9. Change in Curriculum

Dwight Look College of Engineering
Department of Aerospace Engineering
BS in Aerospace Engineering
Minor in Aerospace Engineering
CHANGE IN CURRICULA
CHANGE IN CURRICULUM

Dwight Look College of Engineering
Department of Aerospace Engineering
BS in Aerospace Engineering
Texas A&M University
Request for a Change in Curriculum

1. Request change for: 
   - [ ] Degree Program 
   - [ ] Minor 
   - [ ] Certificate

2. Request submitted by (Department or Program Name):
   Aerospace Engineering

3. Program Designation and Name
   (e.g. B.A. in History, Minor in History, Certificate in European Union):
   B.S. in Aerospace Engineering

4. Brief description of change:
   1) Consolidate AERO 201, 209, and 210 (each 2 hour) into 201 and 210 (each 3 hour); 2) Remove 320 and increase credit hours in 220; 3) Remove 213 and introduce 413; 4) Remove 305; 5) Remove KINE 198 and 199 (each 1 hour); 6) Remove ENGL 301 from list of courses that fulfill Communications requirement

5. Rationale for change:
   The BS in AERO curriculum is reduced from 134 to 128 credit hours as a result of these changes. Details on each brief description of change stated:
   1) Streamline course material and reduce overlap in content (1 credit hour reduction); 2) Streamline course material, reduce overlap in content, and utilize course material coverage now included in ENGR 111 and 112 (1 credit hour reduction); 3) Move course material into senior year; 4) Reduce overlap in content (2 credit hour reduction); 5) KINE courses will no longer be required for graduation purposes at TAMU (2 credit hour reduction); 6) Course has been removed from the list of acceptable Communication electives.

6. Use the checkboxes below to make sure that all information is included.
   - [ ] a. Proposed curriculum attached.
   - [ ] b. Current catalog curriculum with handwritten edits attached.
   - [ ] c. Current howdy degree evaluation with handwritten edits attached.

   Please make sure the attached proposed curriculum, catalog and Howdy degree evaluation match.

7. Will degree program hours change (increase/decrease) due to the proposed curriculum changes?
   - [ ] a. Yes 
   - [ ] No

   If yes, degree program hours will change from: ______ to: ______

   If yes, is the Texas Higher Education Coordinating Board form attached?
   - [ ] Yes 
   - [ ] No
   http://www.thecb.state.tx.us/index.cfm?objectid=A0F9P7FA-9A92-4F11-2756AD3BBF01D60

8. If proposed changes affect other unit(s), are letters of support attached?
   - [ ] Yes 
   - [ ] No

IMPORTANT NOTE: Curriculum changes submitted through the approval process and finally approved by February (December - UCC/GC, January - Faculty Senate, February - President) will be effective in the next academic year. Changes requiring approval beyond the University should complete the internal approval process early in the fall semester whenever possible in order to ensure timely implementation.

Approval recommended by:

[Signature]
Department Head or Program Chair (Type Name & Sign) Date

[Signature]
Dean of College Date

[Signature]
Chair, College Review Committee Date

[Signature]
Chair, GC or UCC Date

Questions regarding this form should be directed to Curricular Services at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 07/12

DEC 02 2013
RECEIVED
CURRICULAR SERVICES
Overview of Curriculum Changes to BS in Aerospace Engineering

The Department of Aerospace Engineering requests the following changes to the current AERO curriculum. The result of the following changes will be a curriculum that has been reduced from 134 credit hours to 128 credit hours.

1) Consolidate AERO 201, 209, and 210 (each 2 hour) into 201 and 210 (each 3 hour)
2) Remove AERO 320 and increase credit hours in 220
3) Remove AERO 213 and introduce 413
4) Remove AERO 305
5) Renumber AERO 421 to 321
6) Move AERO 212 to the first semester sophomore year
7) Move AERO 422 to the second semester senior year
8) Remove KINE 198 and 199 (each 1 hour)
9) Remove ENGL 301 from list of courses that fulfill Communications requirement

