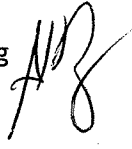




College of Engineering

142 Hitchcock Hall
2070 Neil Avenue
Columbus, OH 43210-1278

To: Randy Smith, Vice Provost, Office of Academic Affairs
Dan Mendelsohn, Chair, Council of Academic Affairs

From: Stu Zweben, Associate Dean, College of Engineering 

Date: June 16, 2009

RE: Proposal to Move Welding Engineering to Materials Science and Engineering

On June 10, 2009, the faculty of the College of Engineering voted unanimously to endorse the attached proposal to transfer the academic programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering. On behalf of the College, I hereby forward this proposal for consideration and approval by the Council on Academic Affairs.

The College strongly supports this proposal, as evidenced by the faculty vote. Interim Dean Greg Washington also strongly supports this proposal.

Please advise us if you have any questions about this request. We look forward to prompt consideration of it by CAA.

Cc: G. Washington, Interim Dean
G. Valco, Chair, College Committee on Academic Affairs



College of Engineering

122 Hitchcock Hall
2070 Neil Avenue
Columbus, OH 43210-1278

Phone 614-292-2651
FAX 614-292-9379
E-mail engosu@osu.edu

Date: 2 June 2009

To: Stu Zweben
College Secretary, College of Engineering

From: Ed McCaul
Secretary College Committee on Academic Affairs (CCAA)

Subject: WE-MSE Realignment Proposal

Attached is a proposal to Transfer the Academic Programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering along with documents discussing CCAA's initial concerns and how the committee's concerns were resolved. CCAA voted on the 1st of June by a vote of 8 approved, 0 opposed, and 0 abstentions to endorse the proposal to the College of Engineering faculty. As a result, the proposal is being sent to you so that you can arrange for the college faculty to vote on it. If you have any questions about CCAA's actions please let me know.



College of Engineering

Office of the Dean
142A Hitchcock Hall
2070 Neil Avenue
Columbus, OH 43210-1278

<http://engineering.osu.edu>
Phone: (614) 292-2836
Fax: (614) 292-3244

Date: May 27, 2009

To: Professor George Valco
Chair-College Committee on Academic Affairs

From: Gregory Washington,
Interim Dean College of Engineering

Subject: Response to comments from CCAA regarding the WE-MSE Realignment proposal.

The following documents are provided to address comments from CCAA regarding the WE-MSE Realignment proposal:

1. A revised version of the body of the proposal.
2. Responses to committee comments point-by-point.
3. A copy of the MOU between the College and MSE regarding support for the realignment (new appendix to the proposal).
4. A memo from J. Higle to G. Washington outlining the ISE faculty and staff rosters after realignment (new appendix to the proposal).
5. A summary of discussions held in MSE leading up to its vote on the realignment proposal.

These revisions and documents address each of the issues raised in the initial committee review. Please let me know if further clarification is needed.

Warmest Regards

A handwritten signature in black ink, appearing to read "Gregory Washington".

Gregory Washington, Ph.D.
Professor and Interim Dean

Recommendation of CCAA Subcommittee A: Proposal to Move Welding Engineering to Materials Science and Engineering

College and Unit Response to Questions

May 26, 2009

Question 1. The proposal, as written, comes from Dean Washington rather than from the faculty members who would move. This unusual arrangement suggests—perhaps unfairly—that grass-roots support among those faculty members (though unanimous by recorded vote) might be less than solid. The Subcommittee finds this nagging concern to be amplified by the proposal’s lack of a substantive summary of the issues that were raised and the discussions that took place in WE, MSE, and ISE faculty meetings before voting.

The College and the units appreciate the Subcommittee’s concern in this regard. We point out that Dean’s authorship of a realignment proposal is described in the University Rules and is in no way unusual. We do understand however that the proposed restructure is somewhat unusual in that there has been very few mergers or restructures in the college in recent years. Indeed, this realignment action was triggered by a recommendation from the College’s Performance Plan Acceleration Task Force committee report. The committee received its charge from the Dean, and the realignment proposal originating from committee recommendation should be attributed to the Dean.

With respect to faculty votes on the proposal, it is important for the Subcommittee to know that that the votes taken in MSE, ISE and WE were not required by rule. At the outset of the proposal process, it was decided to conduct these votes and include the results to capture dissent or concern by affected faculty and preserve self-determination for the units. To insure free expression in this regard, the vote in MSE was by secret ballot.

In any event, we interpret this comment as an indication that the Subcommittee seeks greater description of the discussions on the issues related to realignment that led up to these votes. Those summaries have been included as an appendix to the proposal.

Question 2. The proposal title and the executive summary both mention that the academic programs of WE would be moved to MSE, but do not mention that the faculty members of WE would also be moved to MSE. The Subcommittee assumes this is a simple oversight.

It is the intention for the WE faculty to transfer their Tenure Initiating Unit (TIU) to MSE, as described in University Rule 3335-6-06, Tenure initiating unit. This has

been noted in the revised proposal.

Question 3. Apparently there is at least one Memorandum of Understanding among the affected faculty members and the Dean that is not included in the proposal. The Subcommittee agrees it is crucial to include all such MOUs in the proposal.

The MOU between the College of Engineering and MSE is included as an appendix to the proposal and referred to in the revision.

Question 4. The tables do not include information about ISE faculty members or staff. One Subcommittee member wondered what the size of the ISE faculty would be after the WE faculty members move to MSE. And while the increased workloads of MSE staff are detailed, the presumably decreased workloads of corresponding ISE staff are not. It is the understanding of the Subcommittee that the proposal should be revenue-neutral, so if additional funding would be requested by MSE to handle the increased staff (e.g., advising) workload, the Subcommittee suggests that the proposal should note that a concomitant savings would be realized in ISE.

Tables illustrating the change in ISE faculty and staff size, and staff workload have been included in the revised proposal in a new appendix.

No additional special funding has been requested by MSE for staff support.

Question 5. The budget information is difficult to understand: it assumes the reader is familiar with budgetary terminology and details, and many faculty members are not. Details about dollar amounts for revenue generated and costs incurred, in addition to the percentages over and under target budgets, should be provided for each of WE, MSE, and ISE. These details also should make it clear whether the \$500K for the EWI lease is included in the \$966K WE budget or is in addition to it. The Subcommittee believes that tables of before-and-after budget estimates would make it much easier to understand the meanings of, and to check, the percentage figures provided in the current version of the proposal.

The section of the proposal containing budgetary information has been expanded to show unit-level changes in before and after budgets.

Question 6. Table 3 does not list all the required WE courses. A check of the WE "bingo sheet" indicates that WE 300, WE 350, WE 351, and WE 500 are missing. This information should be double-checked and corrected.

This has been corrected in the revised proposal.

Question 7. The proposal does not make it clear whether both the MSE and WE undergraduate degree programs would be handled by a single Undergraduate Studies Committee, or by two such committees. There is a statement about this matter for the graduate programs.

The MSE and WE undergraduate degrees will be handled by a single Undergraduate Studies Committee that will include at least one WE faculty member. This issue has been addressed in the revised proposal.

Additional comments from George Valco, CCAA Chair, on some of
Subcommittee A's questions
(numbering matches the subcommittee's list)

Question 1: During the full meeting of CCAA it was confirmed that issues raised during discussions in the affected departments were considered during development of the proposal. However that is not clear from reading the proposal. We anticipate that including a substantive summary of the issues raised and discussion that took place in the proposal at this time is likely to help the proposal proceed more smoothly at the next level of review.

Summaries of issues and discussions are included as appendices to the proposal.

Question 2: While section 2.1 of the proposal addresses the impact of the reorganization on faculty, the executive summary only discusses the transfer of academic programs, and is silent on the transfer of faculty. Addressing this may be as simple as adding "and faculty" after "academic programs" in the first sentence of the executive summary.

The language has been amended. It should be noted that there are other University Rules that govern change in TIU for faculty. They have been cited in the amended version of the proposal.

Question 3: CCAA suggests that the MOU(s) be attached in an appendix to the proposal, with references to their existence incorporated at appropriate point(s) in the proposal. The contents of the MOU(s) should naturally suggest the sections in the proposal where such reference(s) should be included.

The MOU between the College of Engineering and MSE is included as an appendix to the proposal and referred to in the revision.

Question 5: During the full meeting of CCAA it was clarified that the \$500K for the EWI lease is in addition to the \$966K WE budget. However that was not clear from reading the proposal. We suspect this and other budget details will be difficult for reviewers from outside of the college to understand without additional clarification. Providing such clarification now should help the proposal proceed more smoothly at the next level of review.

Elaboration on how the realignment will affect budgets in MSE and ISE has been made.

Synopsis of Discussions in MSE Related to the WE-MSE Realignment

May 26, 2009

MSE Discussion Timeline

Discussions in MSE on the WE-MSE realignment proceeded in four main phases:

- 1) December 2008 - February 2009. Discussions prior to the PPAT recommendation for realignment. These took place during.
- 2) February - March 2009. Discussions after the PPAT recommendation for realignment. These discussions were based on formal solicitation of input from the MSE faculty.
- 3) March - April 2009. Discussions after agreement-in-principle between the COE and MSE on a MOU addressing resources to support the realignment.
- 4) April 2009. Final MSE discussions and vote on the realignment proposal.

Discussions Prior to the PPAT Recommendation for Realignment

In Fall quarter 2008, the Dean charged the Performance Plan Acceleration Taskforce (PPAT) to examine issues raised in the Graduate School's Doctoral Program Assessment. Among those issues was the weakness in the Welding Engineering PhD program. One of the options for dealing with WE programmatic weakness was to realign WE programs and faculty in MSE. Because of the significance of the issue and the need to protect faculty and unit interests in any realignment process, discussion within the MSE faculty was initiated on December 5th, 2008 with a characterization of the WE program and faculty and a strengths, weaknesses, opportunities, and threats (SWOT) analysis of consequences related to realignment. The issues raised on the SWOT analysis at that time were as follows. Retrospective comments (added in May 2009) related to specific items in these lists are given in italics. This analysis was prepared by the MSE chair. The weaknesses and threats represent the chair's perception of the criticisms and concerns among the MSE faculty related to realignment. This analysis was discussed at the time of presentation, but no formal solicitation of comment was made. At the request of the Dean, formal discussion of the realignment within MSE was suspended until the PPAT had concluded its deliberations.

Strengths:

- Would be one of the largest MSE faculties in the country.
- Strengthens structural materials areas.
- Significant increases in UG and G enrollment. Increases are documented in the realignment proposal.
- Strengthens industry connections.
- WE alumni are committed to the program and institution.
- Distance Education expertise at the dept. level.

Weaknesses:

- Current research funding in WE looks soft. *Research funding has strengthened considerably since December 2008 with a new \$2.5M, three-year program on the books and an NSF I/UCRC proposal under development.*
- Trends in national research funding are not familiar to us; not an obvious growth area. *This issue is mitigated if the WE program changes orientation towards materials joining.*
- Need to recruit new faculty. *A specific plan has been developed with the College to bring three new faculty into the WE program by 2015.*
- College budget position is weak--may not be able to help much. *The transition plan supporting the realignment brings resources sufficient to fund salary and start-up for three new faculty hires.*

Opportunities:

- Possible options for MSE minor, WE minor and dual majors. *Our Q2S committee is including these options in their planning, which should be attractive to students and prospective employers.*
- Distance MS in MSE. *MSE faculty already teach several courses in the WE MS distance learning program. We expect to expand MSE teaching in this program with an ultimate goal of a distance MS degree in MSE.*
- Expanded enrollments.
- New research focus.
- Could be an invigorating change.
- Increase industry support.

Threats:

- Would put MSE far over budget in the short term. *Subsequent estimates show that bringing WE program to MSE will immediately improve the MSE budget position relative to the University's budget model.*
- Might affect metals hiring on the MSE side in the future. *The COE-MSE MOU addresses this issue to ensure that MSE hiring will not be affected by the commitments for new faculty hires to support the WE program.*
- Might increase teaching loads. *Subsequent analysis shows that the current WE faculty are sufficient in number and expertise to teach the WE core*

curriculum and significant increases in MSE teaching loads are not anticipated.

- *Culture clash now and into the future. There are various anecdotes and observations to suggest differences in the MSE and WE culture. In the broader context of the disciplines in the College, MSE and WE are more similar than they are different. However, the two groups will have to be alert to unintended consequences for academic freedoms, learning, research and access to resources and opportunities as the two groups integrate over the next several years.*
- *Incorporate a geographical split (west campus-central campus) in MSE. Unavoidable in the short run. Several other units in the College manage geographic splits. The first real opportunity or consolidation occurs in 2014 when Koffalt Labs may become vacant.*
- *May reinforce the “smokestack industry” perceptions held by some of our peers. It is likely that some will have this perception. Nonetheless, materials joining is an essential component of the national technological enterprise and opportunities for scientific and engineering impact remain despite perceptions to the contrary.*
- *Merger may be forced on us in some form no matter what. Hard to judge this threat in retrospect.*

Discussions after the PPAT recommendation for realignment.

The PPAT issued its recommendations in early February 2009 and the MSE chair formally solicited comments, questions and concerns related to the proposed realignment. The following is a summary of concerns raised:

- Integrating with WE will hurt the MSE reputation for scholarship
- WE is too different from MSE
- WE is an old smoke-stack part of the discipline
- WE students are not as strong as MSE students
- A geographic split will hurt us
- What to do with WE is not an MSE problem
- What is in it for MSE.

In a meeting on March 4, 2009, counter arguments were made by the MSE chair regarding the impact of scholarship and reputation. The issues related to cultural differences between MSE and WE, and differences in approaches of the students

were recognized as matter that would require deliberate attention if realignment were to proceed. A list of conditions establishing resources that would be made available to support the realignment were discussed. This list of conditions included salary support for new faculty and start-up funding. A straw vote was taken on the realignment action assuming that the list of conditions was supported by the College in the form of a MOU. That vote was taken by secret ballot and passed in favor of realignment. A number of negative votes were entered.

Final MSE discussions and vote on the realignment proposal.

MOU language related to the realignment was written and agreed upon in principle between MSE and the College. This MOU and the realignment proposal were provided to the MSE faculty prior to a secret vote of the full faculty. On the basis of these documents, the faculty voted unanimously to support the realignment proposal.

Request to Reconfigure Academic Units under University Rule 3335-3-07:

A Proposal to Transfer the Academic Programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering

Submitted by: Gregory N. Washington, Interim Dean of the College of Engineering

Revised May 26, 2009

Executive Summary

The College of Engineering requests that the academic programs, faculty and staff in Welding Engineering, which are currently housed in the Department of Integrated Systems Engineering, be transferred to the Department of Materials Science and Engineering. The Department of Integrated Systems Engineering (formerly known as Industrial, Welding and Systems Engineering) has administered two disparate programs, "Industrial and Systems Engineering" and "Welding Engineering" since the merging of their respective departments in 1994. The Welding Engineering (WE) program aligns more closely with the program in Materials Science and Engineering than the programs in Integrated Systems Engineering, so that the proposed transfer will better serve the students and faculty of Welding Engineering to Materials Science and Engineering (MSE). No changes are proposed for the BS and MS Welding Engineering degree programs. No changes are proposed for the Materials Science and Engineering degree programs. No changes are proposed for any of the remaining programs administered by the Department of Integrated Systems Engineering. The WE PhD program is currently being evaluated for alteration or elimination by the College of Engineering. This evaluation is being carried out in conjunction with affected constituencies. Because degree program alteration follows a separate proposal and approval process (described in University Rule 3335-8-02), it is being considered in a separate administrative action.

Resources that will be provided to support this transition are described in a Memorandum of Understanding between the College of Engineering and the Department of Materials Science and Engineering. That MOU is Appendix I of this proposal.

1. Background

At its inception, the Welding Engineering program was administered by the Department of Industrial Engineering. As these two disciplines diverged, a Department of Welding Engineering (WE) was formed in 1948. During a reorganization of the College of Engineering, Welding Engineering was merged with Industrial and Systems Engineering (ISE) to form a single academic unit in 1994. That unit has since been renamed as the "Department of Integrated Systems Engineering". The WE and ISE degree programs are essentially disjoint, with very limited excursion of students from one program into courses offered by the other.

Welding Engineering employs science and engineering in joining components made of metals, ceramics, plastics, and materials. In other words, it involves the science, engineering, and design of the manner in which materials are joined. The alliance between Welding Engineering and Materials Science and Engineering is quite natural, as evidenced by the extent to which programs in WE require MSE courses. In the 2008-09, nearly 10% of the courses required by the BS WE program are MSE courses. In addition,

members of the WE faculty collaborate freely with MSE faculty, while relatively limited interaction occurs between the WE and ISE faculty.

Indeed if one views welding and joining as a means of altering microstructure and therefore properties of materials, then a case can be made for an excellent strategic fit between welding engineering and materials science and engineering. Further, understanding the performance of weld joints (or joints made by other joining methods) relies on the ability to characterize the effect of the joining process on the microstructure of the material. The MSE strengths in characterization are also synergistic with welding engineering. OSU already leads the country in research on the microstructure-property relations. Adding the ability to include studies of microstructural changes induced by joining only extends our reach in this research domain. At the same time it enhances the awareness and access of the welding engineering faculty to world-class characterization facilities and the affiliated supporting staff.

In April 2008, a recommendation to disinvest in the WE PhD program was forwarded by the OSU's Graduate School's Doctoral Assessment and Plan Report. The report noted that:

"The Welding Engineering doctoral program is in a transition phase owing to faculty retirements and its small size. It is the only such program in the U.S., and there is high industrial demand for its graduates. The college notes that a more appropriate name for the program would be "Materials Joining Science and Engineering". Nonetheless, its current situation is weak and not tenable."

