CGAS-17-22 MAE

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: PROPOSED EFFECTIVE SEMESTER: Spring 2018 COLLEGE: Engineering & Applied Sciences

PROPOSED IMPROVEMENTS

Academic Program
- ☐ New degree*
- ☐ New major*
- ☐ New curriculum*
- ☐ New concentration*
- ☐ New certificate
- ☐ New minor
- ☐ Revised major
- ☐ Revised minor
- ☒ Admission requirements
- ☐ Graduation requirements
- ☐ Deletion ☐ Transfer
- ☐ Other (explain**)

Substantive Course Changes
- ☐ New course
- ☐ Pre or Co-requisites
- ☐ Deletion (required by others)
- ☐ Course #, different level
- ☐ Credit hours
- ☐ Enrollment restriction
- ☐ Course-level restriction
- ☐ Prefix ☐ Title and description (attach current & proposed)
- ☐ General education (select one)

Not Applicable

- ☐ Other (explain**)

Misc. Course Changes
- ☐ Title
- ☐ Description (attach current & proposed)
- ☐ Deletion (not required by others)
- ☐ Course #, same level
- ☐ Variable credit
- ☐ Credit/no credit
- ☐ Cross-listing
- ☐ COGE reapproval
- ☐ Other (explain**)

**** Other:**

Title of degree, curriculum, major, minor, concentration, or certificate: Master of Science in Aerospace Engineering (Accelerated)

Existing course prefix and #: **Proposed course prefix and #:** **Credit hours:**

Existing course title:

Proposed course title:

Existing course prerequisite & co-requisite(s):

Proposed course prerequisite(s)
If there are multiple prerequisites, connect with "and" or "or". To remove prerequisites, enter "none."

Proposed course co-requisite(s)
If there are multiple corequisites, they are always joined by "and."

Proposed course prerequisite(s) that can also be taken concurrently:

Is there a minimum grade for the prerequisites or corequisites?
The default grades are D for undergraduates and C for graduates.

Major/minor or classification restrictions:
List the Banner 4 character codes and whether they should be included or excluded.

For 5000 level prerequisites & corequisites: Do these apply to: (circle one) undergraduates graduates both

Specifications for University Schedule of Classes:

a. Course title (maximum of 30 spaces): Doctoral Dissertation

b. Multi-topic course: ☐ No ☐ Yes

c. Repeatable for credit: ☐ No ☐ Yes

d. Mandatory credit/no credit: ☐ No ☐ Yes

e. Type of class and contact hours per week (check type and indicate hours as appropriate)

1. ☐ Lecture
2. ☐ Lab or discussion
3. ☐ Lecture/lab/discussion
4. ☐ Seminar or ☐ studio
5. ☐ Independent study
6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director K. Maglioli Date 2/22/17

Chair, College Curriculum Committee Date

Dean Date: Graduate Dean: Date

Curriculum Manager: Return to dean ☐ Date Forward to: Date

Chair, COGE/ PEB / FS President Date

FOR PROPOSALS REQUIRING GSC/USC REVIEW:

* ☐ Approve ☐ Disapprove | Chair, GSC/USC Date

* ☐ Approve ☐ Disapprove | Provost Date

1. **Explain briefly and clearly the proposed improvement.**

   1) The requirement to submit the general Graduate Record Examination (GRE) is removed.

   Hence, the current department guidelines for the accelerated degree in Aerospace Engineering (AE-ADP) are revised to include this change.

2. **Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)**

   As the students admitted into the accelerated degree program in Aerospace Engineering (AE-ADP) are currently required to have a minimum of 3.5 GPA. This already ensures that we admit quite high quality students, who are going through the rigor of WMU undergraduate curriculum in AE program. Hence, this requirement was felt redundant and also found to be obstructive by increasing the complexity and cost of the admission process.

   Due to the above reasons, the department faculty decided to remove the GRE requirement for AE-ADP.

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.**

   None.

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

   This change will have a positive effect on the Department as, we will encourage exceptional undergraduate students to join our MS program making the admission process easier for them.

5. **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. If a required course will be offered during summer only, provide a rationale.**

   No negative effects.

6. **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?**

   This is a proposal for revising and aligning the requirements of an existing program and making it easier and less costly for the students. This provides further encouragement to students to join the AE-ADP program.

7. **Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? How often will course(s) be offered? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)**

   This change will have a positive effect on the Department as our ADP process will be easier.

8. **General education criteria. For a general education course, indicate how this course will meet the criteria for the area or proficiency. (See the General Education Policy for descriptions of each area and proficiency and the criteria. Attach additional pages as necessary. Attach a syllabus if (a) proposing a new course, (b) requesting certification for baccalaureate-level writing, or (c) requesting reapproval of an existing course.)**

   Not Applicable.

9. **List the learning outcomes for the proposed course or the revised or proposed major, minor, or concentration. These are the outcomes that the department will use for future assessments of the course or**

program.

This is an admission process change which does not impact learning outcomes.

10. **Describe how this curriculum change is a response to assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.**

    As CEAS has been placing stronger emphasis on research through grants and through the growth of its graduate programs, it has become clear that we must recruit exceptional graduate students. This helps to encourage more students in the AE-APD program, which can in turn feed our ME-Ph.D. program as well.

11. **(Undergraduate proposals only) Describe, in detail, how this curriculum change affects transfer articulation for Michigan community colleges. For course changes, include detail on necessary changes to transfer articulation from Michigan community college courses. 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.**

    Not Applicable.

Current Catalog Description
Master of Science in Aerospace Engineering
(Accelerated)

The Accelerated Graduate Degree Program (AGDP) allows undergraduate students in aerospace engineering an opportunity to complete the requirements for both the bachelor's and master's degrees at an accelerated pace. These undergraduate students may count up to 9 (but not less than 6) credit hours of 5000-level courses taken during their undergraduate studies toward a master's degree in aerospace engineering within 24 months of completing their bachelor's degree in aerospace engineering. These students may choose to pursue a master's degree in aerospace engineering under either the Thesis Option or the Non-Thesis Option.

This program will allow an undergraduate student majoring in Aerospace Engineering to complete an accelerated bachelor's/master's in aerospace engineering by completing either 146 combined graduate/undergraduate credit hours (if choosing the Thesis Option), or 152 combined graduate/undergraduate credit hours (if choosing the Non-Thesis Option).

The University processes for application, admission, and registration can be found at www.wmich.edu/registrar/students-forms-acceleratteddegree.

Application to the AGDP Program

1. A prospective student who meets the eligibility requirements (see Criteria for Admission) must set up a meeting with the MAE undergraduate advisor and the graduate advisor to develop Plans of Work for the bachelor's and master's degree programs.

2. Before admission to an AGDP can be finalized, students must submit the standard application for admission to the Office of Admissions/Graduate Admissions including:

- an application
- an application fee
- ~~Graduate Record Exam (GRE) scores~~
- a Plan of Graduate Work, signed by the prospective student, the undergraduate advisor and the graduate advisor

3. The Plan of Graduate Work for the master's degree must clearly indicate:

- the 5000-level courses (a maximum of 9 graduate credit hours) that will be counted for both bachelor's and master's degrees,
- the graduation date for the master's degree that meets the time limit for the AGDP (i.e. obtaining a master's degree in aerospace engineering within 24 months of completing the bachelor's degree). Any changes to the AGDP Plan of Graduate Work must be submitted in writing and approved by the graduate advisor and graduate dean.

Criteria for Admission to the AGDP

Permission to pursue an AGDP does not guarantee admission to the Graduate College. Admission is contingent on meeting the following eligibility requirements at the time of entering the graduate program:

- Students must have completed a minimum of 80 and a maximum of 96 credit hours in their undergraduate programs, including credits earned from advanced placement.

- Transfer students must have completed a minimum of 30 credit hours as a full-time student at WMU.
- Students must have a minimum accumulated grade point average (GPA) of 3.5/4.0 at WMU.

Requirements for Participation and Graduation

1. Students must complete the bachelor's degree prior to entering the master's program. Students in the AGDP may not elect to by-pass the bachelor's degree.

2. Students will only be allowed to count a maximum of nine 5000-level credits taken during their undergraduate studies toward their master's degree. Students must consult with the aerospace engineering graduate advisor to determine which courses may be applied towards the master's degree. Ordinarily, the selectable courses are those from the non-accelerated aerospace engineering master's degree program.

3. Students must receive a grade of "B" (3.0/4.0) or better in the 5000-level courses taken during their undergraduate studies. Courses with a grade of "CB" or below cannot be counted toward theirs master's degree.

4. Students must complete the master's degree within 24 months from the completion of the bachelor's degree. If the master's program is not completed within these time limits, none of the 5000-level courses specified in the Plan of Graduate Work and used to meet the requirements of the undergraduate degree can be counted toward the master's degree.

Continuing Eligibility

1. It is the responsibility of the student to recognize his/her eligibility status.

2. A student completing the bachelor's degree requirements with an accumulated GPA of less than 3.25/4.0 is no longer eligible to count the 5000-level credit hours specified in the Plan of Graduate Work toward the master's degree and is automatically terminated from the AGDP.

3. A student who does not follow the approved Plan of Graduate Work may become ineligible to participate in the AGDP.

4. A student who is ineligible to participate in (or withdraws from) the AGDP cannot count any of the courses specified in the Plan of Graduate Work for both bachelor's and master's degrees. These courses, however, may be counted toward the student's bachelor's degree upon the discretion of the undergraduate advisor.

5. A student who becomes ineligible to participate in the AGDP, must be informed by the graduate advisor in writing of his/her ineligibility. A copy of this letter to the student must be sent to the Graduate College.

Withdrawal

A student may withdraw from an approved AGDP at any time by informing the advisor of undergraduate programs and the graduate advisor in writing. A copy of this request to withdraw must be sent to the Graduate College for approval.

Revised Catalog Description:
Master of Science in Aerospace Engineering
(Accelerated)

The Accelerated Graduate Degree Program (AGDP) allows undergraduate students in aerospace engineering an opportunity to complete the requirements for both the bachelor's and master's degrees at an accelerated pace. These undergraduate students may count up to 9 (but not less than 6) credit hours of 5000-level courses taken during their undergraduate studies toward a master's degree in aerospace engineering within 24 months of completing their bachelor's degree in aerospace engineering. These students may choose to pursue a master's degree in aerospace engineering under either the Thesis Option or the Non-Thesis Option.

This program will allow an undergraduate student majoring in Aerospace Engineering to complete an accelerated bachelor's/master's in aerospace engineering by completing either 146 combined graduate/undergraduate credit hours (if choosing the Thesis Option), or 152 combined graduate/undergraduate credit hours (if choosing the Non-Thesis Option).

The University processes for application, admission, and registration can be found at www.wmich.edu/registrar/students-forms-acceleratteddegree.

Application to the AGDP Program

1. A prospective student who meets the eligibility requirements (see Criteria for Admission) must set up a meeting with the MAE undergraduate advisor and the graduate advisor to develop Plans of Work for the bachelor's and master's degree programs.

2. Before admission to an AGDP can be finalized, students must submit the standard application for admission to the Office of Admissions/Graduate Admissions including:

- an application
- an application fee
- a Plan of Graduate Work, signed by the prospective student, the undergraduate advisor and the graduate advisor

3. The Plan of Graduate Work for the master's degree must clearly indicate:

- the 5000-level courses (a maximum of 9 graduate credit hours) that will be counted for both bachelor's and master's degrees,
- the graduation date for the master's degree that meets the time limit for the AGDP (i.e. obtaining a master's degree in aerospace engineering within 24 months of completing the bachelor's degree). Any changes to the AGDP Plan of Graduate Work must be submitted in writing and approved by the graduate advisor and graduate dean.

Criteria for Admission to the AGDP

Permission to pursue an AGDP does not guarantee admission to the Graduate College. Admission is contingent on meeting the following eligibility requirements at the time of entering the graduate program:

- Students must have completed a minimum of 80 and a maximum of 96 credit hours in their undergraduate programs, including credits earned from advanced placement.
- Transfer students must have completed a minimum of 30 credit hours as a full-time student at WMU.

- Students must have a minimum accumulated grade point average (GPA) of 3.5/4.0 at WMU.

Requirements for Participation and Graduation

1. Students must complete the bachelor's degree prior to entering the master's program. Students in the AGDP may not elect to by-pass the bachelor's degree.

2. Students will only be allowed to count a maximum of nine 5000-level credits taken during their undergraduate studies toward their master's degree. Students must consult with the aerospace engineering graduate advisor to determine which courses may be applied towards the master's degree. Ordinarily, the selectable courses are those from the non-accelerated aerospace engineering master's degree program.

3. Students must receive a grade of "B" (3.0/4.0) or better in the 5000-level courses taken during their undergraduate studies. Courses with a grade of "CB" or below cannot be counted toward theirs master's degree.

4. Students must complete the master's degree within 24 months from the completion of the bachelor's degree. If the master's program is not completed within these time limits, none of the 5000-level courses specified in the Plan of Graduate Work and used to meet the requirements of the undergraduate degree can be counted toward the master's degree.

Continuing Eligibility

1. It is the responsibility of the student to recognize his/her eligibility status.

2. A student completing the bachelor's degree requirements with an accumulated GPA of less than 3.25/4.0 is no longer eligible to count the 5000-level credit hours specified in the Plan of Graduate Work toward the master's degree and is automatically terminated from the AGDP.

3. A student who does not follow the approved Plan of Graduate Work may become ineligible to participate in the AGDP.

4. A student who is ineligible to participate in (or withdraws from) the AGDP cannot count any of the courses specified in the Plan of Graduate Work for both bachelor's and master's degrees. These courses, however, may be counted toward the student's bachelor's degree upon the discretion of the undergraduate advisor.

5. A student who becomes ineligible to participate in the AGDP, must be informed by the graduate advisor in writing of his/her ineligibility. A copy of this letter to the student must be sent to the Graduate College.

Withdrawal

A student may withdraw from an approved AGDP at any time by informing the advisor of undergraduate programs and the graduate advisor in writing. A copy of this request to withdraw