NOT FOR USE FOR CURRICULAR COURSE CHANGES
REQUEST FOR PROGRAM IMPROVEMENTS

NOTE: Changes to programs may require course changes, which must be processed electronically. Any questions should be directed to Associate Provost David Reinhold at 7-4564 or david.reinhold@wmich.edu

DEPARTMENT: MAE
PROPOSED EFFECTIVE FALL YEAR: 2011

PROPOSED IMPROVEMENTS: Academic Program Proposed Improvements
☐ New degree*                   ☐ New minor*
☐ New major*                   ☐ Deletion*
☐ New curriculum*              ☐ Revised major
☐ New concentration*           ☐ Revised minor
☐ New certificate*

☐ Other (explain**)            ☐ Admission requirements

** Other:

Title of degree, curriculum, major, minor, concentration, or certificate: Minor in Mechanical Engineering

Chair, Department Curriculum Committee: ____________________________  Date 09/17/2019

CHECKLIST FOR DEPARTMENT CHAIRS/DIRECTORS
☐ For new programs and other changes that have resource implications, the dean has been consulted.
☐ When appropriate, letters of support from department faculty are attached.
☐ When appropriate, letters of support from other departments in the same college are attached.
☐ The proposal has been reviewed by HIGE for possible implications for international student enrollment.
☐ The proposal is consistent with the departmental assessment plan, and identifies measurable learning outcomes for assessment.
☐ Detailed resource plan is attached where appropriate.
☐ All questions attached have been completed and supporting documents are attached.
☐ The proposal is written and complete as outlined in the Faculty Senate guidelines and the curriculum change guides.

Chair/Director: ____________________________  Date 09/17/2019

CHECKLIST FOR COLLEGE CURRICULUM COMMITTEE
☐ The academic quality of the proposal and the faculty involved has been reviewed.
☐ Detailed resource plan is attached where appropriate.
☐ Consistency between the proposal and the relevant catalog language has been confirmed.
☐ The proposal has been reviewed for effect on students transferring from Michigan community colleges. Detailed information on transfer articulation must be included with undergraduate proposals.
☐ Consistency between the proposal and the College and department assessment plans has been confirmed.
☐ Consistency between the proposal and the College and department strategic plans has been confirmed.
☐ All questions attached have been completed and supporting documents are attached.
☐ The proposal is written and complete as outlined in the Faculty Senate guidelines and the curriculum change guides.

Chair, College Curriculum Committee: ____________________________  Date

Revised Sept. 2016. All previous forms are obsolete and should not be used.
CHECKLIST FOR COLLEGE DEANS

☐ For new programs and proposed program deletions, the provost has been consulted.

☐ For new programs, letter of support from University Libraries Dean indicating library resource requirements have been met.

☐ When appropriate, letters of support from other college faculty and/or chairs are attached.

☐ When appropriate, letters of support from other college deans, whose programs/courses may be affected by the change, are attached.

☐ The proposal has been reviewed for implications for accreditation, certification, or licensure.

☐ Detailed resource plan is attached where appropriate.

☐ All questions attached have been completed and supporting documents are attached.

☐ The proposal is written and complete as outlined in the Faculty Senate guidelines and the curriculum change guides.

| Dean: | Date |

FOR PROPOSALS REQUIRING REVIEW BY:
GSC/USC, EPGC, GRADUATE COLLEGE, and/or FACULTY SENATE EXECUTIVE BOARD

☐ Return to Dean

☐ Forward to: Curriculum Manager: Date:

☐ Approve ☐ Disapprove

* needs review by

Chair, GSC/USC: Date

☐ Approve ☐ Disapprove

Chair, EPGC: Date

☐ Approve ☐ Disapprove

Graduate College Dean: Date:

☐ Approve ☐ Disapprove

Faculty Senate President: Date

☐ Approve ☐ Disapprove

* needs review by

Provost: Date

Revised Sept. 2018. All previous forms are obsolete and should not be used.
1. Explain briefly and clearly the proposed improvement:

We propose to offer a “Minor in Mechanical Engineering” degree for WMU students from other programs. To graduate with this Minor degree, students will have to complete successfully at WMU 5 required courses, as shown in the proposed catalog language below.

