

## 2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

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- Review the data with your instructor pertaining to the achievement student outcomes by our **2020** program graduates, and complete Part 1 of the survey. Your survey responses should be based on the data presented. For each row, mark the survey form with an "x" in the box that most closely represents your opinion. Enter one response per row.
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- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

ABBOTT.BENJAMI N.TYLER.15378979 09	Digitally signed by ABBOTT.BENJAMIN.TYLER.153 7897909 Date: 2021.01.19 09:11:09 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Benjamin Abbott

Date: 19 JAN

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a process for periodically assessing the achievement of its student outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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"/>	<input type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Benjamin Abbott

Date: 19 JAN

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I believe that the current courses are sufficient. I will be better able to answer the question once the FEE has been taken.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I do not have any suggestions as of now. Again, I will be better able to answer this once the FEE is taken.

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

None at the moment

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ALVERMANN.THO MAS.ALEXANDER. 1537860029	Digitally signed by ALVERMANN.THOMAS.ALEXAN DER.1537860029 Date: 2021.01.19 08:57:46 -05'00'
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  - Process dynamics and control.
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  - Process design.

Name: Thomas Alvermann

Date: 1/19/2021

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The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Name: Thomas Alvermann

Date: 1/19/2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

For the purposes of learning and understanding chemical engineering, the core curriculum has great classes, however, the lack of flexibility of the elective courses does not allow broadening of a cadets education. The program should add more flexibility on elective courses, however it sounds like that is the plan for the future with the bioengineering minor option.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

One question that could be added is does the chemical engineering curriculum enable the cadet to reach their personal goals.

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

One additional comment is that although the instructors are fantastic and always find time to help cadets, many times they seem overworked with their job requirements.

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- Add your signature or digital signature in the space below:

BEAUCHAMP.HUN TER.THORPE.1537 927336	Digitally signed by BEAUCHAMP.HUNTER.THORP E.1537927336 Date: 2021.01.19 07:16:52 -05'00'
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  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Hunter Beauchamp

Date: 19JAN21

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<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Each course has been extremely useful and necessary to move forward through the program. There has never been a time that I felt I needed the a different or additional class to understand the material.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

The survey does well to get the opinions of the cadets in the program.

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

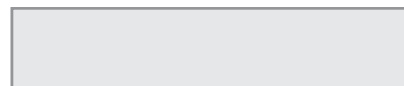
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  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Kevin C. Brooks

Date: 19JAN21

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Kevin C. Brooks

Date: 19JAN21

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Kevin C. Brooks

Date: 19JAN21

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I believe that the right classes are being taught. I do not believe that a course should be added at this time. Courses are added and dropped already in accordance with the strengths and weaknesses of the cadets.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

The faculty is always available and that is super helpful!

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

N/A

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

**Instructions**

- Write or enter your name and date on the top of each page.
- The second page of this handout contains a listing of program objectives and student outcomes. Please read this page to become oriented to the process.
- Review the data with your instructor pertaining to the achievement student outcomes by our **2020** program graduates, and complete Part 1 of the survey. Your survey responses should be based on the data presented. For each row, mark the survey form with an “x” in the box that most closely represents your opinion. Enter one response per row.
- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an “x” in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<input type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

Yes for the msot part. Same as other major schools (UT, Purdue, ect). Maybe add an engineering managment or finance class in place of controls.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Ask students if they feel that the semester Capstones are effective in reaching thier learning goals. Also, if they belive profesors utilize classtime to the fullest exitent.

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

I love the program!

## 2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

### Instructions

- Write or enter your name and date on the top of each page.
- The second page of this handout contains a listing of program objectives and student outcomes. Please read this page to become oriented to the process.
- Review the data with your instructor pertaining to the achievement student outcomes by our **2020** program graduates, and complete Part 1 of the survey. Your survey responses should be based on the data presented. For each row, mark the survey form with an “x” in the box that most closely represents your opinion. Enter one response per row.
- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an “x” in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
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- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Louis Cornell Fuka

Date: 18JAN21

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Louis Cornell Fuka

Date: 18JAN21

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Louis Cornell Fuka

Date: 18JAN21

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

Yes. We appear to be doing more than most colleges to prepare us to be well rounded Chemical Engineers.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Yes, No suggestions

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

This is a solid program and one I am glad to have participated in.

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

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- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

HOGEBROOM.CHARLES.PATRICK.V.1047421760	Digitally signed by HOGEBROOM.CHARLES.PATRICK.V.1047421760 Date: 2021.01.20 09:14:23 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

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- Understand the chemical engineering curriculum, including:
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  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.