Rationale

1) Streamline course material and reduce overlap in content by going from three courses with a total of 7 credit hours to two courses with a total of 6 credit hours.
2) Streamline course material, reduce overlap in content, and utilize course material coverage now included in ENGR 111 and 112, which allows going from two courses with a total of 5 credit hours to one course with a total of 4 credit hours (1 credit hour reduction).
3) Integrate introductory material from AERO 213 into 214 and move additional material to 413, which would be a required course in the senior year.
4) Reduce overlap in content (2 credit hour reduction) and introduce aspects of experimental design into a current course, AERO 214.
5) Properly reflect junior level placement in the curriculum.
6) Balance the load in the sophomore year.
7) Balance the load in the senior year.
8) KINE courses will no longer be required for graduation purposes at TAMU (2 credit hour reduction).
9) Course has been removed from the list of acceptable Communication electives.
# CURRICULUM IN AEROSPACE ENGINEERING

## (Fall 2014)

### FRESHMAN

<table>
<thead>
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<td>MATH 150</td>
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<td>MATH 151&lt;sup&gt;R&lt;/sup&gt;</td>
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<td>PHYS 218, MATH 152&lt;sup&gt;R&lt;/sup&gt;</td>
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<td>ENGL 104 (3-0)&lt;sup&gt;CBK, 1&lt;/sup&gt;</td>
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### SOPHOMORE

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<td>AERO 201 (3-1)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Admission to AERO, MATH 251&lt;sup&gt;R&lt;/sup&gt;</td>
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<td>AERO 201, MATH 308&lt;sup&gt;R&lt;/sup&gt;</td>
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<td>AERO 212 (3-1)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 201&lt;sup&gt;R&lt;/sup&gt;, 251&lt;sup&gt;R&lt;/sup&gt;</td>
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<td>AERO 220 (3-3)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 301 (3-0)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 201, 212, 220, MATH 308</td>
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<td>AERO 303 (3-0)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 302 (1-3)&lt;sup&gt;1, W&lt;/sup&gt;</td>
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<td>AERO 304 (3-0)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 214, 220, MATH 308</td>
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<td>AERO 351 (3-0)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 310 (3-0)&lt;sup&gt;1&lt;/sup&gt;</td>
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### SENIOR

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<td>AERO 401 (2-3)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>AERO 413 (3-0)</td>
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<td>AERO 306</td>
<td>3</td>
<td>AERO 422 (3-0)</td>
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<td>AERO 423 (3-0)</td>
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<td>AERO 321</td>
<td>3</td>
<td>AERO 452 (3-0)</td>
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<td>Design Elective&lt;sup&gt;5&lt;/sup&gt;</td>
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<td>see course descriptions</td>
<td>6</td>
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### TOTAL CREDIT HOURS 128

**Notes:**

- CBK Common Body of Knowledge courses
- R Or registration therein (co-requisite).
- W Designated as TAMU Writing Intensive Course required by UCC committee.
- 1 Requires a grade of "C" or better (includes all courses that are used as prerequisites for the AERO degree plan courses).
- 2 To be selected from the University Core Curriculum (UCC). Of the 18 hours shown as UCC electives, 3 must be from creative arts, 3 from social and behavioral sciences (SBS), 6 from American history, 6 from POLS 206 and 207, and 6 from international and cultural diversity (ICD). The ICD requirement may be met by courses satisfying the creative arts, SBS, and history requirements if they are also on the list of ICD courses.
- 3 To be selected from ENGL 210 or COMM 205.
- 4 To be selected from AERO 430 or MATH 401.
- 5 AERO 405, 417, 426, 428, 472, or 489 if designated as an AERO design elective.
- 7 ECEN 421: see University catalog.
Curricula in Engineering

The freshman year is almost identical for degrees in aerospace engineering, biological and agricultural engineering, biomedical engineering, chemical engineering, civil engineering, computer engineering, electrical engineering, industrial engineering, mechanical engineering, nuclear engineering, ocean engineering, petroleum engineering and radiological health engineering, thus allowing a student with adequate grades to change majors within the Look College of Engineering. Although listed in eight semesters, most students will change the sequence and number of courses taken in any semester. However, deviations from the prescribed course sequence should be made with care to ensure that prerequisites for all courses are met.