There is no question that Welding Engineering is of vital interest to the US manufacturing enterprise. Under the circumstances, it would appear that the best method for sustaining OSU's capability to continue providing much needed welding engineers is to shift the academic program to the MSE Department and alter and rename the PhD degree program, or merge it into the MSE PhD program thus eliminating the WE PhD degree. A separate administrative process is underway to determine the most appropriate course of action to ensure the best prospects for maintaining, supporting, and building research and education in the disciplines of welding engineering and materials joining.

2. Impact on Faculty and Staff Affected by the Proposed Reconfiguration

2.1 Faculty

Table 1 lists the faculty of Welding Engineering and Materials Science and Engineering affected by the proposed reconfiguration of units. Integrating these two groups of faculty creates no significant overlaps in research expertise, nor is there a significant gap between the two sets of faculty. We note that while 3 WE faculty hold PhD's in areas other than MSE (Benatar, Farson, and Rokhlin), the backgrounds of graduate students recruited into MSE are typically appropriate to pursue advanced study under the direction of these faculty. Indeed, several members of the MSE faculty also hold degrees in areas other than MSE.

The faculty and staff remaining in ISE after realignment are listed in Appendix II. How the departure of WE faculty, staff and programs is also discussed in this Appendix.

Under this proposal, the faculty appointments for all WE faculty indicated in Table 1 will transfer from the Integrated Systems Engineering (14570) to Materials Science and Engineering (14680). The WE

faculty will have governance rights as described in the MSE Pattern of Administration (Appendix III), and will be expected to sustain active research programs, support the WE academic degree programs, and participate in faculty governance through faculty meetings and service on MSE departmental committees. Appointments, promotion, tenure, annual evaluation, and merit compensation for WE faculty will be carried out as described in the MSE Appointments, Promotion and Tenure document (Appendix IV). All WE faculty members identified in Table 1 are tenured – there are no probationary faculty. Two members of the WE faculty retired, effective April 1 2009: C. Tsai (Professor) and C. Albright (Associate Professor). The MSE department will maintain emeritus status for these individuals if it is granted by ISE.

Upon approval of this proposal, responsibility for the space occupied by the WE program in the Edison Joining Technology Center (EJTC) will transfer from Integrated Systems Engineering (14570) to Materials Science and Engineering (14568). As a result, the disruption to the WE educational and research programs will be minimized.

Program	Name	Rank	Years of Experience		
			Govt./Ind. Practice	Total Faculty	OSU
WE Faculty, Tenure Track	Babu, S.	Assoc. Professor	13	2	2
	Benatar, A.	Assoc. Professor	0	21	21
	Farson, D.	Assoc. Professor	1	20*	12
	Lippold, J.	Professor	17	14	14
	Rokhlin, S.	Professor	6	32	24
MSE Faculty, Tenure Track	Akbar, S.	Professor	0	19	19
	Anderson, P.	Professor	0	20	20
	Buchheit, R.	Professor	7	12	12
	Clark, W.	Professor	0	30	30
	Daehn, G.	Professor	0	20	20
	Dregia, S.	Associate Prof.	0	20	20
	Drummond, C.	Associate Prof.	0	28	28
	Flores, K.	Associate Prof.	0	6	6
	Frankel, G.	Professor	9	13	13
	Fraser, H.	Professor	1	35	23
	Guan, J.	Assistant Prof.	1	2	2
	Gupta, P.	Professor	8	22	22
	*Ho, W.	Professor	26	6	6
	Lannutti, J.	Associate Prof.	3	18	18
	Mills, M.	Professor	7	14	14
	Morral, J.	Professor	0	43	5
	Morris, P.	Associate Prof.	20	3	3
	Myers, R.	Assistant Prof.	0	1	1
	Padture, N.	Professor	0	17	4
	Powell, H.	Assistant Prof.	1	1	1
	Sahai, Y.	Professor	0	25	25
	Verweij, H.	Professor	16	18	7
	Wagoner, R.	Professor	6	25	25
	Wang, Y.	Professor	0	12	12
	Williams, J.	Professor	18	22	9
	Windl, W.	Associate Prof.	4	7	7
Zhao, J.	Associate Prof.	13	1	1	
MSE Faculty, Research Track	Collings, E.	Research Professor	7	36	3

Table 1. Faculty Roster. Except as noted by “*”, all faculty are full-time faculty.

2.2 Staff

The addition of new faculty, staff, students and programs, imposes additional workload on MSE fiscal, HR, and academic staff. Table 2 lists the current staff that will be affected by the proposed reconfiguration of units, and the manner in which their workload and assigned duties will be impacted. Over time, additional staff to support the increased workload may be necessary. Because no administrative staff will transfer from ISE to MSE, only staff that provide primary technical, research, and instructional support for the WE research and educational programs are impacted. The current configuration of their duties will remain unaltered, as will the sources for their salary support, through the transition period. Post transition, job duties and locations may evolve as the needs of the combined programs become clearer.

The disposition of ISE staff after realignment is provided in Appendix II.

Program	Name	Position	Impact of proposal on current duties
MSE	Allen, L.	HR Coordinator	Increased HR duties to support WE faculty and staff.
	Babusci, K.	Administrative Associate	No significant changes.
	Lindsey, C.	Office Administrative Assistant	No significant changes.
	Wang, M.	Business Manager	Increased duties related to research program support, procurement, fiscal transactions and HR to support WE program.
	Cooper, M.	Graduate Program Coordinator	Increased duties to support WE graduate students (approx. 40, including distance students).
	Daniels, M.	Undergraduate Advisor and Recruiter	Increased duties to support WE undergraduate students (approx. 70).
	Kushner, K.	Lab Supervisor-MSE	No significant changes.
	Bright, S.	Research Associate I-Engineer	Will assume added duties for chemical safety of WE faculty staff and students and will assume added duties for support of lab classes taught to WE undergraduates.
	Baldwin, R.	Instructional Lab Supervisor	No significant changes.
WE	Alexandrov, B.	Research Scientist	None.
	Glazier, J.	Manager-Welding Engineering	None.
	Phillips, D.	Lecturer-BE	Will lecture as arranged by contract.

Table 2: Roster of Staff Impacted by Proposed Configuration.

3. Academic Courses Taught by WE and MSE Faculty

The proposed transition will not impact the structure, requirements, or offerings of the MSE program. The MSE programs, at both the undergraduate and graduate levels, will continue without any alteration attributable to the proposed transition.

At the present time, there are 58 undergraduates, 4 BS/MS, 37 MS, and 8 PhD students matriculating through the Welding Engineering degree programs.

3.1 BS WE degree program.

The College of Engineering will host an ABET accreditation review in AU 11. Consequently, in the short-term, the WE and MSE undergraduate programs will remain largely separate, intact and as-is within one academic department in order to facilitate preparation for the accreditation review. In the long-term, it is expected that the degree programs will evolve as dictated by curriculum revision needed for the quarter-to-semester change and will be strongly affected by new faculty hiring.

The MSE Undergraduate Studies Committee will supervise the BS WE program. Committee membership will include at least one WE faculty to ensure that the interests of the program are served.

Despite recent retirements from the WE faculty, the remaining faculty and instructor pool is sufficient to support both the WE and MSE undergraduate degree programs. In recent years, Dr. Boian Alexandrov (Research Scientist) and Dr. David Phillips (Lecturer) have both offered courses in the WE program, and will continue to do so throughout the transition period. Table 3 identifies MSE and WE courses required by the BS WE program. Beyond the core requirements, the BS WE program includes 17 hours of technical electives. Although these technical electives are not required to be taken in WE, they must be approved by the WE Undergraduate Studies Committee prior to enrollment in the course(s). A

student's technical elective plan must show coherence and depth in welding engineering or in a closely aligned science or engineering discipline. For these reasons, the WE degree program is quite flexible and readily supportable by the current WE faculty. As a result, support for the elective component of the BS WE is not a critical issue at the present time.

Course	Name
MSE 205	Intro. to Materials Science and Engineering
MSE 401	Materials Thermodynamics
MSE 525	Phase Diagrams
MSE 543	Structural Transformations
MSE 581.04	MSE Lab
WE300	Intro to Welding Engineering
WE350	Welding Processes Lab I
WE351	Welding Processes Lab 2
WE500	Physical Principles in Welding Engineering I
WE 550	Physical Principles in Welding Engineering Lab I
WE 600	Physical Principles in Welding Engineering II
WE 601	Welding Processes and Applications
WE 610	Introduction to Welding Metallurgy
WE 611	Welding Metallurgy I
WE 612	Welding Metallurgy II
WE 620	Engineering Analysis Design and Simulation
WE 621	Welding Engineering Design
WE 631	Nondestructive Engineering
WE 651	Welding Process Applications Lab
WE 661	Welding Metallurgy Lab
WE 662	Welding of Non-ferrous Alloys
WE 690	Capstone: Welding Design I
WE 691	Capstone: Welding Design II
WE 692	Capstone: Welding Design III

Table 3: MSE and WE in the BS WE Core

3.2. WE graduate programs.

The WE MS program will be offered on campus and by distance education formats essentially as they are offered at the present time. Students will retain their current faculty advisors, but will be subject to supervision of the MSE Graduate Studies Committee, and administrative issues regarding graduate advising will transfer to the MSE Graduate Program. GSC membership will be expanded to include WE faculty representation to ensure that the interests of WE graduate students are met.

Students who hold a BS in engineering or the physical sciences and meet other admission criteria can pursue a MS WE (Thesis or non-Thesis). The MS WE is available either through traditional, "on campus" course delivery, or through a Distance Education Program (DEP). In the WE DEP program, course delivery is either synchronous or web-hosted asynchronous self-study according to a format and schedule determined by the instructor. Currently, 22 WE courses and 6 MSE courses are currently offered via this program. Of the 37 MS WE students currently enrolled, 29 are enrolled in the WE DEP. Details of the WE DEP can be found in Appendix III of this proposal.

Dr. Avraham Benatar serves as the WE DEP coordinator. The logistical aspects of the WE DEP are coordinated through the College of Engineering Distance Education Office. Program revenue pays 40% of the salary and benefits for Jeff Glazier, who provides technical support for the delivery of the DEP courses, and 25% to support a GTA to assist Glazier. Upon approval of this proposal, it is expected that the WE DEP program will be operating in general accordance with the principles described in the WE DEP MOU (now expired) show in Appendix IV.

The disposition of the WE PhD program is currently under review by the College of Engineering and affected constituencies. The on-going status of the program will be determined in a process separate from this realignment proposal. At the present time, the two primary options under consideration are: 1) WE PhD program elimination, and 2) altering the curriculum and renaming the program to reflect an orientation towards "materials joining". If the program is eliminated or altered, enrolled students will be allowed to complete degree requirements for the WE PhD, transfer to the MSE PhD program, or transfer to the altered PhD program.

4. Students affected by this proposal.

Many of the issues regarding the impact of this proposal on students enrolled in the WE programs, both now and in the future, have been addressed in §3 of this proposal. For the sake of completeness, we repeat and summarize these impacts here. Feedback from student groups potentially impacted by this consolidation action is provided in Appendix V.

4.1 MSE Undergraduate Students.

The only immediate impact of this proposal on MSE undergraduate students will be larger class sizes in some elective courses associated with enrollment increases should WE students opt to take more MSE courses. This effect is minor as undergraduate elective class sizes range from 15 to 30 students.

4.2 MSE Graduate Students.

The only direct impact of this proposal on MSE graduate students will be larger class sizes in some graduate courses associated with graduate program enrollment increases. This effect will be minor, as there are very few on-campus WE graduate students.

4.3 WE Undergraduate Students.

The WE undergraduate curriculum will not change as a result of this consolidation. As a result, no transition curriculum is needed. Academic advising will be carried out by the WE faculty and the MSE academic advisor. It is expected that the WE program will continue with its current offering until conversion to semesters is complete. The WE undergraduate degree program is very flexible in its technical elective component and students may take all 17 hours of technical elective credit outside the WE program. In this situation the current instructor pool of 5 faculty can support the current WE program core with a modest amount of assistance from instructional adjunct appointments.

4.4 WE On-campus Graduate Students.

After approval of the consolidation, how new students working for WE faculty will be enrolled will depend on the status of the WE PhD degree program alteration action. Until that action is complete, new PhD students working for WE faculty will be enrolled in the WE PhD program. When the action is complete, students will enroll as is appropriate based on the action.

No immediate changes are proposed for the on-campus WE MS degree programs. Admitted and enrolled students tracking towards a terminal MS degree will be subject to degree requirements of the program.

4.5 WE Distance Education MS Students.

No immediate changes are proposed for the WE distance education MS degree program. Over the next several years, it is expected that MSE will offer more graduate elective courses in distance format thereby increasing the distance degree curricular offerings.

5. Budgetary consequences

Unofficial budget estimates made to support this proposal suggest that the WE program had 2008 revenues of \$1.45M, a PBA allocation of \$966K; not including approximately \$500K in PBA used to fund the lease agreement for space housing the WE program in the Edison Joining and Technology Center. After accounting for assessments for physical plant, research administration, student services, and central administration, this suggests that that the WE program has an 11.8% over-budget position. By comparison, MSE had 2008 revenues of \$7.90M and a PBA allocation of \$5.25M. After accounting for the assessments, MSE has an over-budget position of approximately 24%. How the transfer of WE PBA from ISE to MSE would impact unit PBA and budget positions relative to the university budget model (Target Budget) is illustrated in Table 4. This analysis shows that transferring the WE programs to MSE, would reduce the MSE over-budget position by a modest amount. Because neither MSE nor WE draw significant undergraduate enrollment, further improvement of the budget position after realignment will require that the initial undergraduate enrollment increases associated with the transfer be sustained. Additionally, growth would need to occur in the research program and graduate enrollments in order to ensure that the PBA of the consolidated unit is preserved against potential future budget cuts.

	MSE	ISE	WE
Present			
PBA Allocation	5.25	4.25 (est.)	0.966
Target Budget	4.23	4.15 (est.)	0.863
Position	24%	2.5% (est.)	12%
Realigned			
PBA Allocation	6.22	3.28	0
Target Budget	5.10	3.28	0
Position	22%	0%	--

Table 4: Unit budget estimates at the present time and after realignment. "Position" is calculated as $100 \times (\text{PBA Allocation} - \text{Target Budget}) / (\text{Target Budget})$. Analysis does not account for \$500K PBA to fund EJTC lease. Present WE figures are included in the present ISE figures.

6. Services lost to the rest of the university as a consequence of the proposal

No services will be lost to the university as a consequence of this consolidation.

7. Impact upon diversity

Both the WE program and MSE department are people-oriented organizations and the issue of diversity affects all aspects of our research and educational operations. Like many academic departments in the physical sciences, underrepresented populations in WE and MSE are small. The diversity of the WE and

MSE student, staff and faculty pools will not be adversely impacted by this adoption of this proposal. However, continued effort to strive for balance within our student, staff and faculty populations will be needed independent of the specific course of WE-MSE consolidation.

8. Impact on constituencies external to the university, including alumni

There are very few opportunities for Welding Engineering education in the US. Consequently, the alumni of the OSU WE program are integrated across all sectors employing welding engineers. A poll of the OSU WE Alumni was conducted via email, the primary mode of communicating with this group. The response was overwhelmingly positive. More than 50 responses were received by email, the vast majority of them were fully supportive of the proposal. The few who were not fully supported could be classified as being “mostly supportive”, their primary reservation being a preference that the WE program be administered through a Department of Welding Engineering. There was not a single response suggesting that the current arrangement was preferred to the proposed arrangement.

9. Impact on Governance

As discussed in §2 of this proposal, all WE faculty impacted by this proposal will be governed by the MSE POA and APT. The MSE faculty will continue to be governed by the MSE POA and APT. The ISE faculty will continue to be governed by the ISE POA and APT, amended to account for the departure of WE faculty from standing committees.

10. Impact on Academic Freedom and Responsibility of Affected Faculty.

The WE program and MSE department have been housed in the College of Engineering since their inception. They are comprised of faculty and technical staff trained to teach and do research in the physical sciences. There is a set of shared experiences and expectations that is sufficiently broad that the intellectual and professional interests of each group will be understood by the other. This shared experience base is expected to enable consolidation, yet allow for the unique identities of WE and MSE to be preserved.

11. Review and Acceptance by WE, MSE, and ISE Faculty.

This proposal has been reviewed and discussed by the faculty of all affected programs over a period of several months. Motions to accept the proposal were made and voted upon in accordance with the MSE and ISE Patterns of Administration. All votes were conducted by secret ballot and are recorded as follows:

Faculty Group	Votes in Support	Votes in Opposition	Abstentions	Date of Vote
Welding Engineering	5	0	0	5/5/09
Materials Science and Engineering	18	0	1	5/5/09
Industrial and Systems Engineering	20	0	0	5/5/09

**Appendix I: MOU between College of Engineering and Materials Science and
Engineering**



Department of Materials Science and Engineering

177 Watts Hall
2041 College Rd.
Columbus, OH 43210
phone: 614-292-6085
fax: 614-292-9857
buchheit.8@osu.edu
mse.osu.edu

May 26, 2009

Memorandum of Understanding Concerning the Consolidation of Welding Engineering Programs within the Department of Materials Science and Engineering

This agreement is between the Department of Materials Science and Engineering (MSE) and the College of Engineering (COE) who desire to consolidate Welding Engineering (WE) Programs in MSE. To support the consolidation, MSE and the COE agree to the conditions listed below. This MOU shall be in force from the date of the agreement until the end of FY 15, the date of retirement of J. Lippold, or the date of retirement of S. Rokhlin, whichever is latest.

Personnel

1. MSE receives all PBA associated with faculty and staff moving from ISE to MSE as described in the WE-MSE Reconfiguration Proposal.
2. MSE retains vacancy credit from the following retirements: Albright (66%), Tsai (66%), Lippold (at least 66%), and Rokhlin (at least 66%).
3. MSE receives authorization for 3 faculty hires to support programs in metallurgy and joining as vacancy credit specified in Item 2 becomes available.
4. Creation of new hire start-up fund from the following: MSE cash (\$200K), COE cash (\$200K), cash recovered from Albright and Tsai vacancies beginning in FY10, and any cash recovered from unfilled Lippold and Rokhlin vacancies.
5. Regular vacancy credit policies will be applied to all other MSE faculty departures.

