a diversity of people and ideas through the process of discovery and learning for the advancement of science, engineering and technology in the areas of materials and joining. We seek to create impact that is tangible and significant with excellence that is obvious.

MSE Mission

Our mission is to create, transfer and preserve knowledge through research that has impact and through teaching and training of our future colleagues in materials science and welding engineering. Though these actions, we seek to be a core asset to the Ohio economy for national and global competitiveness.

Foundations

The 2012 - 2016 MSE Strategic Plan is the product of a process first initiated in 2004. The antecedents of the current plan are:

• 2004 Portfolio Assessment
• 2005 SWOT Analysis of the MSE Long Range Planning Group
• 2006 MSE Plan Assessment
• 2008 Academic Program Review
• 2007 - 2011 Performance Plan (with annual revisions)
1. Background and Current Conditions

The past three years (2010-2012) have been among the most dynamic the department has seen since its formation in the late 1980s. The department has attained high levels of accomplishment as a result of directions established in planned strategy. It has also changed in response to external influences, both anticipated and unanticipated. The most significant of these accomplishments and changes are as follows.

- Resources from our 1999 Selective Investment Award were fully invested as of 2009. This ended a 10-year period of faculty investment and thematic growth for MSE. This investment allowed the department to make 8 tenure track faculty hires and nucleate research thrusts in computational materials science, biomaterials and electronic materials to add to its signature strengths in metals, ceramics and materials characterization.

- MSE/WE Research expenditures increased to a FY 2012 peak of $16.2 million. Expenditures were up for the third straight year leading to a 10-year annualized increase in research expenditure direct charges of 5.5% per year. The associated 10-year annualized IDC increase was 10.2% per year, which was double our PBA growth during the period.

- WE was realigned with MSE in February 2010 as part of a college-wide reorganization. This realignment brought to MSE responsibility for two degree programs, 6 faculty, 2 staff, 150 students, and research and office space on west campus.

- The department revised its undergraduate and graduate curricula in MSE and WE in response to the quarters to semester calendar conversion. The MSE undergraduate curriculum was fully revised to reflect integration of computation in the discipline. Specifically, the undergraduate MSE curriculum now includes novel elements related to databases, visualization, computation and simulation.

- In 2011, we successfully recruited the Ohio Research Scholar and in 2013 a new, state-of-the-art facility, Center for Electron Microscopy and Analysis (CEMAS) was completed.

- MSE renewed its commitment to scholarship and graduate student training in support of external rankings and impact. Scholarly output has increased from 120 several years ago to 350 total publications per year in 2012. Our PhD graduation rate has increased and stabilized in the range of 20 per year.

- Undergraduate enrollment has increased from 150 to 300 and graduate enrollment from 90 to 170.

- We are engaged in the early stages of design review for a renovation of Koffolt and Fontana Laboratories, which may provide a significant central campus upgrade in infrastructure for MSE research and education programs.
There are also significant near-term challenges and uncertainties that are a part of our current context.

• MSE and WE have lost 10 of 35 faculty members to retirements and departures in less than 3 years. During that same time period, we hired 2 tenure track, one clinical track and one research track faculty member.

• Standing up CEMAS as a new research center has deeply engaged departmental and college fiscal reserves. This has had and will continue to have impacts on fiscal decision-making in support of other MSE initiatives.

• We have implemented a new undergraduate curriculum in MSE and are making adaptations to ensure it helps us meet learning goals for our students.

• Funding models for higher education, demands for more domestic engineers, federal funding for research and the disposition of the national and global economy are all in a state of significant flux. These issues must be monitored closely and their impact on strategic decisions considered carefully.
2. Analysis of Strengths, Weakness, Opportunities and Threats

Strengths. The primary strength of the department is found in the abilities, experience, commitment and collegiality of the faculty. We have a strong group of faculty rising into the most productive points in their careers, and we have outstanding younger faculty who are already well recognized and making an impact in the field.

The fiscal posture of MSE has allowed us to make significant investments in facilities and start-up packages for new faculty members. Our internal revenue generation mechanisms allow us to develop resources for reinvestment in the program to promote its growth and well-being.

