On May 9th 2012, Tom Wolpert met with Robert Stone the Interim Head of the school of Mechanical, Industrial and Manufacturing Engineering (MIME) and David Cann, the Associate Head for Graduate Education. The meeting was held as part of the 3-year follow up on the Action Plan developed by the school in response to the 24 recommendations provided in the review of the Mechanical Engineering Graduate Program conducted May 5-4, 2008. The action plan submitted to the Provost and Graduate School, dated June 2, 2008, is included below. Imbedded in the action plan and written in italics, are the follow up responses to the action plan as provided on May 9th, 2012:

**Mechanical Engineering Graduate Degree Program Action Plan in Response to the Review of 2 June 2008**

Prepared by David Cann (12 Dec 08)
Associate Head for Graduate Education
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The review committee conducted an on-site interview on May 4-5, 2008 and a written report was submitted on 2 June 2008. The report contains a total of 24 recommendations; this document details the specific actions being taken by the ME program in response to these recommendations. Given that it is not possible to implement all of these recommendations in the short term, each action lists the appropriate priority.

**Recommendation 1:** Identify specific, existing collaborative interactions with international institutions and develop a plan for how these could be expanded within the programmatic effort, e.g., summer exchange program, semester abroad for collaborative research, etc.

**Action:** The ME program has existing, but informal, exchange programs with Germany and Japan. Such programs are best initiated by individual faculty members with specific research collaborations. Therefore, mechanisms for expanding our current portfolio will be discussed with the ME faculty. Priority = Low.

**Follow up:** Currently, no formal program for international collaborative interactions has been developed. However, such interactions continue to proceed on an individual basis. Additionally, plans are currently underway to implement a graduate student exchange program with Sweden.

**Recommendation 2:** The Graduate Program Chair should investigate building on existing links with institutions in China and determine whether it is possible to use current opportunities to expand the contribution of Chinese students to the ME program.

**Action:** The ME program is a charter participant in the graduate-level INTO program and, if successful, this may increase the number of Chinese students in our graduate program. In the initial years it will be limited to 4 to 8 per year, but could grow into significantly larger numbers. Priority = Currently being implemented.

**Follow up:** The School is engaged with the INTO program at OSU and as such includes the participation of Chinese students. No additional programs are planned.
**Recommendation 3:** The Graduate Program Chair needs to develop a full recruiting plan with a budget.

**Action:** A detailed recruiting plan with a budget will be developed by the end of the 2008-9 academic year with guidance from the MIME recruiting committee. Given current budget predictions it is unlikely that significant resources can be made available for the near future. Priority = Moderate.

**Follow up:** Efforts toward Graduate Student recruitment have been significantly increased and appear to be increasingly successful. For example, the school now invites and funds up to 20 candidates a year for campus interviews. Last year’s recruiting efforts resulted in the matriculation of 30 graduate students.

**Recommendation 4:** Submit a proposal to the National Science Foundation to establish a Research Experience for Undergraduates (REU) site in ME. If such a proposal is funded it will give ME faculty access to some of the best and most highly motivated undergraduates in the United States. The effectiveness of these sites in recruiting top students into graduate school has been widely documented. They also increase recruiting opportunities for domestic PhD students.

**Action:** The annual deadline for the REU site proposals is in August. A team of faculty in MIME will submit a proposal in August 2009. Priority = Moderate.

**Follow up:** REUs are obtained on an individual level by faculty. Currently, plans are being developed for a possible site under the theme “Engineering for Good”. Also, a newly recruited faculty member has had prior experience directing an REU site and will be considered a resource for developing a proposal at OSU.

**Recommendation 5:** Reduce required course credits to Graduate School minimums. Such a reduction would facilitate flexibility and allow students to take courses (including some at the undergraduate level) outside ME and outside the College of Engineering.

**Action:** The ME graduate faculty recently (5 Dec 2008) voted to reduce the total number of course credits from 36 to 30 for the MS degree. A similar initiative is under consideration for the PhD degree. Priority = Already implemented for MS, High priority for PhD.

**Follow up:** As indicated, this was completed for MS degrees in 2008 and recently also completed for Ph.D. degrees. For the latter, a reduction of 54 course credits to 48 was approved.