Programs

6. WE undergraduate degree program reaccreditation will be sought in 2011.
7. WE graduate program will be merged with MSE in accordance with an approved Reconfiguration Proposal and WE PhD Program Proposal.
8. WE Distance learning program will be preserved and integrated with MSE programs.

Other

9. All discretionary funds including endowments, gifts, scholarships and faculty discretionary accounts associated with the WE programs, as well as all funds associated with the WE Master's degree Distance Learning Program will remain undiminished except with consent of the COE and MSE as of the date of this agreement and will transfer to MSE with WE personnel when the realignment is approved by the Board of Trustees.

10. Consolidation of WE faculty and laboratories on central campus will be made at the earliest possible time. It is anticipated that funds currently used to support WE programs through the lease of EWI space will be applied to such space consolidation. To the extent that additional cash support for relocation and renovation is necessary to avoid WE operations (including teaching and research capabilities) being negatively impacted by a move to central campus, the CoE will assist in providing these resources.

11. COE and MSE will allocate development support for Lincoln Electric chair and mount a broader campaign with the WE alumni base.

Approvals:

College of Engineering

Materials Science and Engineering

Gregory N. Washington
Interim Dean, College of Engineering

Rudolph G. Buchheit
Chair, Materials Science and
Engineering

Appendix II: ISE Faculty and Staff Roster and Impact of Realignment on ISE



Department of Integrated Systems Engineering

210 Baker Systems Building
1971 Neil Avenue
Columbus, OH 43210-1217

Phone (614) 292-6239
Fax (614) 292-7852

To: G.N. Washington, Interim Dean, College of Engineering
From: J.L. Higle, Chair, ISE *Julie Higle*
Subject: Impact of Transfer WE programs to Dept. of MSE on ISE Faculty and Staff
Date: 5/26/09

From the perspective of ISE, the proposal to transfer the programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering will primarily impact the faculty and staff supporting the WE programs, as detailed within the proposal. The WE faculty and staff do not play a role in the ISE programs, so there is no impact on the educational mission impact.

The current roster of ISE faculty follows:

Rank	Name	FTE	Years of Service
Assistant Prof.	Kuçukyavüz, Simge	100%	< 1
Assistant Prof.	Sioshansi, Ramteen	100%	< 1
Associate Prof.	Allen, Theodore T.	100%	13
Associate Prof.	Brevick, Jerald R.	100%	19
Associate Prof.	Irani, Shahrukh A.	100%	13
Associate Prof.	Lavender, Steven A.	50% (Orthopaedics)	7
Associate Prof.	Lilly, Blaine W.	67% (Mech. Eng.)	18
Associate Prof.	Lundquist, Robert G.	100%	28
Associate Prof.	Mount-Campbell, Clark A.	100%	35
Associate Prof.	Sommerich, Carolyn M.	100%	7
Associate Prof.	Xia, Honghui	100%	< 1
Associate Prof.	Yi, Allen	100%	7
Professor	Altan, Taylan	50% (Mech. Eng.)	24
Professor	Castro, Jose M.	100%	11
Professor	Higle, Julia L.	100%	4
Professor	Marras, William S.	100%	27
Professor	Posner, Marc E.	100%	23
Professor	Sen, Suvrajeet	100%	3
Professor	Shivpuri, Rajiv	100%	20
Professor	Smith, Philip J.	100%	29
Professor	Woods, David D.	100%	21

No changes to the ISE faculty are anticipated as a result of the proposed restructuring of the department.

There will be an impact on the workloads of the advising and administrative staff of ISE. The current roster of Advising and Administrative Staff of ISE follows:

Name	Position	Years of Service
Freitas, Tamara E.	Office Admin Associate	2
Flickinger, Judith K.	Office Associate	2
Hussen, Pamela V.	Academic Counselor	18
McCain, Candi C. (50%)	Administrative Associate	11
Wine, Darline J.	Administrative Associate	22

Historically, the WE undergraduate program has been approximately 1/3 the size of the ISE undergraduate program and the two programs are essentially disjoint. The WE and MSE programs share some common core courses, and are similarly sized. Pam Hussen, the ISE Academic Counselor currently advises both ISE and WE students. This requires time commitment often extends beyond the normal workweek. Moving the WE program to MSE will reduce what is currently an unreasonable workload for Pam Hussen.

Judith Flickinger assists with the coordination of the ISE Graduate Program. Additionally, she maintains basic enrollment data and assists with applications for the WE Graduate Program. Because the WE graduate program is small relative to the ISE Graduate Program, removing these duties will not have a substantial impact on her position.

The remaining 2.5 staff members provide all fiscal and HR support for the department, and will continue to do so after WE moves to MSE.

As you know, when we account for all PBA-funded staff, D14570-ISE has the lowest staff-to-faculty ratio. The table below is based on data included in the college's recent study on COE Unit Budgets:

Dept.	Staff on PBA (AU 08 headcount)	Faculty (AU 08 headcount)	Staff-to-Faculty Ratio
D14-07-AER	10	4	0.40
D1410-KSA	28	15	0.54
D1141-AVN	2	2	1.00
D1417-BME	11	6	0.55
D1425-CBE	17	12	0.71
D1427-CEE	23	13	0.57
D1435-DSE	34	20	0.59
D1445-ECE	45	22	0.49
D1457-ISE	27	10	0.37
D1468-MSE	26	13	0.50
D1470-MEC	42	23	0.55

Upon acceptance of this proposal, the Staff-to-Faculty ratio in ISE will be approximately 0.43, which still resides at the low end of the spectrum.

Appendix III: Materials Science and Engineering Pattern of Administration

PATTERN OF ADMINISTRATION

Department of Materials Science and Engineering (MSE)

Vision Statement

Our vision is creation of an environment that brings together a diversity of people and ideas through the process of discovery and learning for the advancement of materials science and engineering. We seek to create impact that is tangible and significant with excellence that is obvious.

Mission Statement

Our mission is to create and transfer of knowledge through research and teaching excellence in materials science and engineering, and be a core asset to the Ohio economy for national and global competitiveness.

Governance Principle

The Department of Materials Science and Engineering adheres to the principle of faculty governance via majority vote regarding all departmental policies.

Administration, Assignment of Duties, Evaluation and Grievances

Chair - The chair is the chief administrator in MSE. The Chair's duties and authority conform to Faculty Rule 3335-3-35.

The chair shall provide a schedule of all regular faculty meetings, at least two per quarter, to all faculty members eligible to attend such meetings before the start of each quarter. Additional meetings may be held when deemed necessary by the chair or by a request to the chair by three or more faculty members.

The chair will consult with faculty as a whole on all policy matters covered by the Pattern of Administration. This consultation, whenever practical, will be undertaken at a meeting of the faculty as a whole.

All departmental policies are governed by majority faculty rule, as defined under "Voting Faculty". In extraordinary circumstances, the chair may make an exception to the faculty rule. Whenever majority faculty rule is not followed, the chair shall explain the reasons for the departure, and how the decision of the chair differs from the majority faculty decision. Where possible, this statement of reasons shall be provided before the departure occurs. This explanation shall outline the decision of the majority of the faculty, the decision of the chair and the reasons the decisions differ. The explanation shall be communicated to the faculty in writing, where possible, or at a faculty meeting, with an opportunity provided for faculty to comment.

Faculty shall be consulted in the initiation and in the review of selection of new faculty members for appointment. Subsequent offers of appointment to the faculty will be made only following a majority vote by a quorum of the faculty as described in the MSE AP&T document.

Allocation of Departmental resources including space is ultimately the prerogative of the Chair.

Associate Chair – An associate chair will be designated annually to serve during the chair's absence in situations requiring administrative decision or signature when the chair cannot be reached within a reasonable period of time. The associate chair may also be assigned administrative duties to assist the chair.

Approved by MSE Faculty February 4, 2008
Approved by OAA February 19, 2008

Faculty Secretary - The elected faculty secretary will assure that minutes are maintained, and are approved by majority vote of the faculty, of all faculty meetings and records for actions covered by the Pattern of Administration.

Principal Committees and Individual Appointments – The faculty will elect these from candidates selected by a nominating committee in consultation with the chair. The nominating committee will be appointed with one faculty member from each rank, when possible. The list of nominees for the coming academic year will be presented to the faculty in the spring. A faculty meeting will be held in which further nominations will be solicited followed by voting.

Voting Faculty – All regular faculty members (i.e. those with 50% or greater salaried appointments at the university) who have salaried appointments in the Department of Materials Science and Engineering may vote and participate in departmental faculty meetings. Other faculty members may be invited to attend faculty meetings in a non-voting capacity. A quorum is defined by attendance by 50% of eligible faculty except for personnel issues, for which a quorum is defined by attendance by 2/3 of the eligible faculty. A majority of the eligible faculty voting in such meetings carries the vote. Excluding promotion and tenure actions, in cases where written motions are available for review and discussion before a faculty meeting at which the vote is held, absentee votes submitted to the chair in advance of the meeting will be counted in determining the majority position.

Teaching Assignments – The chair prepares a preliminary list of teaching assignments based on faculty workload considerations (see Document A for the MSE Faculty Workload Statement) and programmatic needs. The preliminary list for the coming academic year is distributed to the faculty as soon as possible in the Winter or Spring quarters, and discussion is solicited. Subsequent drafts may be prepared for discussion, leading to final teaching assignments by the chair.

Faculty Evaluation – the chair in accordance with guidelines promulgated by the Office of Academic Affairs and the Faculty Rules will review each faculty member's performance annually. This review is a key component of decisions and recommendations regarding compensation, appointments, promotions, and tenure matters. Specific procedures followed by the chair and P&T Committee with regard to tenure and promotion decisions, are updated periodically by the chair in consultation with the faculty. The current procedures are put forth in the department AP&T document.

Leaves, Consulting and Conflicts of Interest – MSE has no special policies governing leaves of absence, consulting and conflicts of interest. College and University policies will be followed in such matters.

Grievance Procedures – Grievances may be taken to the Chair, the Office of the Dean or the Office of Human Resources (OHR). Grievance hearing procedures for complaints against faculty are described in Faculty Rule 3335-5-04 and are subject to relevant College and University policies including the Code of Student Conduct. Tenure appeals and salary grievance procedures are described in the MSE APT document.

Supporting Documents

Document A – Department of Materials Science and Engineering Faculty Workload Statement, revised February 4, 2008.

Document B – Appointment, Promotion and Tenure document (Department of Materials Science and Engineering), revised December 7, 2007.

Approved by MSE Faculty February 4, 2008
Approved by OAA February 19, 2008

Faculty Workload Statement

Department of Materials Science and Engineering (MSE)

1. Expected level of instruction, scholarly and service activity:

Instructional: 3 courses per year (9 credit hours)

Scholarship: 4 supported and advised Graduate Research Associates. Sponsored research (approximately \$275K per year plus 20% released time). Commensurate publication in peer-reviewed journals.

Service: 2 standing or ad hoc committee assignments or 1 committee chair assignment (Dept. level). Participatory support of departmental governance, activities and initiatives. Proactive involvement in College, University or professional society committees. Active participation in undergraduate student advising and mentoring.

2. Departures from nominal expectations:

Faculty without significant research and service may be expected to teach up to 6 courses per year.

Faculty with more than 33% released time and 8 supported and advised graduate research associates will normally teach 1 - 2 courses per year subject to instructional needs.

Teaching loads will be adjusted considering overall loading, quality and duties requiring major time commitments (e.g., committee assignments, major proposals, conference organization lead, etc.).

3. Minimum and maximum number of course taught per year: 1 and 6.

4. This Statement does not constitute a contractual obligation. Fluctuation in instructional demands and individual circumstances of faculty members may warrant deviation from these statements.

Appendix IV: Materials Science and Engineering Appointments, Promotion and Tenure Document

APPOINTMENTS, PROMOTION, AND TENURE

Criteria and Procedures

for the

Department of Materials Science and Engineering

Approved by MSE Faculty – December 7, 2007

Table of Contents

1.0 PREAMBLE	1
2.0 DEPARTMENT VISION AND MISSION	1
3.0 APPOINTMENTS	2
3.1 CRITERIA: TENURE-TRACK FACULTY.....	2
3.1.1 <i>Appointment as a Tenure-Track Assistant Professor</i>	2
3.1.2 <i>Appointment as associate professor with tenure</i>	2
3.1.3 <i>Appointment as full professor with tenure</i>	2
3.1.4 <i>Appointment as associate professor OR FULL PROFESSOR without tenure</i>	2
3.1.5 <i>Appointment as instructor</i>	3
3.2 CRITERIA: REGULAR RESEARCH FACULTY	3
3.2.1 <i>Research Assistant Professor</i>	3
3.2.2 <i>Research Associate Professor and Research Professor</i>	3
3.3 CRITERIA: AUXILIARY FACULTY	4
3.3.1 <i>Visiting professor, visiting associate professor, visiting assistant professor, and visiting instructor</i>	4
3.3.2 <i>Lecturer and senior lecturer</i>	4
3.3.3 <i>Professor, associate professor, assistant professor, and instructor holding appointments of less than 50% time</i>	4
3.3.4 <i>Adjunct professor, adjunct associate PROFESSOR, adjunct assistant professor, and adjunct instructor</i> 4	4
3.4 CRITERIA: COURTESY APPOINTMENTS FOR REGULAR FACULTY	4
3.4.1 <i>criteria: Emeritus FACULTY</i>	5
3.5 PROCEDURES: TENURE-TRACK FACULTY	5
3.6 PROCEDURES: REGULAR RESEARCH FACULTY	6
3.7 PROCEDURES: AUXILIARY FACULTY.....	6
3.8 PROCEDURES: COURTESY APPOINTMENTS.....	7
4.0 ANNUAL REVIEWS	7
4.1 PROCEDURES: PROBATIONARY FACULTY	7
4.1.1 <i>Review procedures</i>	7
4.1.2 <i>Fourth year reviews</i>	8
4.1.3 <i>Exclusion of time from the probationary period</i>	8
4.2 PROCEDURES: TENURED FACULTY.....	9
4.3 PROCEDURES: REGULAR RESEARCH FACULTY	9
4.4 DOCUMENTATION	9
5.0 MERIT SALARY INCREASES AND OTHER REWARDS	10
5.1 CRITERIA	10
5.2 PROCEDURES.....	10
5.3 DOCUMENTATION.....	10
6.0 REVIEWS FOR PROMOTION AND TENURE AND FOR PROMOTION	10
6.1 GENERAL CRITERIA FOR PROMOTION AND PROMOTION WITH TENURE.....	11
6.1.1 <i>Teaching</i>	11
6.1.2 <i>Scholarship</i>	12
6.1.3 <i>Service</i>	13
6.1.4 <i>Integration</i>	14

6.2	CRITERIA: PROMOTION TO RANK OF ASSOCIATE PROFESSOR WITH TENURE.....	14
6.2.1	Teaching	15
6.2.2	Scholarship	15
6.2.3	Service.....	15
6.3	CRITERIA: PROMOTION TO THE RANK OF PROFESSOR	15
6.3.1	Teaching	16
6.3.2	Scholarship	16
6.3.3	Service.....	16
6.4	CRITERIA: PROMOTION OF REGULAR RESEARCH FACULTY	17
6.4.1	Promotion to Research Associate Professor	17
6.4.2	Promotion to Research Professor.....	17
6.5	PROCEDURES.....	17
6.5.1	The MANDATORY review process FOR PROBATIONARY FACULTY	17
6.5.2	THE REVIEW PROCESS FOR NON-MANDATORY FACULTY	18
6.5.3	Selection of evaluators.....	19
6.5.4	Conflict of interest	20
6.5.5	Summary of Promotion and tenure committee responsibilities	20
6.6	DOCUMENTATION.....	21
6.6.1	Teaching	21
6.6.2	Scholarship	22
6.6.3	Service.....	23
7.0	PROMOTION AND TENURE APPEAL PROCEDURES.....	23
8.0	SEVENTH YEAR REVIEWS.....	24
APPENDIX A.	REVIEW PROCESS TIMETABLE*	25
APPENDIX B.	DEFINITIONS	26
APPENDIX C.	PEER EVALUATIONS.....	26

1.0 PREAMBLE

In this an Appointments, Promotion, and Tenure (APT) document, The Department of Materials Science and Engineering (MSE) shall describe, in qualitative terms, the department's criteria for appointments, promotion, and tenure within the context of the department's mission. This document is a supplement to Chapter 6 of the Rules of the University Faculty (Additional Rules Concerning Tenure-Track Faculty Appointments, Reappointments, Promotion and Tenure) <http://trustees.osu.edu/rules6/ru6index.html>; the Office of Academic Affairs annually updated procedural guidelines for promotion and tenure reviews http://oaa.osu.edu/handbook/xi_ptannual.html; and other policies and procedures of the College and University to which the department and its faculty are subject.

Should those rules and policies change, MSE will follow the new rules and policies until such time as it can update this document to reflect the changes. In addition, this document must be reviewed, and either reaffirmed or revised, at least every four years on the appointment or reappointment of the department chair.

This document must be approved by the dean of the college and the Office of Academic Affairs before it may be implemented. It sets forth the department's mission and, in the context of that mission and the missions of the College and University, its criteria and procedures for faculty appointments and for faculty promotion, tenure and rewards, including salary increases. In approving this document, the dean and the Office of Academic Affairs accept the mission and criteria of the department and delegate to it the responsibility to apply high standards in evaluating current faculty and faculty candidates in relation to departmental mission and criteria.