Weaknesses. We are now a larger department that is too dependent on a set of practices, policies, cultural attributes and expectations that evolved when the faculty was one-third the size it is today. We need to move to a pattern of distributed leadership that involves redefinition of the Associate Chair role, our committee structure, and the expectations and accountability of the faculty.

The Welding Engineering faculty size is subcritical. At the present time 7 faculty members support the research and educational programs. The program recently made an outstanding faculty recruitment, but has just lost one of its most productive members. It will lose another to retirement by 2015.

Opportunities. The subject of materials has good visibility on campus and with many of our important extramural research partners.

Pursuit of advanced and lightweight manufacturing is an institution-level strategic target for investment. Because of its strengths in structural materials, MSE should play an important role in realizing this opportunity.

In the next several years, MSE may share a building complex with BME. Thoughtful changes to our programs and staffing could lead to distinctive synergies.

Threats. In a three-year period, MSE absorbed departures from its faculty that amount to nearly 1/3 of the peak faculty head count. The majority of these departures were in areas related to structural materials and processing, which are precisely the areas needed to support a manufacturing initiative.

The build-out of CEMAS required MSE to make significant financial commitments from its funds to leverage investments from other organizations. These commitments constrain future flexibility to engage and execute new initiatives.

Enrollments in the College of Engineering are up 80%. Enrollments in the undergraduate MSE and WE programs are expected to double or triple from 2008-2009 levels by 2014-2015 placing significant demands on teaching loads and facilities.
The quarters to semesters change has brought new curricula and defined a new calendar. The department continues to adapt to these significant changes.

There is on-going uncertainty in the national fiscal picture that is likely to keep federal investments in R&D flat or declining. There is also broad-based demand to contain the costs of higher education. These forces are expected to lead to a protracted period of fiscal austerity for the university community.
3. Overview of the 2012-2016 MSE Strategic Approaches

In the following section, a detailed description of the 2012 - 2016 MSE strategic approaches is presented. In keeping with elements of the College Strategic Plan, this detailed description has been mapped onto the University’s focused themes of *Learning*, *Discovery* and *Engagement*. In this section, individual initiatives are identified, objectives are defined and resources required to attain objectives are given.
3a. Learning

We seek to sustain rigorous, engaging and adaptive academic curricula within vigorous undergraduate and graduate programs. The importance of engineering education to societal well-being has never been greater and engineering talent is undersupplied in the U.S. At the same time, electronic communications and classroom technology are radically redefining best practices in teaching. In the near term, we must adapt to reach and serve a greater number of students, and do so in a manner that makes engineering education economically accessible.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Objective</th>
<th>New Resources Required</th>
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</table>
| Improve curricular offerings by modernizing and streamlining delivery of course content and by enabling asynchronous learning. | • Web presence for 100% of courses.  
• Complete upgrade of undergraduate laboratory space to accommodate enrollment growth while expanding experiential learning opportunities.  
• Complete upgrade of computer laboratory space and soft seating space for undergraduates.  
• Development of one or more MOOC-like course in materials.  
• Develop a complete, recorded rendition of the MSE BS and MS curriculum. | • 50% of the Lab Technology Fee per student per year.  
• $1 million in laboratory upgrades.  
• Support for 0.4 FTE academic staff member. |
| Implement self-assessment processes to ensure course and curriculum objectives are met and to promote curricular evolution. | • Implement new instructor-based course assessments.  
• Create the Peer Evaluation of Teaching committee.  
• Annual updates of course portfolios. | • None. |
| Be the primary steward and resource for the materials education on campus by teaching the best materials courses to the largest number of students. | • Attain an undergraduate enrollment of 400 with 80 graduates per year in MSE.  
• Attain an undergraduate enrollment of 200 with 40 graduates per year in WE.  
• Attain a combined MSE and WE graduate research student enrollment of 180 with a PhD graduation rate of at least 20 per year.  
• Increase classroom contact with non-MSE students to 700 per year. | • 2 Regular clinical track faculty lines in MSE.  
• 1 Regular clinical track faculty line in WE.  
• Support for 2 lecturers in MSE.  
• Support for 2 lecturers in WE. |
| Develop distance educational offerings and programs to serve non-traditional student populations. | • Develop a distance education program in MSE at the MS level.  
• Increase the enrollment distance MS students to 60 per year. | • Support for 0.2 FTE academic staff member. |
| Create and promote international education and co-op opportunities for MSE undergraduate students. | • Increase placement of international co-ops and interns to 20% of total co-op placement. | • Support for 0.2 FTE academic staff member. |
| Use aggressive and creative recruiting methods to sustain a smart and diverse student population. | • Increase enrollment of women and under represented minorities to 35% of total enrollment. | • Support for 0.2 FTE academic staff member. |
3b. Discovery