In addition to the listed freshman year, please refer to the specific major curriculum for other requirements.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>(Th-Pt)</th>
<th>Cr</th>
<th>Second Semester</th>
<th>(Th-Pt)</th>
<th>Cr</th>
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<tr>
<td>ENGL 104 Comp. and Rhetoric</td>
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<td>CHEM 10 Gen. Chem. for Eng. Students</td>
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<tr>
<td>ENGR 111 Foundations in Engineering I</td>
<td>(1-3)</td>
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<td>CHEM 111 Gen. Chem. for Eng. Stu. Lab</td>
<td>(0-3)</td>
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<tr>
<td>MATH 151 Engineering Mathematics I</td>
<td>(3-3)</td>
<td>4</td>
<td>ENGR 112 Foundations in Engineering II</td>
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<td>PHYS 218 Mechanics</td>
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<td>MATH 152 Engineering Mathematics II</td>
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<td>PHYS 206 Electric and Optics</td>
<td>(3-3)</td>
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<tr>
<td>KINE 198 Health and Fitness Activity</td>
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<td>University Core Curriculum electives</td>
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<td></td>
<td>MINE 199 Required Physical Activity</td>
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NOTES: Entering students will be given a placement test in mathematics. Test results will be used in selecting the appropriate starting course which must be at a higher or similar level.

To be selected from the University Core Curriculum. Of the 18 hours required, 3 must be from social and behavioral sciences, 6 from fine and performing arts, 3 from natural and physical sciences, 6 from humanities and human behavior, and the remaining 3 hours may be chosen from the University Core Curriculum. The required 6 hours from international and cultural diversity may be met by courses satisfying the University Core Curriculum broad area requirements, social and behavioral sciences, and the fine and performing arts requirements. There are also on the approved list of international and cultural diversity courses.

ENGR, CHEM, and PHYS electives may be selected from engineering chemistry, which may be satisfied by CHEM 101, CHEM 102, CHEM 103, CHEM 112, PHYS 101, PHYS 102, PHYS 113, PHYS 114, CHEM 101, CHEM 102, CHEM 103, CHEM 112, PHYS 101, PHYS 102, PHYS 113, PHYS 114, CHEM 101, CHEM 102, CHEM 103, CHEM 112, PHYS 101, PHYS 102, PHYS 113, PHYS 114.

See page 20

**A grade of C or better will be required for the Common Body of Knowledge (CBK) courses: MATH 151 and MATH 152, PHYS 218 and PHYS 218; CHEM 101 and CHEM 111, CHEM 102 and CHEM 112, CHEM 112 and CHEM 112, ENGR 104 and ENGR 112, and any other course designated by the individual engineering departments. Prerequisites for the CBK courses will not be included in the calculations for CBK grade point average. See descriptions of individual majors and the requirements: variables from the departmental offices.

** The following majors have different freshman year requirements: CHEN, CPSC, ESET, MMET, IDIS, RHEN

American History and Government and Political Science Requirements

Creative arts
ternship. Given the challenging demands for both better outcomes and lower costs in medical care, candidates for this certificate are expected to be entering a high-growth job market for engineers.

For further information, contact the Quality Engineering for Regulated Medical Technologies Certificate coordinator or the Engineering Student Services and Academic Programs Office, Room 129 Zachry Engineering Center, (979) 845-7200.

Safety Engineering Certificate

The Safety Engineering Certificate prepares the graduate for positions in several areas of safety engineering. Students must complete 15 semester credit hours of specified courses to earn the Safety Engineering Certificate. The Safety Program coordinator reviews each student's coursework prior to certification; both the coordinator and the Dean must then approve each student before the certificate is awarded.

For further information, contact the Safety Engineering Certificate coordinator or the Engineering Student Services and Academic Programs office, Room 129, Zachry Engineering Center, (979) 845-7200.

Curriculum in Aerospace Engineering

Aerospace Engineering is a complex, rapidly changing field that includes aerodynamics, structures and materials, propulsion, dynamics and control, and astrodynamics. The primary application of aerospace engineering is to the design and development of flight vehicles, such as aircraft, missiles, spacecraft and satellites. Aerospace engineering is also important and applicable to other vehicles and systems, such as rotorcraft, submarines, automobiles, wind turbines and robotics.