**Recommendation 6:** Emphasize the option to develop flexible interdisciplinary programs of graduate study when promoting the graduate program (e.g. on the ME program web page and in the department offer letter).

**Action:** The faculty of MIME are currently developing research clusters to help define our research activities. Most of these are highly interdisciplinary in nature and will be used on all external publications and websites, etc. Priority = Being Implemented Currently.

**Follow up:** The School anticipates defining a suite of approximately 12 individual, transcript-visible options for their graduate programs under proposed new guidelines as provided by the Graduate School. Among these will be a “flexible” option.
**Recommendation 7:** Continue providing the Graduate Communication Seminar and consider expanding it to two quarters or possibly the entire year.

**Action:** From a practical standpoint, this recommendation cannot be implemented without an increase in the number of faculty. Priority = Low.

*Follow up: The Graduate Communication Seminar is still offered on a yearly basis. Currently, resources are insufficient to consider a higher frequency.*

**Recommendation 8:** Provide graduate opportunities for international exchange and collaboration.

**Action:** Similar to Recommendation 1. The ME program has existing, but informal, exchange programs with Germany and Japan. Such programs are best initiated by individual faculty members with specific research collaborations. Therefore, mechanisms for expanding our current portfolio will be discussed with the ME faculty. Priority = Low.

*Follow up: Such opportunities are available on an individual, faculty-initiated basis.*

**Recommendation 9:** Establish graduate cooperative agreements for industry internships.

**Action:** This topic will be brought to the attention of the MIME Industrial Advisory Board. If positively received, MIME faculty will develop a strategy for implementing this using a similar structure to the successful MECOP program for undergraduate students. Priority = Moderate.

*Follow up: The School has developed formal exchange fellowships with both Intel and Blount International Inc. Additionally, plans are underway to develop additional fellowship opportunities with other companies that have strong research interactions with MIME.*

**Recommendation 10:** Increase the opportunities for graduate student presentations.

**Action:** All of the specialization groups within ME currently have seminar series (2 of them associated with a formal course number, the others are run on a more informal basis). Priority = Already Implemented.

*Follow up: Currently, 4-5 different seminar programs exist within the School. Each of these offers opportunities for graduate student presentations. The School estimates that most students present 1-2 formal presentations over the course of their graduate careers.*

**Recommendation 11:** The School should consider forming a faculty “vision” or “long-range planning” committee. Encouraging widespread faculty participation would help to foster a sense of collaboration and shared sense of future.

**Action:** An MIME-wide Vision Committee was initiated in 2007-8. It meets regularly addressing strategic issues facing the School. Priority = Already Implemented.

*Follow up: The Vision Committee has been suspended due to excessive committee assignments for faculty. However, work of this nature continues under the Graduate Program Committee.*

**Recommendation 12:** Consider the role of the Qualifying Examination and whether it is being used in the most effective way.
Action: The Qualifying Examination has only been in operation in its current format since the 2007-8 academic year. An assessment of its effectiveness would be appropriate within the next academic year. Priority = Moderate.

Follow up: The requirement for qualifying examinations had only recently been implemented at the time of the review making it impossible to adequately assess. The requirement has now been in place four years and appears to be working as intended. It provides an early and effective means to evaluate future student success toward a higher degree.

Recommendation 13: Metrics for graduate student success should be identified and tracked.

Action: We are currently developing a number of tracking systems that will include the ability to identify students progress in the program of study, and other accomplishments outside the classroom. Priority = Currently Being Implemented.

Follow up: Adequate tracking of graduate student success was deemed impractical, as an appropriate database is not readily available. Additionally, efforts along this line are increasingly being discussed as part of a possible University effort. School plans will develop in parallel with those of the institution.

Recommendation 14: Form a Graduate Student Awards Nomination Committee.

Action: The responsibility for nominating graduate students for awards currently lies with the Graduate Program Committee. At a future faculty meeting, we will seek input from the faculty to determine if the MIME Awards committee is a more appropriate committee to handle graduate student nominations. Priority = Low.

Follow up: An Awards Committee has been established that encompasses considerations for faculty, staff and students.

Recommendation 15: The School should clarify/develop policies regarding the formation and maintenance of graduate committees and publication requirements for graduate degrees.