Name: Chase Hogeboom

Date: 20JAN21

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Chase Hogeboom

Date: 20JAN21

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	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"/>	<input 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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Chase Hogeboom

Date: 20JAN21

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

The Electrical Engineering course (EE301) is largely irrelevant to the bulk of the content learned/utilized throughout the rest of the ChemE program. I'd highly recommend eliminating the requirement to take EE301 and adding either Materials Engineering (MC380)/another Physical Chemistry course, or an extra ChemE lab course.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Consider displaying historical data for survey responses at the conclusion of survey. Great survey overall.

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

Deliberately teach MMA, and Excel skills (specifically call shortcuts and error analysis) earlier in the program (Dr. Biaglow did a fantastic job of this, albeit later in the program); USMA's core math curriculum does not provide an effective foundation for MMA.

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

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- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

HUGGINS.GABRIE LA.ANGELICA.1104 882370	Digitally signed by HUGGINS.GABRIELA.ANGELIC A.1104882370 Date: 2021.01.19 09:33:03 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

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- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
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- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
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- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Gabriela Huggins

Date: 01/19/2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Gabriela Huggins

Date: 01/19/2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Gabriela Huggins

Date: 01/19/2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

According to the data we have classes in place to help assist in our weak points for the FEE. I feel that overall our class structure is reflective of the needs of the major.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

No suggestions, I like the questions.

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

NA



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- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

JASKOT.MARK.H	Digitally signed by
ENRY.1242951413	JASKOT.MARK.HENRY.1242951
	413
	Date: 2021.01.19 15:42:44 -05'00'

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

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  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Mark Jaskot

Date: 19JAN21

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Mark Jaskot

Date: 19JAN21

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
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The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Name: Mark Jaskot

Date: 19JAN21

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I think replacing MC300 with another chemistry course would be useful. I saw in the program briefing that physical chemistry used to be taught for USMA ChemEs. I don't really see why MC300 is needed for our major, but I think that going into more depth on chemistry would be very useful and would broaden the fields that we could enter into following our time in the Army.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Ask about electives / courses in other departments. From discussions with other people in ChemE, I have found that most of their complaints lie with courses in other departments, not CLS. Additionally, I think it would be useful to hear peoples thoughts on the choices of electives. I, personally, went outside of the list of possible electives that was given to me and picked two that looked interesting from the Systems Department, and other cadets might have thoughts/opinions about the classes they chose.

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- Add your signature or digital signature in the space below:

KIM.TAE.YOUN G.1516760709	Digitally signed by KIM.TAE.YOUNG.1516760709 Date: 2021.01.19 08:50:45 -05'00'
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  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Tae Young Kim

Date: 19Jan2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Name: Tae Young Kim

Date: 19Jan2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
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The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Tae Young Kim

Date: 19Jan2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

Yes, in my personal opinion the courses are good. But we could use a more in depth programing course. ie. CY300 (programing in python) since we don't use matlab we could do more coding in other areas to be more efficient engineers.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Yes. No suggestions to improve.

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

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- Review the data with your instructor pertaining to the achievement student outcomes by our **2020** program graduates, and complete Part 1 of the survey. Your survey responses should be based on the data presented. For each row, mark the survey form with an "x" in the box that most closely represents your opinion. Enter one response per row.
- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an "x" in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

MACKEY.ANDREW	Digitally signed by
.EMMANUEL.15378	MACKEY.ANDREW.EMMANUEL
97470	.1537897470
	Date: 2021.01.19 09:04:57 -05'00'

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Andrew Mackey

Date: 19 JAN 2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Andrew Mackey

Date: 19 JAN 2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Andrew Mackey

Date: 19 JAN 2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

All of the provided classes cover the majority of the objectives whether briefly or in-depth. Ethics has not been a heavily discussed topic yet.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

From the provided metrics the questions asked are appropriate and provide an opportunity for reflection.

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

N/A

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

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- Add your signature or digital signature in the space below:

MAZEKE.MYLES.JO RDAN.1537884300	Digitally signed by MAZEKE.MYLES.JORDAN.153788 4300 Date: 2021.01.19 09:01:15 -05'00'
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Name: Myles Mazeke

Date:

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  - Safety and environmental factors,
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  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Myles Mazeke

Date:

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	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"/>	<input 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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a process for periodically assessing the achievement of its student outcomes.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

From the data I believe we are teaching the right classes. I think that we do not have enough credits for each topic.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I think added questions about how motivated cadets are or some of the things that motivate them to perform the best that they can. I say this because I feel the data showed that most cadets are satisfied with meeting the standard or teamwork, and students at other schools are more focused on individual achievement.