The mission of the Aerospace Engineering program is (1) to provide students with a quality undergraduate and graduate education for the State of Texas and the nation through an innovative educational program; (2) to advance the science and aerospace engineering knowledge base through basic and applied research, inventions, technologies and solutions to aerospace problems; and (3) to serve the aerospace engineering profession by preparing leaders for leadership in the creation, design and operation of the next generation aerospace systems. To achieve this mission, the educational objectives established by the Aerospace Engineering undergraduate program are to produce graduates whose expected accomplishments within three to five years of graduation are (1) to have successful careers in industry, private practice, or government, or have pursued advanced graduate studies; (2) to be skilled practitioners who apply their knowledge and skills to solve relevant engineering problems in the aerospace or a related profession; and (3) to function well in teams, communicate well, continue enhancing their professional competence, and understand the impact of engineering solutions. To carry out these educational objectives, the goals of the program are (1) using a high quality faculty, to provide a comprehensive aerospace engineering education that develops in students the fundamental skills necessary for the design, synthesis, analysis and research development of aircraft, spacecraft and other high technology flight systems; and (2) to prepare students for the aerospace engineering profession and related fields by developing in them the attributes needed, so that they can contribute successfully to society and to the engineering profession now and in the future.
The curriculum is generally composed of three topical areas which are (1) core courses
composed of humanities, visual and performing arts, international and cultural diversity,
and social sciences, (2) basic science and mathematics, and (3) engineering science and
design. The core courses are intended to broaden a student's education and to provide
training in oral and written communication skills. In addition, they ensure an awareness
of our cultural heritage and contemporary human situation. The basic science and math-
ematics courses provide the necessary foundation for the engineering science courses.
The latter start at the sophomore year with topics common to many fields of engineer-
ning and continue in the last two years with sequences in aerodynamics, structures and
materials, propulsion, and dynamics and control. These provide a strong fundamental
basis for advanced study and specialization, while technical electives offer a concentra-
tion of study in fields of special interest. Design philosophy and practice are developed
throughout the curriculum so as to relate analysis to aerospace engineering design; and
the design of aerospace system components is particularly emphasized in the junior
and senior-level courses. A senior-level two-semester design sequence, involving spec-
ific goals, objectives, and constraints, integrates analysis and design tools and requires
students working in small teams to design, build, test, and even fly an aerospace system,
such as an aircraft, rocket, spacecraft or rotorcraft. Application of modern engineering
and computational tools is required and emphasized in all courses.

The department is pleased to offer a Bachelor of Science in Aerospace Engineering
with Honors degree option. This option was proposed by our students and implemented
for our students. Very few programs across the country offer this type of experience
within Aerospace Engineering. You will be provided with the opportunity to enhance
your learning experience through one-on-one research with a faculty mentor, introduc-
tion to advanced aerospace theories, and much more. The department also offers a Fast
Track program, which is tailored for high-achieving undergraduate students who wish to
extend their knowledge and gain an edge by earning a Master of Engineering (MEng) de-
gree. Fast Track allows qualified students to earn up to nine hours of credit toward their
Aerospace Engineering undergraduate and graduate degrees. Consequently, through
Fast Track a student can earn a MEng degree in two semesters beyond their undergradu-
ate degree.

The department's laboratories are used to supplement theoretical studies in the major
disciplines. Numerous wind tunnels for low-speed and supersonic aerodynamic studies,
a jet engine test facility, numerous research aircraft, a flight simulator, a satellite labora-
tory with Integrated Concurrent Engineering Capability, a robotics laboratory, and state-
of-the-art materials and structures testing equipment are available; and all are equipped
with modern instrumentation. The department and the University also provide an exten-
sive array of computing resources.

The department participates in the Cooperative Education Program, which provides
an opportunity for qualified students to obtain practical engineering work experience
with participating companies. The co-op degree plan includes three or four work peri-
ods, which are integrated with full-time study semesters.