We seek to make smart faculty hires, and preserve our productive and diverse faculty investments. The faculty is the primary creator and distributor of the intellectual wealth that sustains our mission. An excellent faculty creates returns that are many multiples of the investment made in it, and such a faculty results from a continuous commitment to recruitment, reward and retention.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Objective</th>
<th>New Resources Required</th>
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<tbody>
<tr>
<td>• Pursue opportunities for faculty investments in computation, character</td>
<td>• Sustain 35 regular tenure track faculty members in MSE and WE.</td>
<td>• 66% return on vacancy credit.</td>
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<td>ization, and advanced materials and processes.</td>
<td>• Develop faculty composition to minimize negative effects of the next “retirement wave” in 2025.</td>
<td>• Access to funding for matched start-up cash at a rate of $200K per junior hire every year.</td>
</tr>
<tr>
<td>• Create a diverse faculty.</td>
<td>• Increase proportion of underrepresented minorities and women to 1/5.</td>
<td>• Access to funding for matched start-up cash at a rate of $500K per senior hire every other year.</td>
</tr>
<tr>
<td>• Work creatively with other departments for joint hires</td>
<td>• Increase the proportion of jointly appointed and tenure track faculty to 1/7.</td>
<td>• Access to cash and in-kind cost-share.</td>
</tr>
<tr>
<td>• Work with research centers to increase MSE and WE faculty participation</td>
<td>• Increase the proportion of faculty with sponsored research in research centers to 1/3.</td>
<td></td>
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<tr>
<td>in center research.</td>
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<tr>
<td>• Reward performance excellence</td>
<td>• Scholarship, graduate program enrollment, research expenditures and PhD graduation rate metrics</td>
<td>• Annual merit increases that exceed CPI inflation and move us forward against our benchmark institutions.</td>
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<tr>
<td>through the annual merit compensation process.</td>
<td>in the upper decile of the University Materials Council rankings.</td>
<td></td>
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<tr>
<td>• Develop endowments and gifts</td>
<td>• Increase the proportion of chairs and professorships held by MSE and WE faculty to 1/3.</td>
<td>• Continued support for equity and promotion adjustments.</td>
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<td>to recognize career achievement and aid recruitment and retention.</td>
<td></td>
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<tr>
<td>• Promote programs aimed at addressing work/life quality.</td>
<td>• Be prepared to utilize all aspects of the university’s work-life policy to promote well-being of</td>
<td>• Access to College and University program funds that support work-life policies and</td>
</tr>
<tr>
<td></td>
<td>the faculty.</td>
<td>trailing spousal hiring.</td>
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<td></td>
<td>• Be prepared to support trailing spousal hires with term faculty appointments.</td>
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3c. Engagement

We seek to strengthen relationships with peers, partners and stakeholders by providing distinctive opportunities for access and collaboration for mutual benefit.

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<tr>
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| • Develop and sustain key department-level intramural relationships with other OSU academic units. | • Sustain current interdepartmental relationships with BME, CBE, ECE, and MAE through joint appointment faculty and research.  
• Seek out and initiate new interdepartmental relationship with CSE, ISE and KSA. | • Access to PBA and matching cash to support 1.0 FTE equivalent regular tenure track appointment to engage CSE. |
| • Deepen cross-college relationships in the area of characterization. | • Pursue two joint appointment hires in the area of materials characterization. | • Access to PBA and matching cash to support 1.0 FTE equivalent regular tenure track appointment. |
| • Develop and sustain relationships key extramural partners. | • Establish formal relationships with DNV, EWI, Battelle, Honda, GE and AFRL to allow exchange of researchers and students and pursuit of research, facilities and capital support. | • Access to cash and in-kind cost share to support joint proposals, facilities and capital requests. |
| • Strengthen our relationship with our alumni base and industrial sponsors. | • Increase the number of actively engaged alumni.  
• Revitalize the MSE Alumni Society.  
• Reinvigorate the MSE External Advisory Committee.  
• Increase alumni giving. | • Support for 0.25FTE staff communications coordinator. |
| • Broaden the range of relationships with industrial constituents. | • Increase the amount of cash and in-kind giving from industry. | • Support for 0.25FTE staff communications coordinator. |
| • Increase our ability to engage revenue-generating and relationship-building service work from industry. | • Adapt existing earnings operations in MSE to facilitate short-term service work from outside organizations.  
• Develop clinical track faculty and technical staff leads in important service areas such as corrosion, metallographic analysis, and mechanical testing. | • Support for 2.0 FTE technical staff.  
• Support for 2.0 FTE clinical track faculty. |
We seek to renovate and rehabilitate our infrastructure to create facilities that attract, inspire, motivate and facilitate discovery, learning and innovation.

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<tr>
<th>Initiative</th>
<th>Objective</th>
<th>New Resources Required</th>
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<tbody>
<tr>
<td>• Complete CEMAS.</td>
<td>• Take possession and occupy CEMAS by 2013.</td>
<td>• $10.5 million for construction and 10-year occupancy of CEMAS.</td>
</tr>
<tr>
<td>• Complete renovation of Koffolt-Fontana.</td>
<td>• Renovate the Koffolt-Fontana complex to house educational, administrative and light lab needs for MSE by 2016.</td>
<td>• $50 million in capital support.</td>
</tr>
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<td></td>
<td>• Create hoteling options for remote MSE and WE faculty and staff.</td>
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<tr>
<td>• Upgrade air handling systems in MacQuigg Lab.</td>
<td>• Achieve industry standards for heating and cooling of light experimental laboratory facilities.</td>
<td>• $ 1 million in renovation support.</td>
</tr>
<tr>
<td>• Upgrade laboratories in MacQuigg Lab.</td>
<td>• Transform laboratories to industry standards for professional appearance and safety.</td>
<td>• $1 million in renovation support.</td>
</tr>
<tr>
<td>• Upgrade public spaces in MacQuigg Lab.</td>
<td>• Renovate hallways, restrooms, lobbies and classrooms.</td>
<td>• $2 million in renovation support.</td>
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4. MSE Management and Operations

In this section, historical trends in department revenue streams, fiscal operations (PBA, research, release time and development funding) and fiscal plans are presented. Departmental demographics and personnel management plans are also presented.

**Departmental Research Expenditures.** By their nature, MSE and WE are research-intensive programs. Figure 1 shows the 10-year trend in research expenditures for MSE including sponsor direct charges, cost-share, and sponsor F&A expense (facilities and administration, or “overhead”). Research expenditures from Welding Engineering are included in FY 11 and 12. In any given year, 85 to 90% or the departmental research support derives from federal and state sources. These data show an overall increase in total research expenditures over the 10-year period with a significant bubble from 2004 to 2007. The bubble was due to Third Frontier funds that were invested in facilities and instrumentation. These investments enhanced the ability of the department to compete for fully overheaded funding as evidenced by the increase in Sponsor F&A expenditures (IDC) in MSE from 2008 to 2012.

![Figure 1. Research expenditures for the period of FY 2002 – 2012.](image)

**2012 - 2016 Research Plan.** Historically, research support from federal and state sources has dominated the research portfolio. Our relationships with industry have been strong, but they are often a partnership in pursuit of federal or state support. The ability of the federal and state government to grow research budgets will be limited and we must adapt to increase support from industry. Industry expectations are different. Time horizons are shorter, research is less...
fundamental and accountability is greater. Nonetheless, we must adapt if we are to engage this constituency. This will require changes in staffing, planning, execution and expectations. Models for how academic organizations can effectively engage industry are well developed in the European community and we must look there for ideas that we can adapt to be effective in our new emerging reality.

**Departmental Release Time.** MSE has an aggressive release-time collection policy, which works well for a research-intensive program. Departmental release time collections from faculty are made on a dollar-for-dollar basis against summer salary that is charged to sponsored research programs or discretionary accounts. Contrary to many other science and engineering departments, MSE does not charge release time for course buy-out.