The faculty and the administration are bound by the principles articulated in Faculty Rule 3335-6-01 <http://trustees.osu.edu/rules6/ru6-01.html> of the Administrative Code. In particular all faculty members accept the responsibility to participate fully and knowledgeably in review processes; to exercise the standards established in Faculty Rule 3335-6-02 <http://trustees.osu.edu/rules6/ru6-02.html> and other standards specific to MSE and the College of Engineering; and to make negative recommendations when these are warranted in order to maintain and improve the quality of the faculty.

2.0 DEPARTMENT VISION AND MISSION

MSE Vision:

MSE will be recognized internationally for its research and teaching excellence in materials science and engineering, and will be a core asset for transforming and growing the Ohio economy.

MSE Mission Statement:

- *To provide high quality education, to students at the undergraduate and graduate levels, in the scientific principles, problem solving methods, and engineering techniques associated with the development, manufacture and use of materials.
- *To create knowledge and advance the state-of-the-art of science and technology of materials. To provide expertise on materials related issues to industry in Ohio and elsewhere.
- *To assume a leadership role in articulating the importance and contribution of materials in the global economy.
- * To be a center of expertise consulted by state and national governments, industry, and the public.

3.0 APPOINTMENTS

3.1 CRITERIA: TENURE-TRACK FACULTY

The mission and vision of the department can be achieved only if appointments to tenure-track faculty positions have a high likelihood of improving the quality of the department and strengthening the department's ability to achieve its mission. For appointments at all faculty ranks, the candidate must meet or exceed the department's criteria for tenure and promotion at the rank in question. All appointments are decided by a faculty vote. In all instances, the guiding principle for appointment at any rank is that the prospective faculty member will significantly enhance the department's ability to achieve its mission.

3.1.1 APPOINTMENT AS A TENURE-TRACK ASSISTANT PROFESSOR

To be appointed as a tenure-track assistant professor, a candidate must meet or exceed the following minimum criteria.

- The candidate must possess an earned doctorate in a field of study relevant to materials science and engineering.
- The candidate's recommendation letters must establish the candidate as among the top of his or her peer group nationally.
- The candidate must demonstrate potential for excellence in teaching as determined in part by a record of teaching, the colloquium during the interview process, through individual and small group discussions with faculty, staff and students, and excellence in verbal and written communication.
- The candidate must demonstrate potential for excellence in scholarship as determined in part by an ability to formulate and complete a major body of research, and by the ability to clearly communicate the results and their significance in the form of peer-reviewed publications.
- The candidate's stated goals and career development plan must be consistent with the department mission.
- The candidate's performance during the interview and the candidate's references should indicate the potential that the candidate will help the department fulfill its mission.
- The candidate must exhibit a strong potential to advance through the faculty ranks.

3.1.2 APPOINTMENT AS ASSOCIATE PROFESSOR WITH TENURE

To be appointed as an associate professor with tenure, a candidate must meet or exceed the following minimum criteria.

- The criteria established by the department for appointment as a tenure-track assistant professor.
- All of the department's criteria for promotion to associate professor with tenure.

3.1.3 APPOINTMENT AS FULL PROFESSOR WITH TENURE

An appointment as a full professor will involve tenure. To be appointed as a full professor with tenure, a candidate must meet or exceed the following minimum criteria.

- All criteria set forth for appointment as an associate professor with tenure.
- The department's criteria for promotion to full professor.

3.1.4 APPOINTMENT AS ASSOCIATE PROFESSOR OR FULL PROFESSOR WITHOUT TENURE

A probationary appointment as Associate Professor or Full Professor is appropriate only under unusual circumstances, such as when the candidate has limited prior teaching experience or has taught only in a foreign country. A probationary period of up to four years is possible, on approval of the Office of Academic Affairs, with review for tenure occurring in the final year of the probationary appointment. If tenure is not granted, an additional, i.e. terminal year of employment is offered.

Foreign nationals who lack permanent residency status may be appointed to a senior rank and approved for tenure, if

appropriate, but the University cannot legally grant tenure in the absence of permanent residency.

3.1.5 APPOINTMENT AS INSTRUCTOR

Appointments at the rank of instructor will normally be made only when the offered appointment is that of assistant professor but the appointee has not completed the Ph.D. degree at the onset of the appointment. The department will not otherwise appoint at the rank of instructor.

3.2 CRITERIA: REGULAR RESEARCH FACULTY

Appointment of regular research track faculty entails one- to five-year contracts. The initial contract is probationary, with reappointment considered annually. Tenure is not granted to regular research track faculty. There is also no presumption that subsequent contracts will be offered, regardless of performance. If the department wishes to consider contract renewal, a formal review of the faculty member is required in the penultimate year of the current contract period. See Faculty Rule 3335-7 for more information <http://trustees.osu.edu/rules7/ru7/index.html>.

Faculty members appointed to the regular research track are expected to focus their efforts on research. A research faculty member may, but is not required to, participate in limited educational activities in the area of his or her expertise. Research faculty members are expected to contribute to the department's research mission and are expected to demonstrate excellence in scholarship as reflected in high quality peer-reviewed publications and applications and successful competition for external funding of their research program. Unless otherwise authorized by a majority vote of the tenure-track faculty, regular research track faculty must comprise no more than twenty per cent of the number of tenure-track faculty in the unit. In all cases, however, the number of regular research track faculty positions must constitute a minority with respect to the number of tenure-track faculty in the unit.

The criteria for appointment, reappointment and nonreappointment, and for promotion for regular research track faculty shall be established by this promotion and tenure document and approved by a majority vote of the regular tenure-track faculty of the department and by the College and the Office of Academic Affairs. The criteria for appointment, for reappointment and nonreappointment, and for promotion reflect the preponderance of responsibilities being in research activities. Excellence in research is a requirement, while a component associated with classroom teaching is not required.

Regarding governance rights, regular research track faculty are invited to participate in department faculty meetings, and to vote on all issues other than those involving tenure-track faculty positions. Research track faculty will be eligible to serve on university committees and task forces, but not on university governance committees. Research track faculty will also be eligible to advise and supervise graduate and postdoctoral students and to be a principal investigator on external research grant applications. Approval to advise and supervise graduate students must be obtained from the graduate school as set forth in rule 3335-5-29 and detailed in the graduate school handbook.

3.2.1 RESEARCH ASSISTANT PROFESSOR

Appointment at the rank of Research Assistant Professor requires that the individual have a doctorate and a record of high quality publications that strongly indicate the ability to sustain an independent, externally funded research program.

3.2.2 RESEARCH ASSOCIATE PROFESSOR AND RESEARCH PROFESSOR

Appointment at the rank of Research Associate Professor or Research Professor requires that the individual have a doctorate and meet, at a minimum, the department's criteria for promotion to these ranks.

3.3 CRITERIA: AUXILIARY FACULTY

Compensated auxiliary faculty include lecturers, senior lecturers, faculty with regular titles having appointments less than 50%, and visiting faculty. No-salary auxiliary faculty include adjunct faculty, faculty with regular titles having a zero percent appointment, and visiting faculty. Auxiliary faculty participate in the programs of the department but are not regular faculty members. Auxiliary faculty do not have voting rights in department faculty meetings.

3.3.1 VISITING PROFESSOR, VISITING ASSOCIATE PROFESSOR, VISITING ASSISTANT PROFESSOR, AND VISITING INSTRUCTOR

The visiting faculty rank may only be conferred on regular faculty members with an active appointment at another academic institution. The visiting faculty rank is only conferred if the individual will be collaborating with a regular faculty member of the department and if a request for such an appointment is made in writing by the regular faculty member. The appointment must be approved by the faculty and the department chair. The appointment will be at a rank commensurate with the person's qualifications for a regular faculty appointment. Renewal of a visiting faculty appointment must be done on an annual basis, as outlined in section 3.7.

3.3.2 LECTURER AND SENIOR LECTURER

Appointments as lecturer and senior lecturer are made only when a specific instructional need is identified. The person appointed must have the qualifications to teach the course, or courses, as demonstrated by a Ph.D. degree or an equivalent experience for a lecturer or by a Ph.D. degree for a senior lecturer. The appointment must be approved by the P&T Committee and approved by the faculty and chair. Renewal of lecturer and senior lecturer appointments must be done on an annual basis, as outlined in section 3.7.

3.3.3 PROFESSOR, ASSOCIATE PROFESSOR, ASSISTANT PROFESSOR, AND INSTRUCTOR HOLDING APPOINTMENTS OF LESS THAN 50% TIME

Criteria for appointment and reappointments in these ranks are identical to the criteria for appointment of regular faculty at the same rank. Renewal of these faculty appointments must be done on an annual basis, as outlined in section 3.7.

3.3.4 ADJUNCT PROFESSOR, ADJUNCT ASSOCIATE PROFESSOR, ADJUNCT ASSISTANT PROFESSOR, AND ADJUNCT INSTRUCTOR

Adjunct faculty are uncompensated and are appointed based on expected contributions to the department's undergraduate and/or graduate programs. Adjunct faculty will not be given teaching responsibility and will not serve as the primary advisor of graduate students. Therefore, rank will be determined by professional background and experience without consideration of teaching and mentoring abilities or experience. Adjunct faculty will be appointed primarily to fulfill needs in meeting the department's research mission. Adjunct faculty are eligible for promotion (but not tenure) and the relevant criteria are those for promotion of regular tenure-track faculty. In the event that the department wishes to compensate an adjunct faculty member for work other than the voluntary service for which the adjunct title is provided, a concurrent appointment of limited duration for lecturer, workshop leader, etc. may be added for that purpose. Consideration for renewal must be done on an annual basis, as outlined in section 3.7.

3.4 CRITERIA: COURTESY APPOINTMENTS FOR REGULAR FACULTY

A courtesy appointment is a no-salary joint appointment for regular Ohio State faculty from other tenure initiating units. A courtesy appointment is based on demonstrated collaboration in teaching or scholarship between the potential appointee and one or more regular faculty members of the department. The primary purpose is to facilitate research collaboration between faculty members from two different departments, such as allowing faculty from one department to advise students from another department. The person receiving a courtesy appointment must meet the department's criteria for appointment as a regular faculty at the same rank. A courtesy appointment will be continued only as long as the individual is making significant contributions to the department. Renewal will follow the same procedures as the original appointment, and must be done on an annual basis.

3.4.1 CRITERIA: EMERITUS FACULTY

A candidate must be a regular faculty member who has served the MSE department and who, upon retirement, is recommended by the department chair for emeritus status.

3.5 PROCEDURES: TENURE-TRACK FACULTY

Search procedures must be consistent with the University policies set forth in the most recent update of *A Guide to Effective Searches* <http://hr.osu.edu/hrpubs/guidesearches.pdf> . When a faculty position becomes available, a search committee, consisting of regular faculty members, shall be appointed by the department chair. The search committee will have at least three regular MSE faculty members. The faculty search committee will develop a position description for review and approval by the department chair. The faculty search committee will post the position with the university, conduct an international search including advertising the position in appropriate periodicals, and will review applications. Vigorous efforts are expected in order to ensure a diverse pool of highly-qualified candidates.

After review of the applications, the faculty search committee will recommend to the entire faculty a short list of at least two candidates to be interviewed. Each candidate will be asked to submit a dossier including a CV and statements addressing teaching, scholarship, and service, and a list of reference names. The candidate must identify his/her professional relationship with each of the reference names listed in the application. The committee will seek external letters of evaluation from at least two of those named on the list supplied by the candidate, and an equal number of persons (selected by the committee without input from the candidate) who are not on the candidate's list. The candidate's dossier will be made available to all regular department faculty at least one week prior to the visit of a candidate. The committee will try to have the external letters in the dossier at the time of their availability to the faculty.

The faculty search committee will schedule interviews and will provide the department chair and faculty with the opportunity to meet with the candidates individually or in small groups. The faculty search committee will schedule a colloquium open to all, during which the candidate will present a seminar on a topic of his/her choice. The faculty search committee will provide a mechanism to systematically obtain evaluative comments from all participants in the interview process.

A department faculty meeting will be held at which the faculty search committee will present the case for each candidate, and will make its recommendation to hire the most suitable candidate. The full faculty will then vote¹ on the recommendation. Two-thirds of the eligible faculty must participate for the voting process to be considered valid. The vote will be by secret ballot. A positive recommendation will require a simple majority of those voting .

A positive vote endorses the search committee recommendation and sends the case to the First Promotion and Tenure (P&T) Committee of the Department. The First P&T committee will consist of full professors, who will determine the rank to be offered. In the instance where a candidate is being considered for appointment at the rank of Full Professor, the First P&T committee will vote by secret ballot on the rank recommendation. The chair of the P&T committee will count the votes and document the outcome in a written report (number in favor, number opposed, number abstaining, and number not voting). A positive recommendation will require a simple majority of those voting (abstentions are not considered votes), provided at least 2/3 of those eligible to vote do so . The recommendation will be forwarded to the department chair, who will make an offer at the recommended rank.

If the First P&T committee determines that the candidate should be considered for appointment at the rank of Assistant Professor, the department chair will be informed of the decision. In this case, no further consideration of rank or tenure by committee is necessary, and the department chair will make an offer at the rank of Assistant Professor.

¹ Participation in the voting process is a faculty obligation. Absentee ballots are not allowed, but full participation and voting from a remote location via 2-way communication is permitted.

If the First P&T committee determines that the candidate should be considered for appointment at the rank of Associate Professor, or if the vote on a recommendation for appointment at Full Professor fails, the case will be considered by the Second P&T Committee of the Department. The Second P&T committee will consist of full and associate professors. The Second P&T committee will consider separately the candidate's suitability for hire at a rank of Associate Professor and suitability for tenure. The committee will conduct a vote or votes by secret ballot as necessary. The chair of the P&T committee will count the votes and document the outcome in a written report (number in favor, number opposed, number abstaining, and number not voting). A positive recommendation will require a simple majority of those voting (abstentions are not votes), provided at least 2/3 of those eligible to vote do so. The recommendation will be forwarded to the department chair, who will make an offer at the recommended rank.

If the Second P&T Committee determines that the candidate is not suitable for hiring as Associate Professor either with tenure or without tenure, the department chair will be informed of the decision. In this case, no further consideration of rank or tenure by committee is necessary, and the department chair will make an offer at the rank of Assistant Professor.

If an offer involves prior service credit, the eligible faculty members vote on the appropriateness of such credit. Two-thirds of the eligible faculty must participate for the voting process to be considered valid. The vote will be by secret ballot. A positive recommendation will require a simple majority of those voting. The Second P&T Committee will vote on appropriateness of prior service credit for candidates to be appointed as Associate Professor. The full faculty will vote on appropriateness for candidates to be appointed as Assistant Professor. The chair of the P&T committee will count the votes and document the outcome in a written report (number in favor, number opposed, number abstaining, and number not voting).

3.6 PROCEDURES: REGULAR RESEARCH FACULTY

Searches for regular research track faculty generally proceed identically as for tenure-track faculty. Highly qualified regular research track candidates may occasionally be considered for appointment without a national search, only when there is a reasonable likelihood that a national search would not result in finding more highly qualified and/or more diverse candidates. The faculty and the Dean of Engineering must first approve the decision to interview a candidate without a national search. From that point, the on-campus interview and decision making processes are identical to those following a national search. The department chair determines the details of the offer, including the length of the initial contract.

3.7 PROCEDURES: AUXILIARY FACULTY

All non-tenure-track faculty appointments including: Visiting professor, visiting associate professor, visiting assistant professor, visiting instructor; lecturer, senior lecturer; professor, associate professor, assistant professor, and instructor holding appointments of less than 50% time; Adjunct professor, adjunct associate professor, adjunct assistant professor, and adjunct instructor.

Any regular department faculty member may initiate a request for the appointment of an individual as an auxiliary faculty member. The nominating faculty member will provide a written statement of the proposed involvement of the candidate in the programs of the department. The candidates for this appointment will provide, to the department chair, a dossier containing an application letter from the candidate, his/her curriculum vitae and at least two reference names, indicating the type and level of appointment, and the reasons why the candidate should be appointed in the department. If approved for consideration by the department chair, the dossier (for appointment at the associate or full professor ranks) will be evaluated by the department P&T Executive Committee, which will submit its evaluation to the department chair. After a discussion of the strengths and weaknesses of the candidate, the decision will be made by a vote of the regular faculty. Because this is a personnel decision, a quorum is defined as 2/3 of all regular faculty. The department chair will make the recommendation for the appointment to the College of Engineering provided the candidate receives a majority of the votes of the eligible faculty members.

Reappointments will be considered every year. For reappointment, the auxiliary faculty member must submit an activity report, at the request of the chair, summarizing the duties performed and services provided during the previous appointment and requesting reappointment. This report should be submitted each year at the same time as all faculty Activity Reports (see Table in Appendix A). If the contributions are not substantial, the chair may recommend termination of the appointment. The recommendation to continue or terminate will be voted upon by the regular faculty of the department on an annual basis.

3.8 PROCEDURES: COURTESY APPOINTMENTS

Any regular faculty member may nominate a regular faculty member of another department within the university for a courtesy appointment in MSE at the same rank, based on expected contributions to the mission of the department. The nominating faculty member must provide a written statement explaining the reasons for the appointment and the candidate must provide an up-to-date curriculum vitae. Because this is a personnel decision, a quorum is defined as 2/3 of all regular faculty. The department chair will make the appointment provided the candidate receives a majority of the votes of the faculty members.

Faculty members with courtesy appointments will file a brief activity report each year, at the request of the chair, summarizing their contributions to the department for the previous year. This report should be submitted each year at the same time as all faculty Activity Reports (see Table in Appendix A). If the contributions are not substantial, the chair may recommend termination of the appointment. The recommendation to continue or terminate will be subject to a majority vote of the regular faculty of the department with a 2/3 quorum requirement. Promotion in rank in the candidate's home department is recognized in the reappointment process.

4.0 ANNUAL REVIEWS

The department follows the requirements for annual reviews as set forth in the Office of Academic Affairs Policies and Procedures Handbook:

Regular tenure-track http://oaa.osu.edu/handbook/x_annreview.html

Regular research track http://oaa.osu.edu/handbook/x_annreviewrrt.html

Each faculty member, tenured or probationary, will receive a formal written annual review. The purpose of the review is to provide constructive feedback in writing to the faculty member about his/her performance, and an assessment of general progress toward his/her goals and contributions to the department mission. The annual review also provides the basis for merit salary increases. The annual review also provides the basis for a preliminary evaluation for P & T considerations. The timetable for this process is given in Appendix A.

4.1 PROCEDURES: PROBATIONARY FACULTY

4.1.1 REVIEW PROCEDURES

The annual review for probationary faculty members involves four steps:

- The submission of an annual activity report by the faculty member by March 1.
- A review of the annual activity report by the department P&T Executive Committee resulting in an evaluation report from the committee to the department chair.
- A meeting between the faculty member, a member of the P&T Executive Committee, and the department chair during spring quarter of each year reviewing the P&T Executive Committee's evaluations.
- A review of the annual activity report by the department chair resulting in a written evaluation.

The procedures for the review are described below.

The faculty member is responsible for documenting his/her accomplishments and contributions for the previous calendar year. The content of the annual activity report is described in section 5.3 below and is due in the Chair's office, along with a current curriculum vitae by March 1 each year.

The P&T Executive Committee will review the faculty member's annual activity report and provide a written report to the department chair with an evaluation of faculty member's strengths and weaknesses. If the committee and the department chair are not in substantial agreement, the department chair will meet with the P&T Executive Committee to achieve a consensus evaluation and recommendation.

A meeting between the faculty member, a member of the P&T Executive Committee, and the department chair will take place during the Spring quarter of each year reviewing the P&T Executive Committee's evaluations

The department chair will integrate the promotion and tenure committee report with his/her own evaluation and prepare a single written evaluation which will be provided to the faculty member on or about May 30th. The evaluation will explicitly identify strengths and weaknesses, contain a clear statement of the areas of performance needing improvement, and suggest ways and means to bring about improved performance. A copy of the report is placed in the faculty member's promotion and tenure file.

Within ten days after receiving the report, the faculty member may elect to provide a written response. Any response also becomes a permanent part of the file.

If the consensus evaluation of the faculty member's performance is below adequate and the likelihood of progressing toward tenure is deemed to be low, the case will be brought to a meeting of the eligible faculty for discussion and a vote on whether the faculty member should be reappointed according to the procedure outlined in the Fourth Year Reviews (section 4.1.2). Absentee ballots and E-mail votes are not permitted, however a conference call resulting in a vote is permitted. A simple majority of 2/3 of the eligible faculty is required to carry a motion to deny reappointment.

4.1.2 FOURTH YEAR REVIEWS

Mandatory fourth year reviews are conducted as described above following a schedule which enables College and university deadlines to be met in any given year. The results of the evaluation of the P&T Executive Committee and the department chair are presented to the faculty member for his/her comments. Both reports, and the comments of the faculty member, will be forwarded to the College of Engineering for the consideration of the dean. External letters of evaluation are not required for fourth year reviews.

4.1.3 EXCLUSION OF TIME FROM THE PROBATIONARY PERIOD

Faculty Rule 3335-6-03 (D) sets forth the conditions under which a probationary tenure-track faculty member may exclude time from the probationary period. The full text of the rule is available at <http://trustees.osu.edu/rules6/ru6-03.html>.

No more than three years may be excluded from the probationary period for any reason, except in extraordinary circumstances. The faculty or department chair may advise a faculty member to apply to exclude time from the probationary period, but may not require the individual to do so.

According to recently approved rules, one year is automatically excluded from the probationary period for the birth of a child or adoption of a child under age six.

A faculty member may also apply for an exclusion of time due to adverse events that were beyond the faculty member's control and impeded productivity. These requests are reviewed by the Promotion and Tenure Committee, which advises the department chair on the matter. Approval is based on the nature of the adverse event, the extent to which it was beyond the faculty member's control, and the faculty member's productivity before and after the period of the event. The department chair, dean, and Office of Academic Affairs must approve the request before it may be implemented. A negative recommendation by any of these parties terminates the review process.

The faculty member remains on duty regardless of time excluded from the probationary period. Annual reviews are conducted in every probationary year regardless of time excluded. Approved exclusions do not limit the department's right to recommend nonrenewal of appointment during an annual review.

4.2 **PROCEDURES: TENURED FACULTY**

The annual review for tenured faculty members involves four basic steps:

- submission of an annual activity report by the faculty member by March 1st,
- Associate Professor Only: review of the annual activity report by the department P&T Executive Committee resulting in an evaluation report from the committee to the department chair by March 31st,
- a meeting between the faculty member, a member of the P&T Executive Committee, and the department chair during spring quarter of each year reviewing the P&T Executive Committee's evaluations,
- review of the annual activity report and the P&T Executive Committee report by the department chair followed by a written evaluation prepared by the department chair.

The procedures for the review are described below.

The faculty member is responsible for documenting his/her accomplishments and contributions for the previous calendar year. The content of the annual activity report is described in section 4.4 below. This report must be submitted to the department chair by March 1st each year.

The department chair will prepare a written evaluation which will be provided to the faculty member in a meeting on or about May 30th. The evaluation will explicitly identify strengths and weaknesses, contain a clear statement of the areas of performance needing improvement, and suggest ways and means to bring about improved performance. A copy of the report is placed in the faculty member's personnel file.

Within ten days after receiving the report, the faculty member may elect to provide a written response. Any response also becomes a permanent part of the file.

4.3 **PROCEDURES: REGULAR RESEARCH FACULTY**

The annual review process for regular research track probationary and nonprobationary faculty is identical to that for tenure-track probationary and tenured faculty, except that nonprobationary regular research faculty may participate in the review of regular research faculty of lower rank.

In the penultimate contract year of a regular research faculty member's appointment, the department chair must determine whether the position held by the faculty member will continue. If it will not continue, the faculty member is informed that the final contract year will be a terminal year of employment. The standards of notice set forth in Faculty Rule 3335-6-08 <http://trustees.osu.edu/rules6/ru6-07-08.html> must be observed.

If the position will continue, a formal performance review for reappointment is necessary in the penultimate contract year to determine whether the faculty member will be offered a new contract. This review follows the review procedures for promotion of regular research track faculty. There is no presumption of renewal of contract.

4.4 **DOCUMENTATION**

By March 1, each faculty member must submit the following documents:

- Annual activity report: summary of activities in the previous year highlighting accomplishments in the areas of teaching, scholarship, and service.
- A current CV.

5.0 MERIT SALARY INCREASES AND OTHER REWARDS

Merit salary increases are based on the faculty member's overall performance and contributions to the department, college and university missions. Performance during the previous calendar year, sustained performance over the previous five years, and the appropriateness of the faculty member's salary relative to his/her peers are all considered in reaching judgments about salary increases.

5.1 CRITERIA

Merit salary increases will be based upon accomplishments in the areas of teaching, scholarship, and service.

- Salary increases are considered in recognition of excellence in teaching. The diversity of educational activities among the faculty are considered. Other factors considered are teaching awards; outstanding classroom performance; leadership in program and course development; development of innovative instructional materials including textbooks, laboratory-manuals, and class notes; supervision of graduate research; and teaching activities outside the classroom including both formal and informal advising of undergraduate and graduate students, and advising students involved in internships and similar professional experiences.
- Salary increases are considered in recognition of excellence in scholarship. Among the factors considered are contract and grant success, awards, patents, books, refereed articles, conference presentations, and presentations to academia and industry.
- Salary increases are considered in recognition of excellence in service and leadership to the department, the college, the university, the profession, and society at large. Meritorious service includes participation on national and international review and/or editorial boards, advisory committees, governing boards, organization of conferences and workshops, and support activities for industry, government, and other groups. Membership and participation on department, college and university committees are expected of all faculty members and do not stand alone as meritorious. Noteworthy leadership in such activities is, however, meritorious. Service to students through advising student organizations is also recognized.

5.2 PROCEDURES

Annual raises are at the discretion of the department chair and based on his/her judgment as to the quality of the contributions made by the faculty member.

5.3 DOCUMENTATION

The chair uses, in part, the documentation provided by the candidates during the annual review process through the annual activity report and individual discussions for decisions regarding salary increases. At the discretion of the department chair, additional information may also be required to be included in the annual activity report.

The chair may also use information obtained from other sources such as surveys of students, peer teaching evaluations, surveys of alumni, benchmarking data from the citation index, other departments and universities, and similar comparative information to identify exemplary performance or the need for salary adjustment.

6.0 REVIEWS FOR PROMOTION AND TENURE AND FOR PROMOTION

The promotion and tenure process in MSE has an important role in achieving the department mission. Meeting the demands of the mission requires exceptional performance by the department's faculty. The criteria for promotion and tenure establish the required level of excellence. MSE will adhere to Faculty Rule 3335-6-02 <http://trustees.osu.edu/rules6/ru6-02.html> which provides general context and guidelines for promotion and tenure and promotion reviews.

In evaluating the faculty member's performance in teaching, scholarship, and service, reasonable flexibility shall be exercised. The department needs prominent faculty members in the areas of teaching, scholarship, and service and while an individual faculty member may be stronger in one or two areas than the other(s), it is important that some activity in all areas exist.

In general terms, individuals will be recommended for promotion in rank, or promotion in rank with tenure, based on demonstrated and documented contributions which enable the department to accomplish its mission. No individual will be promoted or promoted and granted tenure without the full expectation that the individual will continue to be a productive faculty member. No individual will be promoted or promoted and granted tenure without the full expectation that the promotion will serve to continue to improve the quality of the department's faculty and programs.

Excellence in teaching, research, and service are moreover defined to include professional ethical conduct in each area of responsibility, consistent with the American Association of University Professors' Statement on Professional Ethics.

<http://www.aaup.org/statements/Redbook/Rbethics.htm>

6.1 GENERAL CRITERIA FOR PROMOTION AND PROMOTION WITH TENURE

6.1.1 TEACHING

The core of the department's mission is education through teaching and advising. All department faculty must be involved in teaching and in the mentoring of students. There must be compelling evidence in the documentation of teaching and mentoring activities that the candidate is an effective teacher. The specific criteria considered are described below.

Quality of Teaching

Quality is judged based upon the candidate's:

- command of his/her subject matter,
- ability to incorporate new developments, and growth in the field over time,
- the ability to appropriately select and organize educational material,
- the ability to integrate and relate the subject matter to other fields of knowledge,
- the ability to present the knowledge effectively in order to maximize learning, and
- curriculum development in light of the needs of industry, society and the discipline.

Evidence of quality is derived from curriculum development activities, student comments and evaluations, student exit interviews, surveys of alumni and employers, and peer reviews by fellow faculty members (see Appendix C).

Effectiveness of Teaching

The effectiveness of teaching is judged based upon the candidate's:

- capacity to awaken in learners an awareness of the subject,
- creativity, spirit, and enthusiasm which vitalize learning and teaching,
- ability to arouse curiosity in learners and to stimulate learners to creative work, and
- ability to select appropriate teaching techniques reflecting the needs of the learners.

Evidence of effectiveness is derived from student comments and evaluations, and peer reviews (see Appendix C).

Relevance and Impact

The relevance and impact of the candidate's teaching is judged based upon

- the appropriateness of the material selected,
- the relationship of the material to fundamental understanding of the discipline,
- the relationship of the material to state-of-the-art professional practice, and
- contributions to curriculum development in light of expressed industrial and societal needs.

Evidence of relevance and impact is obtained from student comments and evaluations, alumni surveys, industrial collaborators and peer reviews (see Appendix C).

Excellence in Mentoring

Excellence in mentoring is judged based upon the candidate's

- skill and extent of participation in the general guidance and advising of both undergraduate and graduate students, and
- ability to guide undergraduate and graduate students to the successful completion of degree requirements.

Evidence of excellence in mentoring is obtained from student comments and evaluations, student exit interviews, surveys of alumni and employers, and successful graduate advising.

6.1.2 SCHOLARSHIP

There must be convincing evidence that the candidate is effectively engaged in scholarship. Collaborative, interdisciplinary, and individual efforts are all valued. Student participation in research is required. The scholarship of discovery, application and integration are all valued. Scholarship must be of high quality to be of value and it must have impact on the field. Impact may be on the intellectual direction of the academic field or on professional practice. The specific criteria used to evaluate scholarship are described in the remainder of this section.

Quality of Scholarship

The quality of a candidate's scholarship is judged based upon:

- publication in respected archival journals,
- participation in respected colloquia, conferences, symposia and other scholarly forums,
- the presence of a coherent vision and an effective, well articulated and focused plan for scholarly activity,
- demonstrated sustained progress toward scholarly goals, and
- the ability to attract and involve students in scholarly work.

Evidence of the quality of the scholarship is obtained primarily by analysis of the candidate's record and review by academic and industrial evaluators.

Effectiveness of Knowledge Dissemination

The department mission requires that the results of our scholarship must be disseminated. The effectiveness of dissemination is judged based upon:

- substantial contributions to the body of knowledge,
- a sustained level of productivity, and

- utilization of all of the appropriate dissemination mechanisms to reach the intended audience in the profession and society. Journal papers, conference presentations, books and trade publications are all important vehicles depending on the nature of the scholarship and should be balanced accordingly.

Evidence addressing the effectiveness of knowledge dissemination is primarily obtained from the candidate's record and the comments of evaluators.

Relevance and Impact

Scholarship that is not relevant to the field or has no impact on the field is of little value in accomplishing the mission of the department. Relevance and impact may be relative to fundamental understanding of the field or one of its subdisciplines, or it may be directly related to professional practice. Relevance and impact are judged by the following:

- the presence of original and creative work which is used by others in the profession and society,
- recognized leadership in the field,
- patents, software, and new product or process developments,
- active involvement on industry and government panels and policy forums,
- active participation in cross-disciplinary scholarly activity, and
- sustained record of funding support for research and scholarly activities.

Evidence of relevance and impact is obtained by evaluators' comments and surveys of former students and employers of former students.

Excellence in Mentoring

- A record of advising students to timely completion of their degrees,
- significant involvement of undergraduates and graduate students in scholarly activity, and
- placement of graduate students who are highly regarded and successful in industry, government, or academia.

Evidence of excellence in mentoring is obtained from analysis of the candidate's record, exit interviews, and surveys of former students and former students' employers.

6.1.3 SERVICE

Faculty members are expected to engage in service activities that enhance the academic programs of the department, college and university; and help us meet our mission as a land grant institution. For purposes of promotion and tenure, service includes, but is not limited to, service to the university, the profession, and public and private entities.

Quality of Service

Quality service does not come without participation and involvement. Leadership and organizing abilities as demonstrated by successful completion of assigned or elected tasks and significant involvement in committee work at any level (department, college, university, nationally, internationally) are required.

Effectiveness of Service

The effectiveness of a candidate's service is demonstrated by

- the development of highly regarded short-courses and symposia,

- a sustained record of consulting services to industry and society (consultation without compensation is highly valued), editorship of books, journals and other professional publications,
- a sustained record as a reviewer for professional publications, and
- participation on proposal and program review panels for government agencies.

Evidence of effective service is obtained from analysis of the candidate's record, evaluators' comments, and surveys of those served.

Relevance and Impact

The relevance and impact of service activities are judged by

- the significant professional society activities,
- the significance of administrative service to the department, college or university, and
- the nature of service on advisory boards and panels for industry or government.

Evidence of the relevance and impact of service is obtained from analysis of the candidate's record and evaluators' comments.

Excellence in Mentoring

Mentoring with respect to service responsibilities is judged by the quality of

- career guidance given to students, and
- help given to new faculty with respect to career development and growth as well as
- advice to members of industry and society in areas of professional responsibility and relevance.

Evidence of excellence in mentoring is obtained from exit interviews with students, comments from faculty and staff, and evaluators' comments.

6.1.4 INTEGRATION

By necessity, the evaluation of faculty performance considers the dimensions of teaching, scholarship, and service. The ideal, however, is an individual who balances and integrates these activities into a synergistic whole. The integration of teaching, research and service to maximize the impact of the individuals activities on the department, college, university and society is highly valued.

6.2 CRITERIA: PROMOTION TO RANK OF ASSOCIATE PROFESSOR WITH TENURE

Faculty Rule 3335-6-02 (C) provides the general criteria for promotion to Associate Professor with Tenure. The evidence to be considered for promotion in rank to associate professor with tenure is described in section 6.6 of this document. The detailed criteria are described in section 6.1.

Superior intellectual attainment, in accordance with the criteria set forth in this document, is an essential qualification for promotion to the rank of associate professor with tenure. Insistence upon this standard for continuing members of the faculty is necessary for maintenance and enhancement of the quality of the department and university which is dedicated to the discovery, application, and dissemination of knowledge. The recommendation to award tenure and promote to the rank of associate professor must be based on convincing evidence that the faculty member has established, and gives the expectation of continuing, a program of high quality and effective teaching and scholarship relevant to the mission of the department.

The following table illustrates the minimum standards for promotion and tenure. The performance judgment levels used in each category are exceptional, excellent, good, adequate and poor. A candidate must exhibit adequate or better service. While teaching performance may not have fully evolved at this stage of the faculty members career, it is essential that the scholarship record be exceptional or at least excellent to attain promotion. The basis for these judgments is described below. In making the evaluative judgments, the process will take into account how the faculty member stands in relation to other persons in the same field outside the university.

Table 1 Equivalent Minimum Performance Expectations for Promotion to Associate Professor with Tenure

TEACHING	SCHOLARSHIP	SERVICE
Good	Excellent	Adequate

6.2.1 TEACHING

The evaluation of teaching performance is based on the general criteria described in section 6.1.1. To be judged excellent in teaching, the candidate's quality and effectiveness must be judged excellent, mentoring must be excellent and relevance must be at least good. To be judged good, the candidate must rate at least good on quality, effectiveness, mentoring and at least adequate on relevance and impact.

A candidate who consistently rates poor on any of the teaching criteria will not be recommended for promotion or tenure.