In addition, the department offers many undergraduate research opportunities. The
department also offers programs of study leading to the MEng, MS, and PhD degrees
(see the Texas A&M University Graduate Catalog).
SOPHOMORE YEAR

**First Semester**

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<td>AERO 200 Intro to Aerospace Eng.</td>
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<td>Math 315 Engineering Mathematics III</td>
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JUNIOR YEAR

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<td>AERO 302 Aerospace Lab</td>
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<td>AERO 304 Aircraft Structural Analysis</td>
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<td>AERO 310 Aerospace Dynamics</td>
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<td>ENGR 315 Principles of Electronic Eng.</td>
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<td>ENGR 321 Technical Writing</td>
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SENIOR YEAR

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<td>AERO 413 Aircraft Design II</td>
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<td>AERO 421 Heat Transfer and Viscous</td>
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<td>ENGR 415 Technical Writing</td>
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<td>Math 315 Advanced Engineering Math</td>
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**NOTES**

1. Required by major program. A minimum of 96 hours is required for a Bachelor of Science in Aerospace Engineering.
2. University Core Curriculum requirements: 24 hours of social sciences, 9 hours of humanities, 9 hours of natural sciences, and 6 hours of oral communication.
3. Design elective selected from AERO 401, AERO 413, AERO 421, AERO 425, AERO 428 or AERO 431.

The following concentrations are available: Aerospace Materials Science, Aerospace Structures, Aerospace Propulsion, Aerospace Systems, and Aerospace Fluid Mechanics.

Curriculum in Biological and Agricultural Engineering

Biological and agricultural engineers apply their knowledge of physical and biological sciences, mathematics, engineering principles and engineering design to the production and processing of food and fiber, to the preservation of environmental quality, to biological systems and processes, and to machine systems that interface with all of these. Because of their broad general engineering background, biological and agricultural engineering graduates are sought by a wide variety of employers including environmental consulting...
### Program Evaluation

**Limitation**
- Correspondence: No more than 12 hours of correspondence earned through an accredited institution may be used for an undergraduate degree.
- Combination: Maximum combination of 18 hours of 481, 482, 485 and/or 491 courses may be used for an undergraduate degree.

**Program:** BS AERO  
**Campus:** College Station  
**College:** Dwight Look College of Engr  
**Degree:** Bachelor of Science  
**Level:** Undergraduate  
**Majors:** Aerospace Engineering  
**Departments:** Aerospace Engineering

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**Expected Graduation Date:**  
**Request Number:** 1  
**Results as of:** Nov 18, 2013

### Met Credits Courses

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This is NOT an official evaluation.

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**Area:** Major Coursework (50,000 credits) - Not Met

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* remove rule G.
**Detail Requirements**

Must make a grade of 'C' or better.

- No AND N. AERO 302
- No AND L. AERO 305
- No AND W. AERO 402
- No AND P. AERO 423
- No AND Q. AERO 452
- No AND R. AERO Elect 3hrs

Select from AERO 405, 417, 426, 428, 472.

- No AND E. AERO 220 - Now 4hrs
- No AND R. AERO 422
- S. AERO 413

Unofficial Evaluation

**Area: Supporting Coursework (36.000 credits) - Not Met**

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Unofficial Evaluation

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Total Credits and GPA: 0.000
unofficial evaluation

Area: Mathematics (17.000 credits) - Not Met

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unofficial evaluation

Area: Physical Sciences

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unofficial evaluation

Area: Humanities (3.000 credits) - Not Met

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unofficial evaluation

Area: Visual and Performing Arts (3.000 credits) - Not Met
unofficial evaluation

Area: Social and Behavioral Science (3.000 credits) - Not Met

Met: Visual and Performing Arts 3hrs
- Select from any course with the Univ-Req VisPerf Arts attribute (UVPA) (except ARTS 100, MUSC 100, MUSC 101, THAR 365).

unofficial evaluation

Area: Citizenship (12.000 credits) - Not Met

Description: Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of U.S. History and 3 hours of Political Science.

