

Name: Michael DeForest

Date: 4/25/19

## 2019 Advisory Board Surveys

Welcome to our annual advisory board meeting. As you know, we consider each of you to be valued shareholders in our program. The meeting is our annual shareholder's meeting, where we show you our performance report and discuss methods of improving the program. This document is your official advisory board survey, and it is *extremely important to our program*. It is design to do two things. First, the completed surveys provide *documentation* that you have been briefed on the performance of our cadets and the relevance of the program objectives. This is extremely important for maintaining our accreditation. Second, it allows us to use your collective knowledge and experience to *identify areas* where we might be in need of improvement. The surveys are based in part on the data that we present to you during this meeting, and your responses are your "thumbs up or down" to the various performance indicators we are tracking. This advisory board survey is part of the assessment for *Academic Year 2018* (students who graduated in May 2018).

### Instructions

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- Part III contains some free-form questions where you can comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
  
- *The surveys are due by the end of today, 26 April 2018.* If you complete the survey after you leave, please email a scanned copy or mail the physical copy to us as soon as possible.

Name: Michael Detrest

Date: 4/25/19

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Michael DeForest

Date: 4/25/19

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Michael DeForest

Date: 4/25/19

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

Two courses, a process safety chart, specific to Chemical Engineering and a technical writings course.

Do you have any suggestions to improve the advisory board meeting for next year?

The cadet forum could be larger for the cows if possible.

A cadet presenting a research topic could help evaluate program objectives.

Please add any addition comments that you would like to make below.

Provide roadmap for how classes link together and what you will learn from classes and how they will link to future classes.

Name: Paul Detrich

Date: 26 April 2019

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Name: Paul DiefenbachDate: 4/26/19**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Paul Dietrich

Date: 4/26/19

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree	
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Paul Dietrich

Date: 4-26-19

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

Happy to see The positive change in Process controls vs Previous CH 367

Do you have any suggestions to improve the advisory board meeting for next year?

Continue & refine Interview (mock) for Senior program

Please add any addition comments that you would like to make below.

Internships rated much improved  
+ many more available than previously  
however some feedback that better vetting  
of actual experiences vs. the CADOTS  
involves

- A "map" of relationships between non chemE courses to chemE - what is important - used also

For relationship of Program objectives to Courses

Name: Matthew Garvey

Date: 4/26/19

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Name: Matthew Garvey

Date: 4/26/19

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Matthew Garvey

Date: 4/26/19

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Matthew Garvey

Date: 4/26/19

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

N/A: Happy to see the success w/ the new CH 367 course.

Do you have any suggestions to improve the advisory board meeting for next year?

No. Very well executed. Having the slides ahead of time is helpful.

Please add any addition comments that you would like to make below.

The dedication from the USMA ChE staff to identify "weaknesses", address them, and document improvement is extremely impressive. Seeing ~~improven~~ solutions from issues brought up at previous meetings shows the strength of this department.

Name: DONALD GLASER

Date: APRIL 26, 2018

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Name: DONALD GLASER

Date: April 26 2018

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: DONALD OLSEN

Date: APRIL 26, 2019

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree	
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

H16n Molecules  
All of the Cu2+ ions  
use the same  
The 333333 with the ends  
like up the Cu2+ work!

Please add any additional comments that you would like to make below.

All Cu2+ ions.  
the Cu2+ ions have a positive charge.  
Age - the new donor molecules

Do you have any suggestions to improve the advisory board meeting for next year?

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

I would like to see a separate  
process safety course.

Part III. Open Questions. Answer the questions below or provide other input as desired.

Name: DANIEL CURRIN  
Date: April 26, 2018

Name: MATTHEW LIBERATORE

Date: 04/26/2019

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Name: LIBERATOREDate: 4/26/2019**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: LIBERATO

Date: 4/26/2019

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree	
The program objectives are consistent with the USMA mission.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: LIBERATORE

Date: 4/26/2019

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

MC312 writing component is good but could be more CHE focused.  
Eng. Electives could be more flexible; Make 1 of 3 electives  
a Science or Engineering Electives.

Do you have any suggestions to improve the advisory board meeting for next year?

Start with campus and facilities tour.

Right size group of 8-10.

Please add any addition comments that you would like to make below.