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

N/A

Name: \_\_\_\_\_ Lucas McCleery \_\_\_\_\_

Date: \_\_\_\_1/19/21\_\_\_\_

## 2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

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- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:



Name: \_\_\_\_\_ Lucas McCleery \_\_\_\_\_

Date: \_\_\_\_\_ 1/19/21 \_\_\_\_\_

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

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- Understand the chemical engineering curriculum, including:
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  - Safety and environmental factors,
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  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: \_\_\_\_\_ Lucas McCleery \_\_\_\_\_

Date: \_\_\_\_\_ 1/19/21 \_\_\_\_\_

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: \_\_\_\_\_ Lucas McCleery \_\_\_\_\_

Date: \_\_\_\_ 1/19/21 \_\_\_\_

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	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"/>	<input 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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Name: \_\_\_\_\_ Lucas McCleery \_\_\_\_\_

Date: \_\_\_\_\_

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I Think that we are taking the right classes but we would benefit from taking the initial thermodynamics classes within the program rather than outsourcing to the Mech department as it would keep the class focused on Chem Engineering objectives.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I believe so yes, the questions are fine as is but I would find it helpful to know what can be done by the students to avoid the downfalls of the previous graduation years.

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

Please if possible give specific instruction on how to avoid the downfalls in the data of the previous grad years in order to best prepare for the FEE.

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- Add your signature or digital signature in the space below:

MUSIOL.JOSHUA. MICHAEL.1232465 430	Digitally signed by MUSIOL.JOSHUA.MICHAEL.123 2465430 Date: 2021.01.18 18:22:12 -05'00'
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  - Heat, mass, and momentum transfer,
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  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Josh Musiol

Date: 19JAN2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Josh Musiol

Date: 19JAN2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Josh Musiol

Date: 19JAN2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I believe that the classes within the curriculum are sufficient for the major. No classes need to be added.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Yes, I believe that questions asked are sufficient for the proper assessment of the program.

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

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

This is your annual cadet survey for the **2020** program assessment, and it is very important for continued ABET accreditation. The survey is designed to do three things. First, it provides documentation that you have been made aware of the performance of our previous cadets on our student outcomes. Second, it serves to document you are aware of the program educational objectives. Third, it allows us to use your collective opinions to help identify areas where we might need improvement.

**Instructions**

- Write or enter your name and date on the top of each page.
- The second page of this handout contains a listing of program objectives and student outcomes. Please read this page to become oriented to the process.
- Review the data with your instructor pertaining to the achievement student outcomes by our **2020** program graduates, and complete Part 1 of the survey. Your survey responses should be based on the data presented. For each row, mark the survey form with an "x" in the box that most closely represents your opinion. Enter one response per row.
- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an "x" in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

NIGAM.PRAKASH. DISCHER.1537949 399	Digitally signed by NIGAM.PRAKASH.DISCHER.153 7949399 Date: 2021.01.19 09:07:18 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.



Name: Prakash Nigam

Date: 19 JAN 2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Prakash Nigam

Date: 19 JAN 2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	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"/>	<input 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"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Prakash Nigam

Date: 19 JAN 2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

The right classes are being taught, but there is a disconnect between classes. The best way to learn information is to apply it, and most of our classes seem to be theoretical instead of labs.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

Have more room for written feedback. It is hard to communicate what I mean when it is simplified to agree or disagree.

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

The program does a phenomenal job with inspiring cadets to learn more and do more with their degree. One of the issues I am encountering now is how to directly apply my degree to being a PL/Leader to give me a strategic advantage. One of my concerns is that the US military will not have leaders that are technologically savvy, and as a STEM major I will be the very familiar with technology. How do I apply this strength as an advantage over our adversaries?

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

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- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

OLSAVSKY.NATHANIEL JOSEPH.1537993100	Digitally signed by OLSAVSKY.NATHANIEL.JOSEPH.15 37993100 Date: 2021.01.19 09:08:40 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

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- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Nathaniel Olsavsky

Date: 19 JAN 2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Nathaniel Olsavsky

Date: 19 JAN 2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

Based off the data, I believe the right classes are being taught. It seems like over the past decade, weaknesses have been identified and corrected by adding courses such as thermodynamics or controls.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

The right questions are being asked to the students.