Met: U.S. History Reqmt 6hrs
- Select from the following:
  1. 6 hours. Take HIST 105, 106.
  2. Up to 6 hours with the U.S. History attribute (UHIST).
  3. Up to 3 hours with the Texas History attribute (TXHIS).
  4. Up to 3 hours with the Citizenship attribute (CITIZ).

Met: Political Science Reqmt 6hrs
- Select from the following:
  1. 6 hours. Take POLS 206, 207.
  2. Up to 3 hours with the Citizenship attribute (CITIZ).

unofficial evaluation

Area: Kinesiology-Physical Activity (1.000 credits) - Not Met

Met: KINE 199
- Must be taken S/U.

unofficial evaluation

Area: Kinesiology-Health & Fitness (1.000 credits) - Not Met

Description: Transfer students may fulfill the Kinesiology and Health Fitness requirement by transferring two KINE 199's taken prior to attend

Met: 

unofficial evaluation

**Area:** Work Not Applied - Met

**Description:** See advisor for acceptable substitutions.

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unofficial evaluation

**Area:** Common Body of Knowledge - Not Met

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<td>Must have a grade of 'C' or better.</td>
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<td>Must have a grade of 'C' or better.</td>
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</table>

Total Credits and GPA 0.000

unofficial evaluation

**Area:** University Writing Requirement - Not Met

<table>
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<th>Condition Rule</th>
<th>Subject</th>
<th>Attribute</th>
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<th>Required Term</th>
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<th>Course</th>
<th>Title</th>
<th>Attribute</th>
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<th>Courses</th>
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<td>Two courses required.</td>
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<td>Only sections of AERO 302; ENGR 482; PHIL 482 with the</td>
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<td>Writing attribute [UWRT] may be used to satisfy this</td>
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Total Credits and GPA 0.000

unofficial evaluation
Area: Int'l & Cult Diversity - Not Met

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<th>Attribute</th>
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<th>Courses</th>
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<td>Int'l &amp; Cultural Diversity 6hr</td>
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</table>

Select from courses with the International and Cultural Diversity attribute [UID] (except sections of BUSN 289 with the UWRT attribute).

Total Credits and GPA 0.000

unofficial evaluation

Area: Foreign Language - Not Met

<table>
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<th>Condition</th>
<th>Subject</th>
<th>Low</th>
<th>High</th>
<th>Required</th>
<th>Required</th>
<th>Term</th>
<th>Subject</th>
<th>Course</th>
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<th>Attribute</th>
<th>Credits</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>A.</td>
<td>Foreign Language Reqmt</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Complete one of the following:
1. Two years of the same foreign language in High School.
2. A two semester sequence of the same foreign language for University credit.

Total Credits and GPA 0.000

unofficial evaluation

Area: Residence Requirement - Not Met

Description: A minimum of 36 hours of 300-400 level coursework must be completed at Texas A&M University. 12 hours must be in the major field.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Subject</th>
<th>Low</th>
<th>High</th>
<th>Required</th>
<th>Required</th>
<th>Term</th>
<th>Subject</th>
<th>Course</th>
<th>Title</th>
<th>Attribute</th>
<th>Credits</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>A.</td>
<td>Residence-Major 12hrs</td>
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</tr>
</tbody>
</table>

Select from AERO 300-499.

No AND B. Residence 300-499 24hrs

Select any courses level 300-499.

Total Credits and GPA

unofficial evaluation

Area: GPR-Major - Not Met

<table>
<thead>
<tr>
<th>Condition</th>
<th>Subject</th>
<th>Low</th>
<th>High</th>
<th>Required</th>
<th>Required</th>
<th>Term</th>
<th>Subject</th>
<th>Course</th>
<th>Title</th>
<th>Attribute</th>
<th>Credits</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>A.</td>
<td>Major GPR 46+hrs</td>
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</tr>
</tbody>
</table>

Select from AERO 100-499, MEMA 467. Must maintain a GPR of 2.0 in this area.

Total Credits and GPA 0.000

unofficial evaluation

Back to Display Options
Texas Higher Education Coordinating Board  
Request to Change Semester Credit Hours

Directions: An institution shall use this form to request a change in the number of semester credit hours (SCH) required for a degree program already on the institution’s program inventory in accordance with Coordinating Board Rules, Chapter 5, Subchapter C, Section 5.55 – Revisions to Approved Programs.