2. Rationale. Give your reason(s) for the proposed improvement.

The proposed ME Minor will help students from other WMU programs in various possible ways. For example, having this Minor degree recorded in the diploma may expand the employment opportunities and attractiveness of students who major in other areas and give them an advantage in job searching. Also, students who may want to pursue graduate degrees in engineering will get a preparation in foundation topics and a useful background to guide them in that direction. Since many majors in the university leave room in their curricula for minor degree credit-hours, many students will be able to take the ME Minor without adding much, if at all, to their required number of credits for graduation.

3. Effect on other colleges, departments, or programs. If consultation with others is required, attach evidence of consultation and support. If objections have been raised, document the resolution. Demonstrate that the program you propose is not a duplication of an existing one.

The proposed ME Minor will add choices to WMU students from other programs. This is a positive effect. There are no negative effects.

4. Effect on your department’s programs. Show how the proposed change fits with other departmental offerings.

We do not expect big number of students and we do not depend on this proposal. Our offerings will remain as they are. Some positive effect is possible, if we end up increasing the number of our graduate students.

5. Alignment with college’s and department’s strategic plan, mission, and vision.

No conflicts.

6. Effects on enrolled students: Are program conflicts avoided? Will your proposal make it easier or harder for students to meet graduation requirements? Can students complete the program in a reasonable time? Show that you have considered scheduling needs and demands on students’ time.

This proposal adds a choice to WMU undergraduate students, which is a good thing. There are no negative effects and no conflicts of any kind.

7. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?

Please see the Rationale (item #2 above). It seems that Physics majors may have the easiest path to the proposed minor due to their existing degree requirements. We, therefore, communicated with the Physics department and received their support to the proposed ME Minor. Other sciences majors, as well as Math majors, may also benefit from this Minor.

8. Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. If proposing a new program, include a letter and/or email of support from the university libraries affirming that the library resource issues have been reviewed. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)

We anticipate small numbers of students. The effects on resources within the department are negligible. No effects on resources outside of our department.

9. List the learning outcomes for the revised or proposed major, minor, or concentration. The department will use these outcomes for future assessments of the program.

N/A

Revised Sept. 2018. All previous forms are obsolete and should not be used.
10. Describe how this change is a response to assessment outcomes that are part of a department or college assessment plan or informal assessment activities.

N/A

11. (Undergraduate proposals only) Describe in detail how this change affects transfer articulation for Michigan community colleges. For new majors or minors, describe transfer guidelines to be developed with Michigan community colleges. For revisions to majors or minors, describe necessary revisions to Michigan community college guidelines. Department chairs should seek assistance from college advising directors or from the admissions office in completing this section.

No effect.

12. Please offer both “Current Catalog Language” and “Proposed Catalog Language” if there is to be a change in the catalog description for a given program. For the “current” language, please copy and paste relevant language from the most current catalog and for the “proposed” language, please share the exact proposed new catalog language. As possible, bold or otherwise note the key changes in the new proposed catalog language.

Current Catalog Language: (does not exist)

Proposed Catalog Language: (p.587 in the 2019-20 UG catalog)

**Mechanical Engineering Minor (15 hours)**

Program requirements

Students must complete at WMU the following 5 courses with a minimum grade of ‘C’:

ME 2320 – Thermodynamics 1

ME 2500 – Materials Science for Engineers (ME 2615 prerequisite will be waived)

ME 2580 – Dynamics (or ME 3600 – Control Systems, for students who receive credit for Dynamics in their major)

ME 3560 – Fluid Mechanics

ME 3650 – Machine Design 1 (EDMM 1420 prerequisite will be waived)

**Note**

Students who are interested in pursuing a graduate degree in mechanical engineering will need a minimum grade of ‘B’ in a course which is a prerequisite to a graduate level course.

**Advising**

The 5 required courses have prerequisites in sciences, mathematics and engineering. Interested students should meet a mechanical engineering advisor to plan a path to the Minor degree. Since the sequence of study may take 5 semesters, we recommend scheduling a meeting with an advisor not later than in the 3rd semester of study.