6.2.2 SCHOLARSHIP

The evaluation of scholarship is based on the general criteria described in section 6.1.2. To be judged excellent in scholarship, the candidate's scholarly quality and effectiveness must be judged to be at least excellent relative to others at the early stages of an academic career. The scholarly work must also be relevant to the mission of the department and there must be evidence that the candidate's work is significant and beginning to have a substantial impact on the field.

To be judged good, the candidate's scholarly quality and effectiveness must be judged to be at least good relative to others in the early stages of an academic career. The scholarly work must also be relevant to the mission of the department and there must be evidence the candidate's work is significant and beginning to have a substantial impact on the field.

It is particularly important that the record provide evidence that the candidate's scholarly performance will continue to improve and the candidate has the potential for maintaining excellence in his/her chosen field. The candidate's career development plan is particularly important in this regard as is the record of work in progress.

6.2.3 SERVICE

The department does not expect a junior faculty member to be involved in service activities at high levels. Moderate, but effective, involvement in departmental committee activity and some involvement in professional society activity at the national level is the minimum expected to be judged adequate.

6.3 CRITERIA: PROMOTION TO THE RANK OF PROFESSOR

Faculty Rule 3335-6-02 (C) provides the general criteria for promotion to the rank of Professor. The evidence to be considered for promotion in rank to Professor is described in section 6.6 of this document. The detailed criteria are described in section 6.1.

Promotion to the rank of professor must be based on convincing evidence that the faculty member has a sustained record of high quality contributions to education, scholarship and service relevant to the mission of the department, college, and university and has demonstrated leadership with impact nationally and internationally in the profession and society.

The department does not expect all faculty members to follow the same path in achieving the level of excellence necessary for promotion to full professor. Diversity of effort is required to meet our mission and is supported by the department. As a consequence, tradeoffs are made with respect to performance related to teaching, scholarship and service. Table 2 contains a summary of the equivalencies that the department considers in reaching judgments about

promotion to full professor. Each row in the table describes a different set of minimum performance levels that will result in a recommendation in favor of promotion. The performance judgment levels used in each column of Table 2 are exceptional, excellent, good, adequate and poor. Since convincing evidence of national and international reputation is required for this promotion, a minimum evaluation of Excellent is required in scholarship.

Any candidate whose performance is rated as either poor or adequate on any category will not be recommended for promotion.

Table 2 Equivalent Minimum Performance Expectations for Promotion to Full Professor

TEACHING	SCHOLARSHIP	SERVICE
Exceptional	Excellent	Good
Excellent	Exceptional	Good
Excellent	Excellent	Excellent
Good	Exceptional	Excellent

6.3.1 TEACHING

Exceptional teaching corresponds to the situation in which all dimensions of the candidate’s teaching: quality, effectiveness, impact and relevance, and mentoring are clearly and consistently judged to be outstanding. Individuals meeting this standard are widely recognized as outstanding teachers. Only the very best teachers fall in this category.

Excellent teaching means that all dimensions of the candidate’s teaching: quality, effectiveness, impact and relevance, and mentoring are consistently judged to be excellent.

Good teaching corresponds to the situation in which teaching quality and effectiveness are judged to be high and the other dimensions are at least good.

6.3.2 SCHOLARSHIP

Exceptional scholarship corresponds to the situation in which all dimensions of the candidate’s scholarship: quality, effectiveness, impact and relevance, and mentoring are clearly and consistently judged to be outstanding. Only the very best scholars fall in this category.

Excellent scholarship means that all dimensions are consistently judged to be of high quality. Scholars in this category are clearly leaders in their field and are making contributions that are internationally recognized.

Good scholarship corresponds to the situation in which the quality and effectiveness of scholarly activity is judged to be high and the other dimensions are at least good.

6.3.3 SERVICE

Excellent service means that all dimensions of service are consistently judged to be of high quality. Candidates rated excellent will be active nationally in the appropriate professional societies and will be involved in leadership roles either in professional societies or in policy- making panels and councils. Candidates in this category also provide high quality leadership within the department, college and university. Candidates will also be very active in service to industry through professional consultation or professional education and short courses.

Good service corresponds to significant and active involvement in the appropriate professional societies and active participation in department, college and university governance.

6.4 CRITERIA: PROMOTION OF REGULAR RESEARCH FACULTY

6.4.1 PROMOTION TO RESEARCH ASSOCIATE PROFESSOR

For promotion to Research Associate Professor, a faculty member must have a substantial record of high quality focused research consistent with an appointment devoted primarily to research. The candidate's scholarship must be judged "excellent," with "adequate" service contributions. Publications must appear in high quality peer reviewed venues and be judged by external evaluators as having substantial positive impact on the field. A record of continuous peer reviewed funding is required along with evidence of a growing national reputation. The candidate must have exhibited strong potential for continued career progression and advancement through the faculty ranks.

6.4.2 PROMOTION TO RESEARCH PROFESSOR

For promotion to Research Professor, a faculty member must have a national and international reputation built on an extensive body of high quality publications and with demonstrated impact on the field. The candidate's scholarship must be judged "excellent," with "adequate" service contributions. A record of continuous peer reviewed funding is required, along with demonstrated research productivity as a result of such funding.

6.5 PROCEDURES

The department's procedures for promotion and tenure and promotion reviews are fully consistent with those set forth in Faculty Rule 3335-6-04 <http://trustees.osu.edu/rules6/ru6-04.html> and the Office Academic Affairs annually updated procedural guidelines for promotion and tenure reviews http://oaa.osu.edu/handbook/xi_ptannual.html. The following sections, state the responsibilities of each party to the review process.

6.5.1 THE MANDATORY REVIEW PROCESS FOR PROBATIONARY FACULTY

Mandatory review for probationary faculty are for:

- an assistant professor in his/her final year of probation.
- an associate professor without tenure in his/her final year of probation.
- an associate professor with tenure, requesting for promotion, who has been previously denied recommendation for promotion by the department P&T committee (comprising all eligible faculty of the department) consecutively in the last three years.

The probationary faculty members will be informed by the department chair of their mandatory status by **January 15**. All probationary faculty members must submit their dossiers to the department chair by **May 15th**. The candidate is responsible for assembling the materials and following the most recent guidelines from the Office of Academic Affairs and the department.

The department P&T Executive Committee will review the dossier and will meet with the candidate if necessary to seek clarification and amplification. The final dossier and a list of names (addresses, phone and fax numbers, institution and relationship to the candidate, if any) of at least 6 potential external evaluators along with a completed External Evaluator Form for each must be provided by the candidate to the P&T Executive Committee by the end of Spring quarter.

The P&T Executive Committee will independently prepare a list of at least 6 external evaluators for each probationary faculty member for the mandatory review. The list will be shown to the candidate to provide him/her an opportunity to reject up to two names from the committee's list. The committee will provide a new name for each name rejected by the candidate.

The department chair will seek letters of evaluation from at least 9 external evaluators (less than half of them will be from the candidate's list) by the end of Spring quarter. Letters of evaluation will also be sought by the department chair by the end of Spring quarter from units within OSU in which the faculty member holds salaried joint appointments such as centers or other departments.

Once the dossier is complete (i.e., it contains at least six external letters of evaluation), the P&T Executive Committee will, in a series of meetings, evaluate the candidate's performance using the criteria described in section 6.1 of this document.

In a final meeting (to be held in the first week of Autumn Quarter), the P&T committee chair will present the dossier to the P&T committee for a final vote. All eligible faculty will vote on the case. The candidate is allowed to update his or her dossier before the final meeting and voting by the TIU. It is the obligation of the eligible faculty to participate in this process. Thus an absentee ballot is not allowed, but a conference call resulting in a vote is permitted. However, 2/3 of the committee must be present in order to conduct a vote. The vote is by secret ballot. The P&T chair will tally the votes recording the number of votes in favor of recommending promotion and tenure, the number not in favor, and the number of abstentions. A positive recommendation will require a simple majority (yes votes) of all votes cast (yes and no votes).

The P&T chair reports the results of the faculty evaluation including the numerical outcome of the faculty vote in writing to the department chair for inclusion in the dossier by **October 1**.

The department chair independently evaluates each case and makes a written recommendation to the dean. In the event that the department chair's evaluation deviates from the faculty recommendation, the department chair will so inform the eligible faculty in a meeting and will invite comments and discussion before the chair's recommendation to the dean is finalized.

The department chair will notify the candidate in writing of the availability of the two letters of recommendation (one by the department chair the other from the P&T chair) by **October 10**. The candidate may provide written comments on the departmental review for inclusion in the dossier within 10 calendar days of being notified. The committee and the department chair may provide written responses to the candidates' comments.

The department chair will deliver an appropriate number of copies of the completed dossier to the Dean of the College of Engineering by the due date (~**November 1**).

The department's process with major milestones is summarized in the table presented in Appendix A.

6.5.2 THE REVIEW PROCESS FOR NON-MANDATORY FACULTY

The P & T review of a non-mandatory faculty member is carried out in two stages; the preliminary review and the final review. The preliminary review is carried out as part of the annual review. See Section 4.

During the annual review based on the annual activity report, a decision will be made by a vote of the eligible faculty whether to recommend a faculty member for the final stage of the departmental P & T review (i.e., whether to seek external letters of evaluation). It is the obligation of the eligible faculty to participate in this process. Absentee ballots and E-mail votes are not allowed, but a conference call resulting in a vote is permitted. However, 2/3 of the committee must be present in order to conduct a vote. The vote is by secret ballot. The promotion and tenure committee chair will tally the votes recording the number of votes in favor of recommending promotion and tenure, the number not in favor and the number of abstentions. A positive recommendation will require a simple majority (yes votes) of all votes cast (yes and no votes). The outcome of the preliminary evaluation is communicated to the faculty member by the department chair by **May 30th**.

Faculty members invited for the final stage of evaluation must submit their dossier to the department chair the end of Spring quarter. The faculty member is responsible for assembling the materials and following the most recent guidelines from the Office of Academic Affairs and the department.

The department P&T Executive Committee will review the dossier and will meet with the candidate if necessary to seek clarification and amplification where necessary. The P&T Executive Committee will assist the candidate in finalizing the dossier. The finalized dossier and a list of names (addresses, phone and fax numbers, institution and

relationship to the candidate, if any) of at least 6 potential external evaluators along with a completed External Evaluator Form for each must be provided to the P&T Executive Committee by the end of Spring quarter.

The committee will independently prepare a list of at least 6 external evaluators for each non-mandatory faculty member. The list will be shown to the faculty member to provide him/her an opportunity to reject up to two names from the committee's list. The committee will provide a new name for each name rejected by the candidate.

The department chair will seek letters of evaluation from at least 9 external evaluators (less than half of them will be from the candidate's list) by the end of Spring quarter. Letters of evaluation will also be sought by the department chair by the end of Spring quarter from units within OSU in which a faculty member holds salaried joint appointments such as centers or other departments.

Once the dossier is complete (i.e., it contains at least six external letters of evaluation), the promotion and tenure committee will, in a series of meetings, evaluate the candidate's performance using the criteria described in section 6.1 of this document.

In a final meeting (to be held in the first week of Autumn quarter), the P&T chair will present the dossier to the P&T committee for a final vote. All eligible faculty vote on the case. It is the obligation of the eligible faculty to participate in this process. Absentee ballots or Email vote are not allowed, but a conference call resulting in a vote is permitted. However, 2/3 of the committee must be present in order to conduct a vote. The vote is by secret ballot. The P&T chair will tally the votes recording the number of votes in favor of recommending promotion and tenure, the number not in favor and the number of abstentions. A positive recommendation will require a simple majority (yes votes) of all votes cast (yes and no votes).

The P&T chair reports the results of the faculty evaluation including the numerical outcome of the faculty vote in writing to the department chair for inclusion in the dossier by **October 1**.

The department chair independently evaluates each case and makes a written recommendation to the dean. In the event that the department chair's evaluation deviates from the faculty recommendation, the department chair will so inform the eligible faculty in a meeting and will invite comments and discussion before the chair's recommendation to the dean is finalized.

The department chair will notify the candidate in writing of the availability of the two letters of recommendation (one by the department chair the other from the P&T chair) by **October 10**. The candidate may provide written comments on the departmental review for inclusion in the dossier within 10 calendar days of being notified. The committee and the department chair may provide written responses to the candidates comments.

The department chair will deliver an appropriate number of copies of the completed dossier to the dean of the College of Engineering by the due date (~ **November 1**).

The department's process with major milestones is summarized in the table presented in Appendix A.

6.5.3 SELECTION OF EVALUATORS

The candidate and P&T Executive Committee will each suggest at least six names for external evaluators for each candidate. A current evaluator report form with biographical information and a description of the qualifications will be prepared by the candidate for each external evaluator. The external reviewer should not have any conflict of interest with the candidate. A total of at least nine evaluators will be selected with less than half from the list provided by the candidate. It is expected that the complete list will include distinguished academics and highly qualified practitioners who are in a position to evaluate the quality, relevance and impact of the candidate's work. The department chair is responsible for contacting the evaluators and obtaining the letters of evaluation.

The evaluators will be provided with a copy of the dossier and copies of the documentation of the three to five most significant contributions produced by the candidate. The candidate is responsible for selecting and providing this documentation to the chair of P&T committee.

The evaluators are asked to comment on:

- the impact the candidate is having on the field through his/her program of scholarship,

- the significance of the overall program of scholarship,
- the originality and quality of the candidate's scholarship, and
- comparison of the candidate with others in the field at approximately the same stage of career development.

Requests for evaluation are made not later than the end of Spring quarter with responses due in mid-September. The promotion and tenure committee and the department chair must consider all responses from the evaluators when evaluating the candidate. All responses must be included in the dossier.

6.5.4 CONFLICT OF INTEREST

No evaluator with a conflict of interest in the outcome of any review shall participate in that review. A conflict of interest may exist under any of the following conditions:

- The evaluator has a familial (or comparable) or significant off-campus financial relationship with the candidate.
- The evaluator is a co-author with the candidate on a significant number of publications.
- The evaluator is a co-principal investigator with the candidate on a significant number of grants or contracts or on grants and contracts of significant dollar amount.
- The evaluator is the principal investigator on grants or contracts upon which the candidate depends for a significant portion of his/her research support.
- The evaluator is dependent on the candidate for his/her professional services.

It is the responsibility of the P&T Executive Committee to identify potential conflicts of interest and bring such cases to a meeting of the eligible faculty for discussion. The department chair will be responsible for resolving such conflict of interest issues.

6.5.5 SUMMARY OF PROMOTION AND TENURE COMMITTEE RESPONSIBILITIES

The P & T committee shall comprise all eligible faculty members in the department. This means that there will be two separate committees; one (made up of all tenured faculty members) to consider tenure and promotion for assistant professors and the other (made up of all full professors) to consider promotion of associate professors. The chair and vice-chair of the P&T committee will act as an executive committee and carry out all required functions short of decisions requiring committee votes. The vice-chair of the P&T committee will be nominated by the department nominating committee and voted on by the full faculty. After serving a two year term, the vice-chair becomes the new chair of the committee, on the election of the new vice-chair.

The P & T committee is advisory to the department chair. The department chair is a non-voting member of the P & T committee and is expected to attend the committee meetings. The department chair is responsible for making available to the committee all material (previous annual reviews, fourth year reviews, previous P & T reviews, internal and external letters of evaluation) needed for a thorough review of a faculty member.

In each of its meetings, the committee will review the cases for P&T of assistant professors first. After these reviews, all associate professors will leave. The full professors will then review the promotion and/or tenure of associate professor applicants. An otherwise eligible faculty member will not participate in the P&T decision of an applicant with whom he or she has a conflict of interest.

The P&T committee will select a full professor as the Procedures Oversight Designee at the beginning of the process. This person will monitor the P&T process with regards to equitable treatment for women and minority candidates and will make reasonable efforts to assure that the process follows the written procedures and is carried out in a professional manner.

The responsibilities of the P&T Executive Committee are:

- participation in the annual review of untenured faculty members as described in section 4.0 of this document
- participation in the annual review of tenured associate professors as described in section 4.0.

- identification of cases of potential conflict of interest and presentation of such cases to the eligible faculty for discussion and resolution prior to the start of a promotion or promotion and tenure review
- assisting candidates for promotion or promotion and tenure in preparing their dossiers
- verification of the accuracy of citations reported and other data reported in the candidate's dossier
- presenting promotion and tenure and promotion cases to the eligible faculty for discussion and vote
- preparing an individual report on each candidate including the faculty evaluation and assessment of the candidate and the numerical results of the eligible faculty's vote

6.6 DOCUMENTATION

The candidate is responsible for preparing the core of the dossier with assistance and advice from the department chair and the P&T Executive Committee.

The department chair designates a staff member to administer the student evaluation questionnaire, which has been agreed upon by the department faculty, in all courses taught by the department faculty. This, in addition to the peer evaluation of instruction by other department faculty, is mandatory documentation. Additional instruments may be used to gather performance data. These may include:

- survey of student opinion about the quality of instruction. This is not linked to individual courses but to the quality of the overall instructional experience.
- exit interviews with graduating students.
- surveys of alumni and employers.
- internal and external letters of evaluation.

Unsolicited letters will not be placed in the P & T dossier.

6.6.1 TEACHING

The following evidence is used to inform judgments on the teaching performance criteria described in section 6.1.

Quality of Teaching

- student evaluation of instruction in individual courses
- comments on course content and delivery from exit interviews with graduating students
- comments from peer reviews of teaching
- departmental surveys of teaching quality (surveys of graduating students)
- surveys of recent graduates (2 and 5 years out)
- leadership in course and curriculum development
- letters solicited by the department seeking evaluation of contributions to engineering education
- awards for teaching excellence
- noteworthy accomplishments of student advisees (awards, publications etc.)
- books and journal articles authored on engineering education or instruction
- development and implementation of new and effective teaching methods and material
- analysis and evaluation of the candidate's goals and career development plan

Effectiveness of Teaching

- student evaluation of instruction in individual courses
- comments on effectiveness from exit interviews with graduating students

- comments from peer reviews of teaching
- noteworthy accomplishments of graduate student advisees (awards, publications etc.)
- letters solicited by the department evaluating engineering education
- books and journal articles authored on engineering education

Relevance and Impact

- letters solicited by the department evaluating engineering education
- books and journals authored on engineering education or instruction
- presentation in engineering education conferences
- development of short courses
- major instructional activities (workshops, non-credit courses etc.)

