Proposal to Create a MIME Course Designator – Submitted by Brady J. Gibbons, Associate School Head for Undergraduate Programs, School of Mechanical, Industrial, & Manufacturing Engineering

Justification

The School of Mechanical, Industrial, & Manufacturing Engineering (MIME) was created upon the merger of the Department of Mechanical Engineering and the Department of Industrial and Manufacturing Engineering in 2008. We encompass four undergraduate programs: Mechanical Engineering, Industrial Engineering, Manufacturing Engineering, and Energy Systems Engineering. Since the merger, first year students have continued to take their respective introductory courses (ME 101, ENGR 111, or IE 285). What the faculty (and advisors) have found, however, is that in many cases a student that declares him or herself a “mechanical engineer” at the outset of their education is actually more interested in manufacturing or industrial engineering (and vice versa, for example) – the problem being that they don’t really know what the various engineering fields encompass. To this end, we have decided to look at providing our MIME students a common first year experience. The first step in seeing this come to fruition is the development of a common Fall term introductory course. To reflect the common nature of this class we do not want it to take the ME, IE, or MFGE course designator, thus we propose to create a MIME course designator.

Purpose: The proposed course designator should have an identified purpose within the curricular structure of Oregon State University.

- What academic programs, including majors, certificates, options and minors will be served by courses within the designator?
  All four of the academic programs in MIME will be served by courses within this designator – these are Mechanical, Industrial, Manufacturing, and Energy Systems Engineering.

- In what ways do the general area and scope of the content constitute a coherent body of knowledge?
  Mechanical, Industrial, Manufacturing, and Energy Systems engineering are all intimately linked regarding the body of knowledge that is required to become an expert. As a student progresses into their Junior and Senior years the topical content becomes more specific to a particular discipline, however in the Freshman and Sophomore years the content is much more general and common to the four programs. Creating the MIME designator will emphasize these common connections to our students.

- Is the proposed usage of the designator consistent with practice at OSU and other institutions? Give examples.
  The proposed usage is highly consistent with practice at OSU. An excellent example would be the ENGR designator. Although OSU does not offer a “general engineering” bachelors degree, there are courses that are generally common to Engineering. The general introduction to engineering class (ENGR 111) is currently used for undecided Engineering students starting at OSU. A further example can be found at Rensselaer Polytechnic Institute, with their Department of Mechanical, Aerospace, and Nuclear Engineering. Upon merging of those departments the course designator MANE was created (although there is no degree where a student receives all three at once).

Accountability: Responsibility for the integrity and oversight of the proposed course designator should be clearly identified.

- What is the academic College of the designator?
  MIME resides in the College of Engineering. This is where the designator would be.
• **Who is responsible for administering courses in the designator, e.g. scheduling and catalog updates. Who are the faculty contact persons?**

The School of MIME Undergraduate Programs leadership and scheduling will be responsible for administering courses. This includes the Interim School Head, Prof. Robert Stone, the Associate School Head for Undergraduate Programs, Prof. Brady Gibbons, and MIME Scheduler, Prof. Ken Funk. These will also be the faculty contacts regarding the designator.

• **Who is responsible for consistency and outcome assessment for courses in the designator?**

The School of MIME Undergraduate Programs leadership will be responsible for consistency and outcome assessment for courses in the designator. This includes the Interim School Head, Prof. Robert Stone and the Associate School Head for Undergraduate Programs, Prof. Brady Gibbons. MIME has a rigorous assessment and evaluation process in place for all courses. This is required by our external accreditation board, ABET.

• **Which units get credit for the SCH generated by courses in the subject code?**

The School of MIME will continue to get credit for the SCH generated by any courses with this designator.

• **Who is responsible for communicating information about the new designator to stakeholders, including advisors, Admissions, and students?**

The School of MIME Undergraduate Programs leadership will be responsible for communicating information about the new designator to stakeholders, including advisors, Admissions, and students. This includes the Interim School Head, Prof. Robert Stone and the Associate School Head for Undergraduate Programs, Prof. Brady Gibbons. The idea of creating this designator has been vetted through our faculty and professional advising staff. All have been supportive of this effort.

**Impacts:** Who will benefit from the new designator and what changes will result from its implementation?

• **Will courses in the new designator duplicate or compete with existing ones?**

Upon implementation, only one course will be created using the MIME designator. This would be MIME 101; an introductory class. The current Mechanical Engineering introductory class (ME 101) would not be continued. The current Industrial and Manufacturing Engineering introductory class (IE 285) would be retained, but would be placed elsewhere in the IE curriculum (and be changed to be more rigorous, no longer an introductory class). ENGR 111 would be retained for the undecided engineering students. The development of additional courses is under consideration, however initially we will focus on the introductory course.

• **Are there expected cross-listings or curricular equivalencies?**

We do not expect any cross-listings. However in general the College of Engineering attempts to have all of the ‘100’ level introductory classes be interchangeable. This simplifies changing of majors within Engineering.

• **How will the new designator affect transfer credits?**

The new designator will not affect transfer credits.

• **Will any previous existing designators expire as the new one appears?**

No designators will expire as the new one appears.

• **How will the new designator benefit students?**

This new designator will be extraordinarily beneficial to students. Our goal is for them to identify the designator with the School. Additionally it will allow us to create a course that will help students understand the commonalities and differences within the four undergraduate programs in MIME. This all stems from observing our students assume they know exactly what a Mechanical, Industrial, Manufacturing, or Energy Systems engineer does, when they really don’t. Providing them this information from day 1 will help them identify which major suits them best.