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

I know at the beginning of each ChemE course on the first day, we typically see which program objectives are being assessed throughout the course. However, I think they are forgotten easily which is why people say they have never seen them before. The brief we received today showing all the data, mission, vision, etc. was great to see and I think it would be beneficial to show the Yearlings the same data and slides on their first day in a ChemE Course (likely CH362). That way, the program objectives are shown at the beginning and end of a cadets ChemE career.

Also, I know the AIChE club here has brought in speakers for us to listen to, but I think it'd be great to take one lesson a semester if possible and have a guest speaker for one of our classes (similar to how some of the core classes bring in a guest speaker). That way, we can see how ChemE applies either inside and out of the Army/what job opportunities exist/ and other things of that nature.





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- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

RAFFERTY.THOM AS.PLUNKETT.153 7905995	Digitally signed by RAFFERTY.THOMAS.PLUNKET T.1537905995 Date: 2021.01.19 09:20:51 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

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  - Safety and environmental factors,
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  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Thomas Rafferty

Date: 19 JAN 2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Thomas Rafferty

Date: 19 JAN 2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 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"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a process for periodically assessing the achievement of its student outcomes.	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Thomas Rafferty

Date: 19 JAN 2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I believe the classes taught are appropriate because I always see the relationships between them. Information I learn in some classes often helps me in other classes.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I believe the questions cover the necessities. I have no suggestions.

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

Big sustain on CH459 because it ties in all the classes into applicable experiments.

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

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**Instructions**

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- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an "x" in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

TANTOW.JEFFREY	Digitally signed by
.HENRY.JR.153864	TANTOW.JEFFREY.HENRY.JR.
9992	1538649992
	Date: 2021.01.19 09:08:14 -05'00'

**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

- Demonstrate effective leadership and chemical engineering expertise.
- Contribute to the solution of infrastructure or operational problems in a complex operational environment.
- Succeed in graduate school or other advanced study programs.
- Advance their careers through clear and precise technical communication.

**Chemical Engineering Student Outcomes:** On completion of the chemical engineering program, our graduates will be able to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.
- Understand the chemical engineering curriculum, including:
  - Chemistry,
  - Material and energy balances,
  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Jeffrey Tantow

Date: 19 JAN 2020

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Name: Jeffrey Tantow

Date: 19 JAN 2020

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 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"/>	<input type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program has a process for periodically assessing the achievement of its student outcomes.	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Jeffrey Tantow

Date: 19 JAN 2020

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

Overall, I feel that I have a good grasp of Chemical Engineering; however, I would like to have more design focused classes. I understand how to design a process using theoretical calculations as we have done in previous classes, but learning more about then making it into a safe and real process, I would like more of.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I feel that the questions are adequate for what they are trying to achieve in terms of improving the program.

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

I believe that I have a good grasp of Chemical Engineering concepts and that I am prepared to further my education later in Chemical Engineering in Graduate school and beyond.

**2020 Cadet Program Briefing Surveys (Completed by Firsties in AY21-2)**

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**Instructions**

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- Complete Part 2 of the survey, which covers program educational objectives. For this part of the survey, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army. Again, for each row, mark the survey form with an “x” in the box that most closely represents your opinion and enter one response per row.
- There are some free-form questions on the last page for you to comment on the quality of the curriculum, the meeting itself or any other items you would like us to address.
- We will consolidate the data and include it in our program assessment, to be reviewed by the faculty and advisory board in a separate meeting.
- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

TARPEY.SOPHIA.R OSE.1537992030	Digitally signed by TARPEY.SOPHIA.ROSE.153799 2030 Date: 2021.01.19 08:54:27 -05'00'
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**Mission:** The mission of the chemical engineering program is to prepare commissioned leaders of character who are proficient in applying chemical and engineering principles to solve problems in a complex operational environment.

**Chemical Engineering Program Objectives:** During a career as commissioned officers in the United States Army and beyond, program graduates:

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- Acquire and apply new knowledge as needed, using appropriate learning strategies.
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  - Safety and environmental factors,
  - Thermodynamics of physical and chemical equilibria,
  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Sophie Tarpey

Date: 16 Jan 2021

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Sophie Tarpey

Date: 16 Jan 2021

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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 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"/>	<input type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Sophie Tarpey

Date: 16 Jan 2021

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I think the courses that we have in the curriculum are great.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

I think the questions cover what the instructors are trying to get students to achieve through the Chemical Engineering program.

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

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- The surveys are due by the end of the hour.
- Add your signature or digital signature in the space below:

VESEL.TAYLOR. Digitally signed by  
CONRAD.15378977 VESSEL.TAYLOR.C  
98 ONRAD.1537897798



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  - Heat, mass, and momentum transfer,
  - