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: Fall 2020

PROPOSED IMPROVEMENTS: Academic Program Proposed Improvements
- New degree*
- New major*
- New curriculum*
- New concentration*
- New certificate*
- New minor*
- Deletion*
- Revised major
- Revised minor
- Admission requirements
- Graduation requirements
- Change in Title
- Transfer
- Other (explain**)

** Other:

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

Chair, Department Curriculum Committee: [Signature]
Date 10/7/2019

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.
- 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 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: [Signature]
Date 10/7/19

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: [Signature]
Date

Revised Sept. 2018. 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.

<table>
<thead>
<tr>
<th>Dean:</th>
<th>Date</th>
</tr>
</thead>
</table>

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

- [ ] Return to Dean
- [ ] Forward to: Curriculum Manager: Date:  
  - [ ] *needs review by*
- [ ] Approve □ Disapprove 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.
NOT FOR USE FOR CURRICULAR COURSE CHANGES
REQUEST FOR PROGRAM IMPROVEMENTS

1. Explain briefly and clearly the proposed improvement:

   We propose to remove AE 3610 from the list of group 1 ME electives

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

   The topics of AE 3610 and ME 3560 have a lot in common. ME 3560 is a required course in mechanical engineering. AE 3610 is a required course in aerospace engineering and it is their closest equivalent to ME 3560. Mechanical engineering students who take AE 3610 as an elective repeat learning a lot of the topics they already had learned in ME 3560.

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 change will have a positive effect on the aerospace engineering program. This program has a lot of students and the enrollment to AE 3610 is large. The proposed change will reduce the number of students who take the course. Also, AE 3610 has a lab component with limited capacity. The reduced number of students will relieve the pressure on the lab.

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

   See item 3 above.

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

   No change.

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.

   The students who now take AE 3610 as an elective will have to take another elective. We have a long list of electives for the 5 electives needed for graduation. The students will be able to choose another elective without any effect on graduation. Many of the electives have a lab (L) designation like the AE3610 course (2 of the 5 electives must have the lab designation).

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?

   N/A

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.)

   See item #3 above.

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

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

Revised Sept. 2018. All previous forms are obsolete and should not be used.
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: (p. 586 in the 2019-20 UG catalog)

Group 1: Electives from Undergraduate Courses
Note: A minimum grade of "C" is required in all prerequisites to Group 1 electives.
• AE 3610 - Aerodynamics Credits: 4 hours (L)
• ME 3670 - Internal Combustion Engines Credits: 3 hours (L)
• ME 4330 - Environmental Systems Design in Buildings Credits: 3 hours (D)
  This course has a prerequisite that is an elective.
• ME 4390 - Design of Thermal Systems Credits: 3 hours (D, L)
  This course has a prerequisite that is an elective.

proposed catalog Language:

Group 1: Electives from Undergraduate Courses
Note: A minimum grade of "C" is required in all prerequisites to Group 1 electives.
• ME 3670 - Internal Combustion Engines Credits: 3 hours (L)
• ME 4330 - Environmental Systems Design in Buildings Credits: 3 hours (D)
  This course has a prerequisite that is an elective.
• ME 4390 - Design of Thermal Systems Credits: 3 hours (D, L)
  This course has a prerequisite that is an elective.