Over the past 5 years, the department has collected between $800,000 and $1,000,000 annually from faculty release time based on a total research expenditure of $77.5 million. Of this, 40% has been returned to faculty on a proportionate basis for use in supporting their individual research programs. Release time paid by a faculty member beyond the 3-month summer salary equivalent is returned at a rate of 100%. Release time collections are used to cover normal department expenses including cost-shared expenses on instrumentation, start-up expenses for new faculty, staff support, upkeep and upgrade of user facilities and undergraduate labs, social events, GAA and GTA expense, consumable supplies, departmental office gear and maintenance contracts.

Table 1 shows 5-year summary of release time collections for the last strategic planning period of FY 2007 – 2011. A plot of year-by-year sources and uses is shown in Figure 2.

**Table 1.** Five-year release time sources and uses.

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<tr>
<th>FY 2007-2011 Totals ($)</th>
<th>(Research expenditures: $77,510,889)</th>
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<tbody>
<tr>
<td>Release Time Collected</td>
<td>4,607,019</td>
</tr>
<tr>
<td>Department Revenue</td>
<td>2,846,416</td>
</tr>
<tr>
<td>Department Expenditures</td>
<td>2,871,433</td>
</tr>
<tr>
<td>Release Time Returned</td>
<td>1,760,603</td>
</tr>
<tr>
<td>Department Balance</td>
<td>(25,017)</td>
</tr>
</tbody>
</table>

Due to significant commitment of reserves for CEMAS and faculty start-up packages, declining faculty size and declining research expenditures, significant decreases in release time collections appear likely.

**2012 - 2016 Release Time Plan.** The overall health of the release-time collections and department expenditures will need to be monitored closely to insure that they remain in balance. Options to restore and maintain balance include reducing department expenditures, reducing release time returns or moving to a fractional reserve method for managing expenditures allocated to faculty release time return balances.
Graduate Fee Authorizations (GFA). It has been MSE policy to return GFA to faculty undiminished based on the number of Graduate Research Associates they support from sponsored research programs. The department directs uncommitted GFA budgets for departing faculty to start-up packages to new faculty.

2012 - 2016 GFA Plan. No changes to GFA allocation practices are planned at the present time.

Permanent/ Present Budget Allocation (PBA). MSE is like most departments in the college in that more than 90% of its PBA pays faculty member salaries. There is a $500,000 increment in PBA that is set aside to pay the rent for 38,000 sf of space in the Edison Joining Technology Center (EJTC) to house the Welding Engineering program. Salary increases have been small in recent years, but are above the national average and above U.S. inflation rates. Figure 2 shows the trend in MSE PBA, the annual merit compensation plan guidance for the College of Engineering and the Consumer Price Index (CPI) for the period of FY 2001 – 2013. Because MSE uses PBA mainly to fund faculty salaries, it is expected to rise and fall with the MSE faculty size. The recent downturn in MSE PBA is associated with the high rate of faculty departures in recent years.

2012 - 2016 PBA Plan. No significant changes are planned for utilization of PBA to support department activities. PBA will continue to support faculty and certain selected staff and EJTC rent. Other expenses, notably MSE staff will continue to be paid by MSE release time collections.
Development Plan. Giving to MSE and WE comprises regular giving and endowment earnings for scholarship support in amounts that range from $80,000 to $100,000 per year. Sporadic individual gifts and corporate giving amount to an additional $100,000 to $200,000 per year. In recent years a $2.5 million dollar endowment for the Ohio Research Scholar was won in a competitive process. The DNV Designated Chair in Corrosion, first supported in 2007 has been renewed for a third period of 4 years. Total commitments for this chair now exceed $1.5 million. A gift agreement to support the EWI Designated Chair has been drafted and will be executed to recruit a new faculty member into the WE program.

2012-2016 Development Plan. Specific fund-raising targets have not been established. It is possible that MSE will need to raise funds to support the Koffolt-Fontana renovation. If that is the case, then a clear development plan will be needed. Initial assessments of the giving capacity of MSE alumni have been estimated to be $10 million. This is about the target that would be needed to support the renovation as it is currently envisioned.