Excellence in Mentoring

- doctoral, masters and honors students advised (theses completed and currently enrolled)
- chairing general exams
- membership on general or other exams, dissertation and thesis committees
- comments from exit interviews
- comments from surveys of alumni

6.6.2 SCHOLARSHIP

Quality of Scholarship

- books and monographs
- peer- or editor- reviewed journal articles
- creative works pertinent to professional focus, (e.g. inventions, patents, major pieces of software)
- quality indicators of research, scholarly or creative work such as citations
- quality indicators of publication outlets (acceptance rates, ranking of journal or publisher)
- external letters of evaluation providing details on the quality of scholarship
- prizes and awards for research, scholarly or creative work
- analysis and evaluation of the candidate's career development plan
- list of funding sources and amounts

Effectiveness of Knowledge Dissemination

- books and monographs
- peer and editor reviewed journal articles
- record of publication and presentation across the spectrum of appropriate outlets - conference proceedings, trade and professional publications, archival journal
- invited presentations/publications
- letters of evaluation in support of effectiveness of knowledge transfer
- organization and participation in major technology transfer or technology dissemination activities
- software development

Relevance and Impact

- letters of evaluation providing details on the relevance and impact of scholarship
- funded research, principal investigator or co-principal investigator and the period of funding, source and amount of funding, contract or grant
- prizes and awards for research, scholarly or creative work

Excellence in Mentoring

- doctoral, masters and honors students advised (theses completed and currently enrolled)
- advising and mentoring of students, alumni, and other learners on nationally and internationally recognized research topics
- significant co-authorship of papers and presentations with current and former students

6.6.3 SERVICE

Quality of Service

- leadership in professional organizations
- organizing and chairing sessions at conferences
- significant involvement and leadership in university, college and department governance and administration
- comments from parties served on the quality of service
- high quality courses and symposia

Effectiveness of Service

- consulting services to industry and society-consultation without compensation is highly valued
- editorship of books, journals and other scientific publications
- reviewer of scientific publications and on review panels of proposals for government agencies
- regular participation on graduate exams as a graduate school representative

Relevance and Impact

- professional society activity
- administrative services for department, college and university
- comments solicited by the department from those served
- service to other departments through joint or courtesy appointments

Excellence in Mentoring

- comments from exit interviews about career guidance of students
- comments from alumni surveys about career and professional guidance
- mentoring of new faculty for career growth
- mentoring of members of industry and society through advisory boards, panels and other mechanisms

7.0 PROMOTION AND TENURE APPEAL PROCEDURES

Faculty Rule 3335-6-05 (A) sets forth general criteria for appeals of negative promotion and tenure decisions. Appeals alleging improper evaluation are described in Faculty Rule 3335-5-05.

Disagreement with a negative decision is not grounds for appeal. In pursuing an appeal, the faculty member is required to document the failure of one or more parties to the review process to follow written policies and procedures.

8.0 SEVENTH YEAR REVIEWS

In rare instances, the department may petition the dean to conduct a seventh year review for an assistant professor who has been denied promotion and tenure. Initiation of this process requires an affirmative vote of the eligible faculty and approval of the department chair. The process must be initiated no later than May 1 of the sixth year of employment. Faculty Rule 3335-6-05 (B) sets forth the conditions of and procedures for a seventh year review for a faculty member denied tenure as a result of a sixth year (mandatory tenure) review.

APPENDIX A. REVIEW PROCESS TIMETABLE*

Beginning of Winter Quarter	Call from the Chair for preparation of Activity reports.
Start of Winter Quarter	Department Chair informs mandatory faculty members
March 1	Annual activity reports and current C.V. are due in the department office for all regular and auxiliary faculty.
March 31	P&T committee reviews annual activity reports for all Associate and Assistant Professors and generates written letters to each summarizing the prospects for promotion and/or tenure.
By the end of April	Performance review of all faculty members by the department chair with an independent letter summarizing prospects for P and/or T.
By May 15	Performance review results reported to individual faculty by the Department Chair, initiation of seventh year reviews (if any).
May 15	Draft-dossiers of all P & T candidates due to the Department Chairperson
May 15 to May 30	P & T meeting to discuss tenure and promotion cases of regular faculty
May 15 to May 30	Department Chair recommendations regarding Auxiliary Faculty and Faculty vote on renewals.
Before end of Spring qtr	Department Chair informs Auxiliary Faculty of renewal
Before end of Spring qtr	Finished dossiers of all P & T candidates due to the P & T Committee chair.
Before end of Spring qtr	Department Chair requests letters from outside evaluators for all candidates for promotion and tenure
September 15	Outside evaluation letters due to the Department Chair
First week of Autumn qtr	Final voting by the P&T committee on all candidates
October 1	Written evaluations of all candidates by the P & T Committee due to the Department Chair
October 10	Department Chair communicates to the candidates the review letters.
October 20	Written responses from the candidates on their review letters due to the Department Chair.
November 1 (or College deadline)	All recommendations for tenure and/or promotion submitted to the college by the department chair according to college and university timetable.
October 31	Dossiers due for fourth year reviews
December 31	Fourth year reviews completed.

*If these dates differ from those provided by OAA and the college, then those issued by OAA and the college will take precedence.

APPENDIX B. DEFINITIONS

1. ELIGIBLE FACULTY:

In order to be eligible as a member of the P & T Committee, a faculty member must

- be of rank equal to or higher than that of the rank for which the candidate is being considered,
- not have any conflict of interest as defined in section 6.5.4, and
- not been on leave from the department for more than one year at the time of submission of the dossier.

APPENDIX C. PEER EVALUATIONS

The department will maintain a program of peer review of teaching for all faculty members. For an associate professor with tenure, at least one faculty member, selected by or approved by the P&T Executive Committee, will attend at least one class per year. For each probationary faculty member (assistant or associate professor without tenure), at least two faculty members will visit a class and provide a peer evaluation. A standard form will be used to summarize each class visit. Evaluators will also review relevant course material, e.g., the syllabus and typical handouts, assignments and examinations. Results of each review will be shared with the faculty member, with the full P&T Committee and with the department chair.

Appendix V: Welding Engineering Distance Education Program Description

Welding Engineering at The Ohio State University

The Welding Engineering Program at the Ohio State University has a long history of supplying top-notch welding engineers to the worldwide manufacturing community. In order to expand the availability of a Welding Engineering education to a wider audience, the faculty has established a distance education program to allow students from around the world to access Welding Engineering courses at both the undergraduate and graduate level. These courses can be taken on either a credit or non-credit basis. The following provides additional information on undergraduate and graduate courses that are being offered via distance education, a schedule of course offerings, an online M.S. Welding Engineering degree program, and a Welding Engineering Certificate program.

Why Welding Engineering? Welding engineering is a rapidly expanding field that is critical to the manufacturing community. At OSU, welding engineers are trained in areas of process technology, materials science, design, inspection, and quality control. This unique combination of skills has resulted in high demand for our students at salaries that generally exceed those in other engineering disciplines. This program is designed to provide professionals from a wide range of engineering and technology backgrounds with the skills necessary to excel as welding engineers.

The welding engineering curriculum is unique and multidisciplinary, containing elements of materials science, process technology, design, and nondestructive evaluation. The MSWE distance education program has courses in each of these areas and also allows specialization in one or more, at the student's discretion.

Master of Science Degree in Welding Engineering Offered via Distance Education

A web-based Master of Science degree in Welding Engineering (MSWE) was established at OSU in 2003. Applicants to this program must have previously earned a baccalaureate or professional degree in engineering or physical sciences and meet the other admission requirements listed below. This program is designed for individuals who are working in a welding engineering or welding-related job and wish to achieve a graduate degree, or obtain graduate credit, in Welding Engineering, and for those who wish to retrain for a welding engineering related position. The domestic and global demand for welding engineers is increasing dramatically. The purpose of this program is to provide a welding engineering curriculum resulting in a MSWE degree that is accessible to applicants from around the world. All the courses offered through this program are available online.

MSWE Curriculum A total of 45 credit hours beyond the B.S. degree are required to earn a MSWE degree. Either thesis or non-thesis options are available, although it is anticipated that the non-thesis option will be better suited to the needs and schedules of most distance students. Credit hours in the non-thesis option are typically distributed as follows:

- **39 course credits.** These consist of either lecture courses available via web-based distance education or laboratory courses offered on-campus at Ohio State University. These courses must satisfy a depth and breadth requirement. For the depth requirement, students are required to take a minimum of four courses from a major area of welding engineering, which are currently limited to materials, processes, and design for MSWE via distance education. For the breadth requirement students are required to take a minimum of one course in one of the other major areas in addition to one course on non-destructive evaluation (i.e. WE631D) and one course on joining of plastics and composites (i.e. WE706D). More details are provided in the Welding Engineering Graduate Handbook.

- 6 independent study credits. This consists of a short term project that is conducted under the supervision of a faculty advisor on a topic of interest to the student. Generally, this project would be conducted at the student's work location, although other options are available. In special cases, it may be possible to increase the number of independent study credits to offset course credits by petition to the WE Graduate Studies Committee. The project is graded on a pass/fail basis (no letter grade assigned).
- In the quarter of graduation, students must register for a minimum of 3 credit hours, complete an Application to Graduate (<http://www.gradsch.ohio-state.edu/Depo/PDF/Master%27sGraduate.pdf>) by the second Friday of the Quarter, and successfully pass a comprehensive MS Exam covering the major and minor areas of their program. Arrangements for the MS Exam are made with the Chair of the WE Graduate Studies Committee (Prof. Benatar, 614-292-1390, benatar.1@osu.edu) by the first week of the graduation quarter.

Courses To date, 17 graduate courses (600-level and above) in welding engineering have been developed for web-based delivery. A course schedule is provided in the table at the end of this document. Details of the courses and other information on the Graduate Program can be obtained from the OSU Department of Industrial, Welding and Systems Engineering website at <http://www-iwse.eng.ohio-state.edu/> and the OSU College of Engineering Distance Education website at <http://elearn.eng.ohio-state.edu>. In addition, a number of other courses are available through the Materials Science and Engineering Department at OSU for those who are interested in a materials specialization.

Course Delivery Courses will be offered both synchronously – at the same time as on-campus courses, or asynchronously – independent from on-campus course offerings. The course lectures are recorded in the classroom and then archived on the website for access and review by distance and on-campus students. In the asynchronous mode, you view and listen to lectures from the course website using a “self-study” format and schedule established by the instructor. Some instructors use weekly recitation sessions, website “chat rooms”, or simply e-mail to interact with their distance students. The website for each course also features a "Discussion Board" that can be used to ask and answer questions. Course materials (notes, technical papers, pre-recorded lectures, prior exams, etc.) are provided to the student either by e-mail, through the website or on CD prior to the start of the courses.

Certificate Program in Welding Engineering Offered via Distance Education

A certificate program was established in 2005-2006. In order to qualify for the certificate program, students must have previously earned an associate, baccalaureate or professional degree in engineering or physical sciences. The Certificate is awarded when the student has completed 5 of the 600- or 700-level courses listed in the table on page 7. Note that laboratory and independent study courses are not included in the Certificate Program.

Students desiring a broad knowledge of welding engineering should select the five core courses (600D, 601D, 610D, 620D, and 631D) for their certificate. Students can also select a concentration area such as materials (610D, 611D, 612D, 715D, 706D), processes (600D, 601D, 602D, 605D, 71D, 702D, 704D, 705D), welding design (620D, 621D, 740D, 706D), or any combination of 5 courses that meets their needs. In order to qualify for the certificate, students must maintain a 3.0 (4.0 scale) Grade Point Average for the 5 courses. Students for the certificate program do not have to be admitted to the university. Students may register for these courses as Continuing Education or Graduate Non-Degree students. The tuition and fees are the same as those for the MSWE degree listed below.

Tuition and Fee Information The tuition and fee schedule that will be effective starting September 2008 is provided in the following table. Note that Ohio residents pay a reduced rate.

Course Credit Hours	1	2	3	4
OH Resident	450	875	1300	1650
Non-resident	925	1675	2500	3350

Based on 2008-2009 tuition rates, the total approximate cost for an MSWE degree would be:

Ohio resident, \$19,500, Non-resident, \$37,000.

Program Coordination

All distance education courses in the College of Engineering at the Ohio State University are coordinated through the College of Engineering Distance Education Office. Contact information for that office is as follows.

College of Engineering Attn: Marianne Weber, Coordinator
Distance Education Office
930 Kinnear Road
Columbus, Ohio 43212

Tel: 614.688.8574
Fax: 614.688.4111
E-mail: coe-de@osu.edu
Website: <http://elearn.eng.ohio-state.edu>

Course Registration

All course registration must be coordinated through Marianne Weber in the COE Distance Education Office. Students should not register on-line through the university registrar website. All registration information is available at the following website: <http://elearn.eng.ohio-state.edu/register.htm>

The following are the deadlines for course registration.

Autumn 2008	September 10, 2008
Winter 2009	December 17, 2008
Spring 2009	March 16, 2009
Summer 2009	June 8, 2009

Admission Information

Admission Criteria. Students wishing to enroll in the MSWE Distance Education degree program must meet the criteria established by The Graduate School and the Welding Engineering Program at The Ohio State University.

- An earned baccalaureate (B.S., B.A.) or professional degree from an accredited college or university by the expected date of entry into the MSWE program.
- A minimum 3.0 cumulative grade point average (on a 4.0 scale), or equivalent, in all previous undergraduate work.
- A minimum 3.3 cumulative grade point average (on a 4.0 scale) in all previous graduate work.
- Minimum English language requirement for applicants whose first language is not English. In most cases, a minimum TOEFL score of 550 (213 computer based) is required.
- The GRE general test (<http://www.gre.org/>) is required for all international applicants, applicants with non-ABET accredited engineering degrees (<http://www.abet.org/>), applicants with non engineering degrees, or students with an undergraduate cumulative grade point average that is below 3.0 (on a 4.0 scale). Minimum GRE scores of 450 on the Verbal Reasoning, 600 on the Quantitative Reasoning, and 3.5 on the Analytical Writing are required.

Applicants who do not meet the minimum GPA requirement may petition the Graduate Studies Committee. Consideration is given for work experience, training courses, and other work-related training that may prepare the applicant for graduate study. The Graduate School must approve recommendations for the GPA waiver.

Further information regarding admission requirements and application materials can be obtained at the Graduate Admissions website: <http://gradadmissions.osu.edu/>

Application Procedures and Requirements All applicants must submit the following credentials in order to be considered for admission into the program.

- A completed application form. The application has to be completed on-line using the following website: http://gradadmissions.osu.edu/apply_online.htm. All applicants are assessed a nonrefundable application fee (\$40 domestic, \$50 international).
- An official transcript from each college or university attended, listing all courses, grades and degrees earned.
- Three letters of recommendation from persons familiar with the applicant's credentials and professional performance. These can be from faculty members, supervisors, or co-workers who are familiar with your background and capabilities.
- A Curriculum Vita or Resume and a Statement of Intent, which is a brief autobiographical statement (200-300 words) that describes the applicant's educational and professional goals. This statement should address why the applicant is interested in an M.S. degree in Welding Engineering.
- GRE and TOEFL scores as required by the admission criteria listed above.

Frequently Asked Questions

What if my undergraduate engineering degree is from a non-ABET accredited college or university?
In most cases, you will be required to take the GRE general exam as noted above. Applicants with high undergraduate GPA and/or relevant work experience and strong letters of recommendations may petition to waive the GRE requirement.

What if my undergraduate degree is not in engineering?

Applicants with non-engineering undergraduate degrees can still apply for and earn a MSWE. The WE Graduate Studies Committee may require or recommend taking some undergraduate preparatory courses prior to starting the graduate program.

What if my undergraduate GPA is less than 3.0 ?

Again, the WE Graduate Studies Committee will review the applicant's other credentials, including work experience and other professional training. In all cases, the applicant will be required to submit GRE scores. When the GPA is less than 3.0, the Graduate School must approve any recommendation for admission submitted by the Graduate Studies Committee. Students may take courses as Graduate Non-degree status (see below) to demonstrate that they can perform well in graduate courses. This can be a positive factor when considering admission.

Can I transfer credits from another graduate program?

Yes. Credits earned from graduate-level courses taken at accredited universities can be transferred to OSU. Only courses in which a grade of "B", or equivalent, is achieved can be transferred. A maximum of 9 credits can be transferred. The Graduate Studies Committee will make the final determination of the number of credits eligible for transfer.

Can I take distance courses if I am not admitted into the MSWE program?

Yes. Distance students may register for a course as "Graduate Non-degree" status. Up to 10 credits earned under this classification can be later applied toward a graduate degree. Many students take courses as Graduate Non-degree status prior to starting the admission process to determine if the program meets their needs and expectations. Students in the Certificate Program register as Graduate Non-degree status.

Is there a time limit within which I must earn my degree?

No. There is no time limit, although students are encouraged to complete the program within 5 years of admission.

How long will it take me to complete the MSWE degree?

This will depend on the plan of study you develop and the pace you wish to maintain. Course sequences will be arranged such that a student can complete the program in 3-4 years. This assumes that the student takes an average of one course per quarter.

How much will it cost to earn a MSWE degree via distance education?

Based on the 2008-2009 fee structure, the estimated total cost is as follows. Note that tuition increases are anticipated, so that this amount will increase. Current costs are: Ohio resident ~ \$19,500, Out-of-state ~ \$37,000.

