2023 – 2024 Applied Engineering Program Credits

Name: _____   Date: _____

Applied Engineering Program Certificate Requirements:
The intent of the Applied Engineering Program is to expose students to as many different aspects and facets of the engineering profession and its many fields of study. To that end, there are no specific requirements that must be fulfilled in order to complete the program (other than successfully completing an advanced engineering course). Rather, the program has been structured to reward students with credits as they complete a wide variety of engineering-related courses and activities.

Instructions:
1. Complete the following form indicating where credits have been earned towards receiving an Applied Engineering Program Certificate. Please be as accurate and complete as possible.
2. Obtain the necessary signatures of approval at the bottom of this page. These signatures serve as confirmation that the information included is accurate.
3. Make a copy of this form to keep for your records and then return it to the Applied Engineering Program Director. You are encouraged to use this form to track your progress towards earning an Applied Engineering Program Certificate.

It is strongly recommended that you complete and submit this form during January of your senior year.

An Applied Engineering Program **Major** Certificate is awarded after successfully earning **28** credits.
An Applied Engineering Program **Minor** Certificate is awarded after successfully earning **18** credits.

Summary and approvals:

Your signature/date: _____

Faculty Advisor signature/date: _____

Academic Advisor signature/date: _____

This section is to be completed by the Applied Engineering Program Director:

Total credits earned: _____

Applied Engineering Program Certificate earned: ____ None   ____ Minor   ____ Major

Applied Engineering Program Director signature/date: _____

Coursework:	Credits available:	Credits earned:	Year/Sem taken:	Grade earned:[2]
Applied Engineering[1, 3]	4 each			
e4usa Engineering[1]	4			
Introduction to Engineering	4			
Independent Study (Engineering)	4			
AP Biology	3			
AP Chemistry	3			
AP Physics 1	3			
AP Physics 2	3			
DE Anatomy and Physiology	3			
DE Nutrition & Human Development	3			
Astrophysics	2			
Land Management	2			
Design/Build[3]	2 each			
Sustainable Agriculture[3]	2 each			
AP Pre-Calculus	3			
AP Calculus AB	3			
AP Calculus BC	3			
AP Statistics	3			
Differential Equations	3			
Calculus	2			
Pre-Calculus	2			
Computer Programming	2			

1: To earn a Major Certificate, either the Applied Engineering course or e4usa Applied Engineering is required.
2: Full credit can be earned with a grade of C+ (77%) or higher. (Classes taken in the spring semester of senior year will still be approved without final grades.)
3: These courses can be taken multiple times for credit.
4: Other AP, DE (dual enrollment), programming, or engineering courses (including classes taken at other schools) will be considered for credit. See the Applied Engineering Program director for more information.

Non-coursework:
For non-coursework, it is possible to receive multiple credits for completing an activity more than once. You may attach additional pages to document your various activities.

After-School Engineering

Credits available: No. of seasons taken: Total credits earned:

1.0 (for Fall or Winter seasons)   _____   _____

0.5 (for Spring season)   _____   _____

Year/Season(s) taken:_____ Project(s):_____

Year/Season(s) taken:_____ Project(s):_____

Year/Season(s) taken:_____ Project(s):_____

Year/Season(s) taken:_____ Project(s):_____

Year/Season(s) taken:_____ Project(s):_____

WWOWW (Engineering related)

Credits available: No. of classes taken: Total credits earned:

0.25 (for each class)   _____   _____

WWOWW class name:_____

       Teacher and year taken:_____

WWOWW class name:_____

       Teacher and year taken:_____

WWOWW class name:_____

       Teacher and year taken:_____

WWOWW class name:_____

       Teacher and year taken:_____

WWOWW class name:_____

       Teacher and year taken:_____

WWOWW class name:_____

       Teacher and year taken:_____

Non-coursework:

For non-coursework, it is possible to receive multiple credits for completing an activity more than once. You may attach additional pages to document your various activities.

Professional Experience (Engineering related)

<u>Credits available:</u> varies   <u>Credits earned:</u> _____

Professional experiences come in many forms. For instance, a summer spent assisting with a research project at either a business or a university could qualify as a professional experience. To earn Applied Engineering Program Credits for professional experiences, a written paragraph summary of those experiences must be submitted. Include detailed information about tasks and activities completed, and date(s) and duration of experience. The Applied Engineering Program Director will determine credit earned based on the information provided in the paragraph summary. (Please type, print, and attach to this form.)

Field Trips/Activities (Engineering related)

<u>Credits available:</u>   <u>No. of trips/activities taken:</u>   <u>Total credits earned:</u>

0.25 (for each field trip/activity)   _____   _____

Examples include (but are not limited to):

- College Engineering Open House or Lab Tour(s) (list each)
- SWE / SASE / NSBE / ASCE / Math club membership (list each)
- Tutoring a STEM subject (include subject & year/semester)
- National / Math / Science National Honor Societies
- Maker Faire (Charlottesville or other)
- USA Science and Engineering Festival
- Other STEM field/trips or activities (be descriptive)

- UVA Bio-Med Tech-Girls
- UVA McCormick Observatory
- UVA SWE High School Visitation
- SPARK! Hackathon
- Science Olympiad
- Destination Imagination
- FRC Robotics (or other)

1. Activity:_____ Date (mm/yy):_____

2. Activity:_____ Date (mm/yy):_____

3. Activity:_____ Date (mm/yy):_____

4. Activity:_____ Date (mm/yy):_____

5. Activity:_____ Date (mm/yy):_____

6. Activity:_____ Date (mm/yy):_____

7. Activity:_____ Date (mm/yy):_____

8. Activity:_____ Date (mm/yy):_____

9. Activity:_____ Date (mm/yy):_____

10. Activity:_____ Date (mm/yy):_____