Action: This issue will be brought up at a MIME GPC meeting during this academic year. Priority = Moderate.

Follow up: The School follows the recommendation of the Graduate School for forming graduate student committees. No consensus has been reached on the publication requirements for graduate degrees and is not considered likely. This is due to the diversity of programs included within the school. For example, some programs involve explicit intellectual property agreements that preclude publication.

Recommendation 16: Form a Faculty Awards Committee. This committee should identify outstanding faculty and help nominate them for Fellow status in their respective societies and national awards available through professional societies such as MRS and ASEE.

Action: The current MIME Awards Committee is currently charged with this task. Priority = Already Implemented.
**Follow up: See Recommendation 14.**

**Recommendation 17:** The School should provide travel funds on a competitive basis (maybe matched by the Graduate School) to encourage graduate (particularly doctoral) student attendance at conferences.

**Action:** There are currently funds available for PhD students to receive $500 to help defray costs of presenting at conferences. Currently only students that have passed their Prelim Exam are eligible, but if additional funds can be made available it will be expanded. Priority = Already Implemented.

*Follow up: Funds for individual students have been increased from $500 to $1000. Also, students can now compete for funds following completion of their qualifying exams (previously-upon completion of their preliminary exam). This allows for more students to compete and to attend conferences earlier in their academic program. The School funds from 10-20 students per year.*

**Recommendation 18:** The School should consider forming a student organization within ME.

**Action:** This issue will be brought up at the next scheduled meeting with the graduate students to see if there is interest amongst the students to initiate a student organization. Priority = Moderate.

*Follow up: A graduate student-initiated organization has been developed in the School. The School contributes $1000/year to help defray organization expenses through an account independently handled through the OSU Memorial Union. In exchange for funding, the student organization contributes to the graduate recruitment activities of the School.*

**Recommendation 19:** The School should improve tracking for graduate alumni.

**Action:** As mentioned above, we are currently developing a number of tracking systems for our graduate students. The initial efforts are aimed at incoming and existing students, but maintaining communication with alumni will be included in the tracking system. Priority = Currently Being Implemented.

*Follow up: This has not been aggressively pursued. However, increased voluntary contacts have been facilitated through professional networks such as “LinkedIn”.*

**Recommendation 20:** The School should consider creating a curriculum committee to periodically review programmatic needs and teaching activities.

**Action:** The responsibilities for the review and maintenance of the ME graduate curriculum lies with the ME Graduate Program Committee. Priority = Already Implemented.

*Follow up: This activity is currently handled by the Graduate Program Committee.*

**Recommendation 21:** Clarify on the web and any published documents the course requirements and how students can satisfy these requirements.
**Action**: The ME graduate program web sites were updated in the 2007-8 academic year and now accurately reflect all course requirements. Priority = Already Implemented.

**Follow up**: The web site is consistently maintained and periodically updated.

**Recommendation 22**: Provide access to student training in aspects of entrepreneurship either through the College of Engineering and/or Business and establish mechanisms for exposing students to ongoing entrepreneurial activities within the College.

**Action**: Students will be made aware of courses on entrepreneurship offered for graduate students. Priority = Moderate.

**Follow up**: At the time of the review, enrollment opportunities for MIME students in these programs was limited. This has been addressed and students can now participate in both the College of Engineering and Business programs.

**Recommendation 23**: Maintain the graduate student directory and keep School web site current.

**Action**: The web site was updated significantly in the 2007-8 academic year. Priority = Already Implemented.

**Follow up**: The graduate student directory is updated annually and other web functions on an ‘as need’ basis.

**Recommendation 24**: Encourage student participation on committees.

**Action**: The ME GPC will allow a graduate student representative to attend meetings as needed. Priority = High.

**Follow up**: A formal policy for graduate committee participation has not been developed. However, student participation is encouraged in a range of School functions.

**Additional follow up discussions**: Due to the recent (2007) fusion of graduate programs into a single School, the School has indicated an interest in having all their graduate programs assessed in unison. This includes the Mechanical Engineering and Industrial Engineering degree programs, as well as the interdepartmental Materials Science degree program which is administered by MIME. The School would appreciate this consideration by the Graduate Committee.