How do I know if OSU has received my application materials?

Applicants may track their application status via the OSU homepage. <http://www.osu.edu>
Click *Future Students*, then *Application Status*. You must know your social security number (application number for international students) and birth date to access this system.

What are the application deadlines?

OSU is on a quarter term system. Deadlines for MSWE distance education applicants wishing to be admitted to the program are as follows. Note that this is the admission deadline, not the course registration deadline. Course registration deadlines are listed on Page 3.

US applicants

Autumn, Aug 15
Winter, Dec 1
Spring, March 1
Summer, May 15

International

Autumn, July 1
Winter, Nov. 1
Spring, Feb. 1
Summer, May 1

Can I defer my admission to another quarter if I'm accepted but cannot attend?

If you cannot attend OSU in the quarter for which you were admitted you can defer your admission to the next quarter, or another quarter up to four quarters from the original quarter of admission by notifying the Chair of the WE Grad Studies Committee (Prof. Benatar, 614-292-1390, benatar.1@osu.edu). You will need to reapply if you require a deferment for more than four quarters from the original admission quarter.

What if I'm not accepted?

If you are not admitted, you can reapply for another quarter.

If I tell you my grades and scores, can you tell me the likelihood of being admitted?

An applicant's file cannot be reviewed for admission until that file is complete, including official GRE scores (if applicable). It is impossible to predict an applicant's chances for admission until the whole file is reviewed and compared to the total applicant pool.

Welding Engineering Course Schedule, 2008-2009

Course #	Course Title (credits)	Area	Instructor	2008-2009			
				AU	WI	SP	SU
300D	Intro to Welding Engineering (3)	Processes	Lippold/Tsai	X	X		
500D	Physical Principles in Welding Engineering (3)		Farson	X			
Core Courses							
600D	Principles of Welding Engineering (3)	Processes	Albright		X		
601D	Welding Processes and Applications (3)	Processes	Benatar			X	
610D	Intro to Welding Metallurgy (3)	Materials	Lippold			X	
620D	Eng. Analysis for Design and Simulation (4)	Design	Benatar	X			
631D	Intro to Nondestructive Evaluation (4)	NDE	Rokhlin			X	
Elective Courses							
602D	Resistance Welding (3)	Processes	Dickinson	X			
605D	Principles of Process Control (3)	Processes	Farson		X		
611D	Welding Metallurgy I (3)	Materials	Babu	X			
612D	Welding Metallurgy II (3)	Materials	Lippold		X		
621D	Welding Design Principles (4)	Design	Tsai		X		
694D	Comp. Modeling Microstructure Evol. Welding	Materials	Babu		X		
701D	Solid-State Welding (3)	Processes	Babu			X	
703D	Brazing and Soldering (3)	Processes	Alexandrov	X			
704D	High Energy Density Processes (3)	Processes	Albright	X			
705D	Advanced Welding Process Control (3)	Processes	Richardson			X	
706D	Joining of Plastics and Composites (3)	Polymers/Design	Benatar		X		
715D	Weld Defect Formation/Prevention (3)	Materials	Lippold				X
740D	Fitness for Service (3)	Design	Tsai			X	
Laboratory Courses							
661D	Welding Metallurgy Lab (1)	Materials	Lippold	Not Offered			
Independent Study							
793D	Independent Study		Faculty	X	X	X	X

Note: No graduate credit for WE300D and WE500D

Proposed Materials Science and Engineering Courses			2008-2009			
Course #	Course Title (credits)	Instructor(s)	AU	WI	SP	SU
MSE525D	Phase Diagrams (3)	Morral		X		
MSE543D	Structural Transformations (3)	Clark			X	
MSE600D	Materials Selection and Performance (3)	Buchheit		X		
MSE605D	Principles of Materials Science (4)	Gupta	X			
MSE662D	Corrosion (3)	Frankel & Buchheit			X	
MSE735D	Advanced Corrosion (3)	Frankel	X	X		

Appendix VI: Welding Engineering Distance Education Program Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING
The Ohio State University

This Agreement entered into this _____ day of _____, 2006 is by and between The Ohio State University Department of Industrial, Welding and Systems Engineering (hereinafter referred to as "IWSE"), 1971 Neil Avenue, Columbus, OH 43210 and the Welding Engineering Distance Education Program (herein referred to as "WE-DE"), 1248 Arthur E. Adams Drive, Columbus, OH 43221.

WHEREAS, WE-DE and IWSE desire to offer this program to its students.

NOW, THEREFORE, it is understood and agreed upon by the parties hereto as follows:

IWSE and WE-DE have through mutual agreement:

- 1.1. Determined that WE-DE courses have been offered at the Ohio State University beginning September 2003 and will continue to be offered through September 2007.
- 1.2. Agreed to maintain ongoing administrative liaison to insure and monitor this agreement. Avraham Benatar will be the WE-DE coordinator.
- 1.3. Determined that this agreement terminates on September 15, 2007, with the intent that a similar agreement, with appropriate modifications (if any) will be signed prior to that time for subsequent years.
- 1.4. Determined that if any provisions of this agreement or any application thereof shall be invalid or unenforceable, the remainder of this agreement and any application of such provision shall not be affected.
- 1.5. Agreed to the following revenue distribution model for the term of this agreement, for courses developed by, and offered through the WE Program:
 - 1.5.1. The WE-DE program will pay 40% of the salary and benefits for Jeff Glazier to provide technical and website support for the Program.
 - 1.5.2. The WE-DE program will support a 25% appointment for a Graduate Teaching Associate to assist Jeff Glazier.
 - 1.5.3. The WE-DE program will pay any other applicable expenses associated with the program as agreed to by the Chair and WE-DE Coordinator.
 - 1.5.4. Faculty teaching distance education courses will receive in their department discretionary account \$167/student-credit-hour, not to exceed \$5000 per course.
 - 1.5.5. Lecturers and visiting scientists and scholars will receive \$167/student-credit-hour, not to exceed \$5000 per course. They will have the option of either placing the funds in a discretionary account or to receive it as salary payment.
 - 1.5.6. The WE-DE coordinator will receive one month summer salary and benefits.
 - 1.5.7. Net Revenues, defined as surplus funds where gross revenues exceed the costs delineated above and those paid to the College of Engineering Distance Education Office, shall be returned to WE-DE.

IN WITNESS WHEREOF, THE PARTIES AGREE TO THE ABOVE TERMS AND HAVE EXECUTED THIS AGREEMENT AND IT IS EFFECTIVE AS OF THE DAY AND YEAR LAST WRITTEN BELOW.

December 6, 2006.

Approvals:

WELDING ENGINEERING DISTANCE
EDUCATION PROGRAM

DEPARTMENT OF INDUSTRIAL,
WELDING, AND SYSTEMS ENG.

Avraham Benatar
Faculty Coordinator, Welding Engineering
Distance Education Program

Julia Higle
Chair, Dept. of IWSE

Appendix VII: Feedback from Students



Department of Materials Science and Engineering

177 Watts Hall
2041 College Rd.
Columbus, OH 43210
phone: 614-292-6085
fax: 614-292-9857
buchheit.8@osu.edu
mse.osu.edu

May 7, 2009

Gregory N. Washington
Interim Dean College of Engineering
142 Hitchcock Hall
CAMPUS

Greg:

Attached is a transcript from a meeting between Professor Rudy Buchheit, Chair of Materials Science and Engineering and undergraduate and graduate students enrolled in Welding Engineering degree program. The meeting was held on April 23rd at the Welding Engineering facilities at the Edison Joining Technology Center.

It is intended that this letter and transcript be appended to the document "A Proposal to Transfer the Academic Programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering" dated May 7, 2009.

The transcript was created by Jeff Rodelas, a student in Welding Engineering, based on an audio recording of the discussions.

This meeting was arranged to explain the intentions and expected outcomes of a consolidation of Welding Engineering programs into the Materials Science and Engineering Department.

These discussions influenced how we have decided to approach evaluation of the Welding Engineering PhD program, which is described in the proposal document.

Respectfully submitted,

A handwritten signature in black ink that reads "Rudy Buchheit".

Rudolph G. Buchheit
Professor and Chair - Materials Science and Engineering
The Ohio State University

**Transcripts of Q&A session after Professor Rudy Buchheit presentation
on WE/MSE merger proposal.**

Presented at WE engineering Graduate Seminar on April 23, 2009

Q: [graduate student]

Welding Engineering (WE) and Materials Science and Engineering (MSE) have a lot of overlap in subject material, but differ significantly in mindset with regard to engineering/application. For example they way a welding engineer views an engineering problem is quite different than an MSE major. Are there plans to keep the two schools of thought separate? Additionally are there plans on keeping the strong engineering-focused curriculum?

A: [Buchheit]

Over the long term I'd expect the strong engineering focused portion of WE to move more towards Industrial Systems Engineering (ISE) because the application-driven aspect of WE is not the focus of MSE. How the focus of WE will proceed will depend on the skills of the new faculty hired. If I had to make a guess, I would say the industrial-specific/design aspects of WE will be deemphasized over a long period of time. Students currently enrolled in WE will see no apparent changes to the focus of courses.

****Comment [Benetar]**

The process of changing from quarters to semester will require a reorganization of the whole program. Instead of having a large number of courses in design as we have now, there will be fewer courses offered with the reorganized curriculum. With the reorganization, we are going to explore the offering of courses in mechanical engineering, MSE, and ISE. As part of the revised requirements, we may also require a course outside the MSE/WE program to fulfill degree requirements. This will allow us to satisfy the many areas of WE with a reduced number of faculty.

****Comment [Buchheit]**

The reorganization decisions will likely be made sooner rather than later. The reason being is that we have to have the after-semester-change curriculum ready to show the ABET evaluation team in 2011. If we fail to do this, a follow-up visit in 2013 will be extremely difficult and time-consuming experience.

Q: [grad student]

I have a big concern that WE will be folded into MSE and that WE will be 'just' a MSE degree. How will the possible loss of WE's 'individuality' be addressed especially considering that the WE program is currently the only ABET accredited program in the nation? How do you address the fact that some WE alumni would not like to see the WE program dissolved into another department?

A: [Buchheit]

Your concern is shared by a number of people both on and off campus. First of all, the WE program will change. This change (for undergraduate and graduate studies) will occur whether it stays in ISE or merges with MSE. The incorporation of WE into MSE can be broken down into two components:

1.) An emotional component (regarding the attachment to the program). This emotional component is not unimportant.

2.) What is the 'real' need for people to be trained in WE? Why does only one ABET accredited WE program exist in the nation currently—why aren't there more programs? If it is so important, why do enrollment numbers not reflect the economic conditions of the past 8-10 years? These questions pose an argument in which MSE will not take sides. What needs to be done is to evaluate how the WE alumni view the merger and determine the skill sets that industry requires from students graduating from WE. We need to determine the consequences of the merger.

****Comment [Benetar]**

There are other welding engineering and welding technology programs. We are unique because we have a proper mathematic and science based welding engineering program. This uniqueness is why we have ABET accreditation. There is a demand in industry for welding engineering. Our unique department makeup makes us the 'top of the field'

Comment: [Undergraduate Student]

I know in my personal experience, that saying that I'm an OSU welding engineer has carried a lot of weight. I've had job interviews with companies that wouldn't have considered me otherwise based on my GPA. I had a co-ops offered to me when I was a freshman—occurrences like this don't happen with other majors. I've talked to other companies that would like to hire welding engineers and have just recently discovered OSU welding engineers.

Comment: [Undergraduate Student]

I was hired just coming into the department just because I was an OSU welding engineer. I hope that the OSU WE distinction can be maintained 20-30 years down the road.

Q: [Undergraduate Student]

With the merger, are there any thoughts about creating interdisciplinary capstone groups?

A: [Buchheit]

This is absolutely something that we would look into. How senior design projects are run in WE is different than how they are run in MSE. MSE maintains the tradition of having senior undergraduate students complete a senior thesis. WE have a different, more industrial-specific approach to senior design projects. I would try to encourage a middle ground between the two. We would have to leave some freedom for the student, because we train both the 'scientist' and the 'engineer'. Because we have a vast dichotomy of mindsets, we need to serve both constituencies of capstone projects and allow for excursions towards both extremes. However, I'm not too comfortable sending students to a whole different department to have the capstone experience.

Q: [Graduate Student]

The WE program is very strong compared to some other engineering departments in terms of undergraduate job placement? Part of this is attributed to the unique course set offered for undergraduates. How will the department-specific courses be maintained after the merger?

A: [Buchheit]

The majority of all quantitative indicators show that the undergraduate program is very strong. Undergraduate studies will not change significantly after the merger. It must be emphasized that the undergraduate WE degree will not turn into a MSE degree as a result of the merger. Rather, after the merger, the WE program will fall under the administrative umbrella of MSE. Two separate degrees, WE and MSE, will remain. Both degrees will have specific and unique core class requirements. When the merger occurs, WE will bring with it the courses that are currently taught. No changes to the courses offered will occur until after the quarter-semester change. Changes to the courses in the long term will adapt to the expertise of the faculty. Such changes will likely not be detectable to the students. Finally, as a result of the merger, academic advising will change for undergraduate students, but no changes will occur for graduate students.

****Comment [graduate student]**

The fact that the WE program will change over time to a more MSE-focused degree is a concern for those students wishing to obtain a more design/process oriented WE degree. What is the direction going to be?

**** Comment [Buchheit]**

We cannot have the program focus drift towards one extreme or another. We would not like to see the degree program shift to a totally design/process focus. Another department besides MSE would better serve such a focus. Conversely, we would not like the WE program to become too heavily focused in material science. Overemphasizing materials science in WE would create unnecessary overlap between the two programs. As far as how the department will look in 16-20 years, I can say that it will be different than it is now. However, I cannot say with any specificity what such changes will involve. The decisions that influence these changes are not mine to make.

****Comment [Rokhlin]**

Clearly the current professors in the WE program will continue to teach their respective courses. Nobody can guarantee what the department makeup and mission will be in 20 years because the field is constantly evolving and changing.

Q: [Undergraduate Student]

With the merger of the department, is there going to be any person appointed to recruiting and marketing of the department?

A: [Buchheit]

Not exactly. There would not be a single professor or staff person in charge, per se. The college of engineering shares some of the responsibility for recruiting students to the department via its own events. MSE as a department hosts many prospective students in various recruiting events.

Q: [Undergraduate student]

What is the idea behind moving the WE program onto central campus?

A: [Buchheit]

We don't want the WE program alone on an 'island' away from central campus. If WE remains separated geographically from MSE, then the departments would be two separate departments

only to be linked via a common administrative unit. As a result, the synergy between WE and MSE would be lost. Clearly, the geographic merger cannot happen successfully instantaneously, but over time being together in one location will help the two departments function much better together.

Q: [Graduate student]

Doesn't the fact that we are the only ABET accredited WE program strengthen the argument for keeping the program alive?

A: [Buchheit]

The fact that WE is the only ABET accredited program in the nation can be viewed by two perspectives. On one hand, one can make the argument that if the WE program here at OSU is the only one in the nation, is there really a need for its existence? On the other hand, an argument can be made for keeping the program intact because it is the only one of its kind that produces true welding engineers.

We must form the argument based on the numbers. What does the industry need? Where are the students being placed? Where is OSU getting the highest return on its investment? There is a meeting to be scheduled regarding issues similar to this.

**Comment [Buchheit]

It is my opinion that the WE program is not being well served administratively in a large department such as ISE. To remedy the situation, the program should be relocated into an environment that does not pose any barriers. Relocating the WE program will in turn make it more effective and result in a larger return in investment.

Is MSE the natural home for all the facets of WE? MSE is clearly the ideal home for any materials aspects, but other design-type areas related to WE may be better served by other out of department classes. It may be a better long-term solution for students that wish to emphasize some of the non-MSE aspects of WE to work in an interdisciplinary mode to accomplish such goals.



Department of Integrated Systems Engineering

210 Baker Systems Building
1971 Neil Avenue
Columbus, OH 43210-1217

Phone (614) 292-6239
Fax (614) 292-7852

To: G.N. Washington, Interim Dean, College of Engineering
From: J.L. Higle, Chair, ISE *Juli J. H. L.*
Subject: Proposal to Transfer WE programs to Dept. of MSE
Date: 5/8/09

The proposal to transfer the programs in Welding Engineering from the Department of Integrated Systems Engineering to the Department of Materials Science and Engineering will affect the 54 undergraduate students who are currently enrolled in the program. For this reason, efforts were made to inform them, and to solicit their feedback.

On April 15, 2009 Dr. Avi Benatar led a discussion on the proposal at the end of his regular meeting of WE 641. This particular class was selected because 47 of the current WE undergraduate majors are enrolled. Dr. Benatar went over the main points of the proposal, making it clear that if it is accepted the BSWE program would be administered through MSE instead of through ISE.

Following the discussion, Dr. Benatar reported that the students' reaction was very positive. A copy of his email to me is attached. The students identified "advising" as a potential area of concern. In response to this concern, I commit that the ISE Academic Advisor will assist the MSE Academic Advisor through the transition period.



Julie Higle <jlhigle@gmail.com>

641 question

Avi Benatar <benatar.1@osu.edu>

Thu, Apr 16, 2009 at 11:31 AM

To: Julie Higle <higle.1@osu.edu>, Pam Hussen <hussen.2@osu.edu>

Hi Julie and Pam,

I spoke with the WE641 students regarding the transfer of the WE academic program to MSE. Their reaction was very positive with comments like "yes!", "it's about time", and "material science is a very important part of our program, so this is good". They also had some questions including: How long will it take? What about student advising (they said that they would miss Pam very much)? Will they have access to computer labs in MSE? I responded to the questions as best I could.

Regards,

Avi

From: Pam Hussen [mailto:hussen.2@osu.edu]

Sent: Thursday, April 16, 2009 9:15 AM

To: Avi Benatar

Cc: 'Julie Higle'

Subject: RE: 641 question

[Quoted text hidden]
