



UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

Mark A. Emmert, President

November 19, 2007

Dean Matthew O'Donnell
College of Engineering
Box 352180

Dear Matthew:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of the revised admission and program requirements for a Bachelor of Science in Aeronautics and Astronautics Engineering degree. A copy of the changes is attached.

I am writing to inform you that the College of Engineering is authorized to specify these requirements beginning autumn quarter 2008.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

Mark A. Emmert
President

Enclosure

cc: Ms. Marlo Anderson (with enclosure)
Mr. Robert Corbett (with enclosure)
Dr. Deborah H. Wiegand (with enclosure)
Todd Mildon, J.D. (with enclosure AA-20071012)



UNIVERSITY OF WASHINGTON
**CREATING AND CHANGING UNDERGRADUATE
 ACADEMIC PROGRAMS**

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Control #	AA-2007-1012

After college/school review, send a signed original and 8 copies to FCAS, Box 355850.

For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>

College Engineering	Department or Unit Aeronautics and Astronautics	Date 10/12/07
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New Programs

- Leading to a Bachelor of _____ in _____ degree.
- Leading to a Bachelor of _____ degree with a major in _____.
- Leading to a _____ Option within the existing major in _____.
- Leading to a minor in _____.

Changes to Existing Programs

- New Admission Requirements for the Major in _____ within the Bachelor of _____.
- Revised Admission Requirements for the Major in Aeronautical and / within the Bachelor of Science in A & A Engr.
- Revised Program Requirements for the Major in Astronautical within the Bachelor of Science in A&A Engr
- Revised Requirements for the Option in _____ within the major in _____.
- Revised Requirements for the Minor in _____.

Other Changes

- Change name of program from _____ to _____.
- New or Revised Continuation Policy for _____.
- Eliminate program in _____.

Proposed Effective Date:

Quarter: Autumn Winter Spring Summer Year: 20 08

Contact Person Marlo Anderson	Contact's Phone 206 - 616 - 1115	Contact's Email marlo@aa.washington.edu
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EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new programs, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (Use additional pages if necessary).

See Attached

CATALOG COPY

Catalogue Copy as currently written. Include only sections/paragraphs that would be changed if you request is approved. Please cross out or otherwise highlight any deletions.


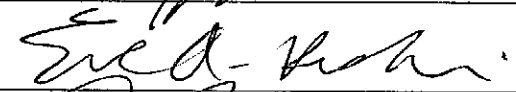

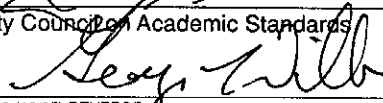
See Attached

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications)

See Attached

SIGNATURES (required)

Chair/Program Director		Date	10/12/07
Dean		Date	10-24-07
College Committee		Date	10-23-07
Faculty Council on Academic Standards		Date	11-16-07

UoW 1503 (12/05) REVERSE



The Department of Aeronautics and Astronautics proposes to drop CSE 142 as a requirement for admission and graduation.

The rationale for this proposal is as follows:

- 1) Scientific computing, such as numerical integration, finding roots of polynomials, solving simultaneous linear equations, determining eigenvalues and eigenvectors, solving ordinary and partial differential equations, etc., is a critical aspect of much of the material covered in AA 3XX and 4XX courses.
- 2) In order to solve the kinds of problems listed above, students must be able to use modern scientific computational software tools, such as MATLAB, MATHEMATICA, ANSYS, etc. The application of these tools allows students to perform realistic calculations that illustrate critical principles, and prepares students to use these state-of-the-art tools in industry or academia after graduation.
- 3) The programming language JAVA currently taught in CSE 142 does not contain the scientific computing component that is needed to solve the type of numerical problems listed in Item 1 above. AMATH 301, Beginning Scientific Computing, meets the needs of our undergraduate program much better than CSE 142, because it covers precisely the scientific computing needed in our AA 3XX and 4XX courses and, beginning this year, also adds a programming component.
- 4) Dropping CSE 142 will allow students to take AMATH 301, a component of the department's professional program, earlier in their academic career. Currently AMATH 301 is taken at the beginning of the junior year.

In addition, we are requesting a change in the way the admission and graduation requirements are stated in the published catalog copy. The current description is confusing and has caused problems for students. Clearer statements in the catalog about how and when the prerequisites and graduation coursework can and must be completed are long overdue.

Current Catalog Description

Upper-Division Admission

1. *Course requirements:* MATH 124, MATH 125, MATH 126, MATH 307, MATH 308, PHYS 121, PHYS 122, PHYS 123, CHEM 142, ~~CSE 142~~, AA 210, M E 230, CHEM E 260, and 5 credits of English composition.