Personnel Plan

Faculty. The reputation of materials science and engineering is strongly connected to roots in metallurgical and ceramic engineering. Over the past 15 years, MSE grew through targeted faculty hiring well beyond that core into computational materials science, biomaterials and electronic materials. This approach has benefited us by allowing us to grow our research into new areas, engage a broader set of research partners, and attract a broader, more diverse cross section of students. Figure 3 shows the MSE faculty size by track and rank for the period of 2000 to 2012 and includes faculty in the WE program in 2010 and later.
Since 2003, the department made only 2 hires that would be considered metals-oriented and 1 that would be considered ceramics-oriented. Realignment with WE strengthened our traditional core expertise in metals processing and structure-properties relationships, but we have had 9 retirements/departures since 2010 and the department expects one more retirement in 2013 and 4 more by 2015. All of those departures come from the metals and ceramics areas.

2012 - 2016 Faculty Plan. The hiring and departure patterns over the past 10 years have resulted in a large faculty by discipline standards, but one that is somewhat out of alignment with its reputation and in need of tuning to address the change in federal funding policy in the area of manufacturing and the university’s manufacturing initiative. The department is also committed to investments in computation and characterization. The department will need to engage more fully the research and clinical faculty tracks. Clinical faculty track can play a significant role in managing user laboratory facilities in which we teach and in which we intend to nucleate revenue-generating service work centers to serve what we hope will be a growing industrial clientele. Research track faculty members are needed to help expand the graduate program and increase research expenditures. MSE made its first research track faculty appointment last year and expects additional appointments in CEMAS and other research centers over the next several years.

![Faculty size and composition 2000-2012](image)

**Figure 3.** Faculty size and composition 2000-2012.
Staff. In response to administrative directives and to the centralization of services at the College level, MSE staffing has fallen as shown in Figure 4. Academic and technical staffing have remained constant and IT staffing (not shown in Figure 4) has increased from 3 to 4 staff, which are shared with the Chemical and Biomolecular Engineering department. In view of the growth in the faculty, research program, and educational program, MSE is understaffed even considering efficiencies delivered by the Business Operations Center. Individual administrative staff members are expected to cover multiple areas and there is no backup or redundancy and succession planning is impossible.

2012 - 2016 Staff Plan. The department is currently searching for a communications coordinator and that position is expected to be filled by April 2013. Our next staff search will be for a transaction initiator to assist with procurement, human resources and travel processing. MSE expects growth in the professional technical staff as we elevate the profile of our user facilities to make them more accessible to extramural partners.

Students. In the past 10 years, the undergraduate population has tripled and the graduate population has nearly doubled (Figure 5). This growth comprises both organic growth in the MSE program, and the addition of Welding Engineering students with the realignment.

2012 - 2016 Student Plan. Undergraduate enrollment in of 400 in MSE and 200 in WE is likely within 2 to 3 years. Graduate program enrollment will be closely connected to success in recruiting research funding. Federal-level austerity measures promise challenges, but a stable graduate population of 180 to 200 students for both WE and MSE programs is a strategic objective.
Diversity. Table 2 shows the diversity demographics for the various populations in MSE and WE. On the faculty, women and underrepresented minorities are below national norms for materials science and engineering. The fractions of underrepresented groups in our student, post-doc and staff personnel categories are near or at national norms. Until we create critical mass of these individuals and the inclusiveness of community that comes with that, we will need to be deliberate in our efforts to recruit and retain diverse populations.

2012 - 2016 Diversity Plan. Particular attention is being given to recruitment of women and minorities in the faculty ranks. The MSE faculty will add a new woman member in 2013. The 2012-2016 goals are to create a critical mass of women faculty in MSE so as to create an internal community that leads to inclusion and to have role models for our students.

Table 2. 2012 Diversity demographics in MSE.

<table>
<thead>
<tr>
<th>Category</th>
<th>Men</th>
<th>Women</th>
<th>% Women</th>
<th>Underrepresented Minorities</th>
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<tbody>
<tr>
<td>Faculty FTE</td>
<td>31</td>
<td>1.75</td>
<td>5.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Core Staff FTE</td>
<td>4.65</td>
<td>4.4</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>Post-docs’</td>
<td>18</td>
<td>2</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Graduate Students†</td>
<td>139</td>
<td>34</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Undergraduate Students†</td>
<td>173</td>
<td>58</td>
<td>25</td>
<td>7</td>
</tr>
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† MSE students only