Future career paths were clearly articulated after the 5XR.  
See lots of options to do engineering AND something else  
(business, cyber, etc). Identify and <sup>need for</sup> mapping topics is  
amazing for the 2<sup>nd</sup> class students to recognize.  
Peer mentoring opportunities could be another form of leadership.

### 2019 Advisory Board Surveys

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- Part III contains some free-form questions where you can comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
  
- *The surveys are due by the end of today, 26 April 2018.* If you complete the survey after you leave, please email a scanned copy or mail the physical copy to us as soon as possible.

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Part II. Program Educational Objectives. Check the most appropriate box.**

	Strongly Disagree	Neutral	Strongly Agree	
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

- CADETS INDICATED THEY COULD BENEFIT FROM A LAB COURSE THAT INCLUDES INSTRUMENTATION, CHEM CAD, PROGRAMMING BEYOND MATHEMATICA.
- CADETS INDICATED INTEREST IN COURSE SEQUENCE ADDITIONS THAT MAY BUILD TO A MINOR (i.e. MATERIALS)

Do you have any suggestions to improve the advisory board meeting for next year?

- I PERSONALLY HAD A HARD TIME LINKING THE RESUMES TO CADET DISCUSSIONS DURING THE ROUND ROBIN EVENT w/ FIRSTIES IN AN EFFECTIVE WAY,

Please add any addition comments that you would like to make below.

- PRIORITIZING PART II OF BRIEF B/C IT DIRECTLY LINKS TO SURVEY QUESTIONS.
- SURVEY RESULTS MAY BENEFIT FROM GREATER ORIENTATION TO DBT / GDALS / MSN etc.

Name: Kelly Schutte

Date: April 26, 2018

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Name: Kelly Schutte

Date: April 26, 2019

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Kelly Schulz

Date: April 26, 2019

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree	
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Kelly Schulz

Date: April 26, 2019

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

A fluids course may be a benefit, ensure if this is part of the thermal-fluid systems, ~~similar~~  
~~to thermodynamics~~

~~a process~~

Technical writing class to track how to write separate from new technical concepts

Do you have any suggestions to improve the advisory board meeting for next year?

I enjoyed the interviews, I would suggest making it more of a conversation, having the seniors coming w/ questions. I would do this instead on the group conversation w/ the juniors

Please add any addition comments that you would like to make below.

Name: Kevin Shipe

Date: 30 Apr 19

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- o Part III contains some free-form questions where you can comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.

*May 10<sup>th</sup>*

- o *The surveys are due by the end of today, 26 April 2018.* If you complete the survey after you leave, please email a scanned copy or mail the physical copy to us as soon as possible.

Name: Shipe

Date: 30 Apr 19

Student  
Data  
Improvement  
Assessment ✓

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: ShifeDate: 30 Apr 18**Part II. Program Educational Objectives. Check the most appropriate box.**

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Student involvement  
always consistent with  
program objectives

Name: Shipe

Date: 30 Apr 19

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

I'm interested to see the impact of CH361 beginning next year. (currently) I don't have another specific additional course.

Do you have any suggestions to improve the advisory board meeting for next year?

I'm fine with the bunch rotation and understand the need; however is it possible to add a web-based section to gather feedback from cadets or observe the cadet discussion section?

Please add any addition comments that you would like to make below.

It seems like many changes have pulled the curriculum in a direction that is helping the cadets achieve good assessment results. This is a positive trend. However, for the most part some cadets don't seem confident that much of the curriculum is improving their skills (according to provided data). Is there a way they can gain more confidence in the program?

Name: Patrick Underhill

Date: 04/26/2019

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Name: Patrick Underhill

Date: 04/26/2019

**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Patrick Underhill

Date: 04/26/2019

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Patrick Underhill

Date: 04/26/2019

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

Based on the curriculum restrictions, the curriculum looks good.

Do you have any suggestions to improve the advisory board meeting for next year?

I thought it was a good mix of activities.

Please add any addition comments that you would like to make below.

Name: Lynn Walker

Date: 4/26/19

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- Part II pertains to the relevance and consistency of the program educational objectives. Your opinions and our discussions will help shape any future revisions of these objectives.
- Part III contains some free-form questions where you can comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
  
- *The surveys are due by the end of today, 26 April 2018.* If you complete the survey after you leave, please email a scanned copy or mail the physical copy to us as soon as possible.