Options:

1) Revisions that reduce the number of SCH require notification of change and affirmation that the reduction does not fall below the minimum requirements of the Southern Association of Colleges and Schools Commission on Colleges, program accreditors, and licensing bodies, if applicable.

2) Revisions that increase the number of SCH require detailed written documentation describing the compelling academic reason for the increase in the number of required hours.

NOTE: No request or notification is needed if revisions to the degree program curriculum do not result in a change in SCH.

Options 1 and 2 require the signature of the Provost or Chief Academic Officer.

Please submit Request to Change Semester Credit Hour via the Online Submission Portal: https://www1.thecb.state.tx.us/apps/proposals/

Information: Contact the Division of Workforce, Academic Affairs and Research at 512/427-6200.

---

Administrative Information

1. Institution: Texas A&M University

2. Program Name – As it appears on the Coordinating Board’s program inventory (e.g., Bachelor of Business Administration degree with a major in Accounting): Bachelor of Aerospace Engineering

3. Program CIP Code: 1402010006

4. Contact Person: Provide contact information for the person who can answer specific questions about the program.
   Name: Kristi Shryock
   Title: Assistant Department Head
   E-mail: kshryock@tamu.edu
   Phone: 979-845-0735
Notification/Request for Change in Semester Credit Hours (SCH):

Current SCH: _______134_______

Proposed SCH: _______128_______

Implementation Date: Fall 2014

Complete Option 1 or 2 as appropriate

Option 1: Reduction in Semester Credit Hours

Is the change in the number of SCH compatible with the requirements of accreditation for the program?

a. Southern Association of Colleges and Schools Commission on Colleges
   □ YES    □ NO

b. Program Accréditor(s)
   □ YES    □ NO    □ NA
   Name of Program Accréditor: __ABET________________

c. Licensing Body(ies)
   □ YES    □ NO    □ NA
   Name of Licensing Body(ies): _______________________

Option 2: Increase in Semester Credit Hours

Provide detailed documentation, such as changes in accrediting agency or licensing body requirements, workforce needs, or academic professional standards and needs, describing a compelling reason for the change in the number of SCH:

Signature of Compliance

I hereby certify that all of the above changes have been approved in accordance with the procedures outlined in Coordinating Board Rules, Chapter 5, Subchapter C, Section 5.55.

________________________________________  __________________________
Provost/Chief Academic Officer                        Date
CHANGE IN CURRICULUM

DWIGHT LOOK COLLEGE OF ENGINEERING
DEPARTMENT OF AEROSPACE ENGINEERING
MINOR IN AEROSPACE ENGINEERING
Texas A&M University
Request for a Change in Curriculum

1. Request change for:
   - Degree Program
   - Minor
   - Certificate
   - Aerospace Engineering

2. Request submitted by (Department or Program Name):
   - Aerospace Engineering

3. Program Designation and Name
   - Minor in Aerospace Engineering

4. Brief description of change:
   1) AERO 421 is being renumbered to AERO 121; 2) AERO 209, 213 and AERO 320 are being removed from the minor prerequisites

5. Rationale for change:
   The BS in AERO curriculum will be reduced from 134 to 128 in an effort to streamline course material and reduce overlap in content. We are updating our minor to reflect these changes. 1) AERO 421 is being renumbered to reflect its placement in the junior year of our curriculum. 2) AERO 209, 213 and AERO 320 are being removed from our degree plan and the catalog.

   - Yes
   - No

   b. Current catalog curriculum with handwritten edits attached.
   - Yes
   - No

   c. Current Howdy degree evaluation with handwritten edits attached.
   - Yes
   - No

   Please make sure the attached proposed curriculum, catalog and Howdy degree evaluation match.

7. a. Will degree program hours change (increase/decrease) due to the proposed curriculum changes?
   - Yes
   - No

   b. If yes, degree program hours will change from: _________ to: _________

   c. If yes, is the Texas Higher Education Coordinating Board form attached?
   - Yes
   - No
   - [Link]

8. If proposed changes affect other unit(s), are letters of support attached?
   - Yes
   - No

IMPORTANT NOTE: Curriculum changes submitted through the approval process and fully approved by February (December-UCC/IGC, January-Faculty Senate, February-President) will be effective in the next academic year. Changes requiring approval beyond the University should complete the internal approval process early in the fall semester whenever possible in order to ensure timely implementation.

Approval recommended by:

[Signatures and dates]

Questions regarding this form should be directed to Curricular Services at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 07/12
## Minor Field of Study

18 hours from the following 300-400 level courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>AERO 301</td>
<td>Theoretical Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>AERO 304</td>
<td>Structural Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>AERO 310</td>
<td>Aerospace Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>AERO 303</td>
<td>High Speed Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>AERO 306</td>
<td>Structural Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>AERO 421</td>
<td>Dynamics of Aerospace Vehicles</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional requirements:
1. Overall GPR > 2.50 when entering the minor field of study.
2. Major GPR > 2.50 when entering the minor field of study.
3. Must earn C or higher to count as a minor field of study.
4. Prerequisites:
   - Completion of the Common Body of Knowledge courses for engineering with a 2.35 Overall GPR and 2.65 CBK GPR.
   - AERO 201, AERO 259, AERO 210, AERO 212, AERO 213, AERO 214, AERO 220, AERO 320; MATH 308 or equivalents.

I, hereby request approval to acquire a minor field of study from the Department of Aerospace Engineering under the rules of the University and the Dwight Look College of Engineering. I understand I am responsible to seek advising from the Department of Aerospace Engineering for all matters related to this minor program.

---

Student's printed name

Major

UIN

Student's Signature

/ / Date

Undergraduate Advisor Signature

Date

Department of Aerospace Engineering

/ / 

Major department authorization date date entered in SIMS by major dept.

Please return the original copy of the document to the Undergraduate Programs Office, Department of Aerospace Engineering, MS 3141.

Approval to pursue the minor from Aerospace; completion of CBKS with at least a C or better.
Minor Field of Study

18 hours from the following 300-400 level courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>AERO 301</td>
<td>Theoretical Aerodynamics</td>
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<tr>
<td>AERO 304</td>
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<td>AERO 310</td>
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<td>AERO 303</td>
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<tr>
<td>AERO 306</td>
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<tr>
<td>AERO 321</td>
<td>Dynamics of Aerospace Vehicles</td>
<td>3</td>
</tr>
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</table>

Additional requirements:
1. Overall GPR > 2.50 when entering the minor field of study.
2. Major GPR > 2.50 when entering the minor field of study.
3. Must earn C or higher to count as a minor field of study.
4. Prerequisites:
   - Approval to pursue the minor from Aerospace; completion of CBKs with a C or better
   - AERO 201, AERO 210, AERO 212, AERO 214, AERO 220, MATH 308 or equivalents.

I, hereby request approval to acquire a minor field of study from the Department of Aerospace Engineering under the rules of the University and the Dwight Look College of Engineering. I understand I am responsible to seek advising from the Department of Aerospace Engineering for all matters related to this minor program.

Student's printed name ________________________________  Major __  UIN ____________

______________________________  
Student's Signature

_______/______/________

Undergraduate Advisor Signature  Date

Department of Aerospace Engineering

/  /  /  /

Major department authorization date  date entered in SIMS by major dept.

Please return the original copy of the document to the Undergraduate Programs Office
Department of Aerospace Engineering, MS 3141
### Area: Work Not Applied - Not Met

#### Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses

<table>
<thead>
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<th>No</th>
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### Area: Common Body of Knowledge - Not Met

#### Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses

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<tr>
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<td>C.</td>
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### Area: Aerospace Engr Minor (18.000 credits) - Not Met

#### Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses

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<th>No</th>
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<th>AERO 301</th>
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<td>Must make a grade of 'C' or better.</td>
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<td>Rule</td>
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<td></td>
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<tr>
<td>Met</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int’l &amp; Cult Diversity - Not Met</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Foreign Language - Not Met</td>
<td>No</td>
<td></td>
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<tr>
<td>Residence Requirement - Not Met</td>
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