~~Of the following three courses required for admission, one may be completed the autumn quarter of admission: CEE 220, T C 231, MATH 324.~~

2. At least 75 credits must be completed, with a minimum overall GPA of 2.50 and a minimum grade of 2.0 in each course required for admission.

Graduation Requirements

180 credits as follows:

1. **General Education Requirements (85 credits)**
 - a. *Areas of Knowledge:* 49 credits as follows: Visual, Literary, and Performing Arts (VLPA), and Individuals & Societies (I&S): 24 credits. Natural World: 25 credits, to include CHEM 142 (5) and PHYS 121, PHYS 122, PHYS 123 (15 credits). An additional 5 credits of natural-world courses are required. See department for a list of approved courses.
 - b. *Mathematics:* 24 credits to include MATH 124, MATH 125, MATH 126, MATH 307, MATH 308, and MATH 324. ~~(which must be completed no later than autumn quarter of admission to the department if all other prerequisites are completed.~~
 - c. *Written and Oral Communications:* 12 credits, to include one 5-credit English composition course from the University list. ~~which must be completed prior than the autumn quarter of admission to the department; T C 231, which must be completed prior than the autumn quarter of admission to the department; and T C 333 (or department-approved alternative).~~
2. **Major Requirements (95 credits)**
 - a. *Engineering Fundamentals:* ~~20~~ credits, to include ~~CSE 142 (or departmentally approved alternative)~~ A A 210, CEE 220, M E 230, CHEM E 260, ~~all of which must be completed prior to autumn quarter of admission. (Note: CEE 220 may be taken as late as the autumn quarter of admission to the department if all other prerequisite courses are completed including MATH 324, has been taken prior to autumn quarter).~~
 - b. *Professional Courses:* 75 credits. ~~The department program begins in the autumn quarter of the junior year.~~ Junior-year professional program courses are all required. The senior year consists of A A 409, A A 410-A A 411 or A A 420-A A 421, A A 447, AA498, and 15 credits of senior technical electives. With approval, 3 credits of the latter may be chosen from another area of engineering.
 - c. *Electives:* ~~4~~ credit of free electives, which may be used to meet the 180 credits required for graduation.

Proposed Catalog Listing

Upper-Division Admission

1. **Course requirements:** MATH 124, MATH 125, MATH 126, MATH 307, MATH 308, MATH 324⁺, PHYS 121, PHYS 122, PHYS 123, CHEM 142, AA 210, AMATH 301⁺, CEE 220, ME 230, CHEM E 260, TC 231 and 5 credits of English composition.

⁺ AMATH 301 and/or MATH 324 may be taken as late as autumn quarter of admission but will create an extremely heavy course load if both are taken. ↴

2. **Grade requirements:** At least 75 credits must be completed, with a minimum overall GPA of 2.50 and a minimum grade of 2.0 in each course required to be considered for admission. Completion of minimum requirements described above does not guarantee admission.

Graduation Requirements

180 credits as follows:

1. **General Education Requirements (85 credits)**
 - a. **Areas of Knowledge:** 49 credits as follows:
 - *Visual, Literary, and Performing Arts (VLPA) and Individuals & Societies (I&S):* 24 credits to include: A minimum of 10 credits in VLPA and a minimum of 10 credits of I & S plus 4 additional credits in either area.
 - *Natural World:* 25 credits to include:
 - CHEM 142 (5 credits)
 - PHYS 121, PHYS 122, PHYS 123 (15 credits).
 - An additional 5 credits of natural-world courses are required. (See department for a list of approved courses.)
 - b. **Mathematics:** 24 credits to include: MATH 124, MATH 125, MATH 126, MATH 307, MATH 308, and MATH 324.
 - c. **Written and Oral Communications:** 12 credits to include: one 5-credit English composition course from the University list, TC 231, and TC 333 (or department-approved alternative).
2. **Major Requirements (95 credits)**
 - a. **Engineering Fundamentals:** 16 credits to include: AA 210, CEE 220, ME 230, and CHEM E 260.
 - b. **Professional Courses:** 75 credits to include:
Junior-year professional program courses are all required. The senior year consists of AA 409, AA 410-AA 411 or AA 420-AA 421, AA 447, and 15 credits of senior technical electives. With approval, 3 credits of the latter may be chosen from another area of engineering.
 - c. **Electives:** 4 credits of free electives, which may be used to meet the 180 credits required for graduation.