Name: L. WallerDate: 4/26/19**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: L.WalkerDate: 4/26/19**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: L.Walker

Date: 4/26/19

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

Good idea to revisit Thermal-Fluid 1,2 / Thermo Sequence - could this be more efficient? Not a failing but potential place for improvement. Focus on Mathematica might need to be broadened.

Do you have any suggestions to improve the advisory board meeting for next year?

Late April is a bit challenging. Presentations are good and informative. Interaction with cadets is very good - rather than mock interviews perhaps just conversations (but still good to assess many qualities). Next time, I will have been able to absorb the pre-reads more effectively.

Please add any addition comments that you would like to make below.

Take advantage of the controlled nature of curriculum (fixed courses, FE Exam 100%) to assist in ABET process. This should offset the more tricky bits (instructor turn over and smaller faculty).

Name: Kisundra Waters

Date: 26 April 2019

### **2019 Advisory Board Surveys**

Welcome to our annual advisory board meeting. As you know, we consider each of you to be valued shareholders in our program. The meeting is our annual shareholder's meeting, where we show you our performance report and discuss methods of improving the program. This document is your official advisory board survey, and it is *extremely important to our program*. It is design to do two things. First, the completed surveys provide *documentation* that you have been briefed on the performance of our cadets and the relevance of the program objectives. This is extremely important for maintaining our accreditation. Second, it allows us to use your collective knowledge and experience to *identify areas* where we might be in need of improvement. The surveys are based in part on the data that we present to you during this meeting, and your responses are your "thumbs up or down" to the various performance indicators we are tracking. This advisory board survey is part of the assessment for *Academic Year 2018* (students who graduated in May 2018).

#### **Instructions**

- The survey pertains to attainment of student outcomes (Part I), relevance of program educational objective (Part II), and program improvement (Part III). You will be given time during the day to answer the questions.
- For Part I, use the data to evaluate the attainment of our student outcomes. You will also meet with cadets, and the opinions you form of them might also influence your ratings. It is completely appropriate to use that information in the formation of your opinions.
- Part II pertains to the relevance and consistency of the program educational objectives. Your opinions and our discussions will help shape any future revisions of these objectives.
- Part III contains some free-form questions where you can comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
  
- *The surveys are due by the end of today, 26 April 2018.* If you complete the survey after you leave, please email a scanned copy or mail the physical copy to us as soon as possible.

Name: KiSondra WatersDate: 26 April 2019**Part I. Student Outcomes.** Check the most appropriate box.

The cadets in the program appear to:	Strongly Disagree	Neutral	Strongly Agree	
• Apply knowledge of math, science, and engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design and conduct experiments as well as analyze and interpret data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Design a system, component, or process to meet desired needs within specified constraints.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Be prepared to function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Identify, formulate, and solve engineering problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Understand their professional and ethical responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Communicate effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Understand the impact of engineering solutions in a global economic, environmental, and societal context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Recognize the need for life-long learning, and appear to be developing the skills they will need to pursue this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Demonstrate knowledge of contemporary issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Kisondra Waters

Date: 26 April 2019

**Part II. Program Educational Objectives.** Check the most appropriate box.

	Strongly Disagree	Neutral	Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty contribute to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Kisondra Waters

Date: 26 April 2019

**Part III. Open Questions.** Answer the questions below or provide other input as desired.

Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum? Please explain.

Two items that don't necessarily need to be split into additional courses but could be supplemented are engineering math and communication/technical writing. Sounds like the engineering math class (MA 364) covers a lot of relevant chemical engineering math topics, but difficult for students to understand what to focus on in order to better connect with CHE topics and calculations later in the curriculum.

It was suggested that this "mapping" could be laid out for students prior to learning the concepts to go into the class with an understanding of which math topics are relevant for which CHE topics.

Do you have any suggestions to improve the advisory board meeting for next year?

A simple syllabus or summary of the classes could be helpful before we speak with students. There were several instances when they discussed specific course topics.

The Classes of 2020+ brochure was very helpful!

Please add any addition comments that you would like to make below.

Sounds like the technical writing piece of MC 312 is seen as too much in such a technical/intensive class. Could be helpful to split this ~~material~~ and include technical writing in an earlier class or a class in which students have mastered the topics and can have the opportunity to focus on the communication aspect with a topic they know more about or are more comfortable with.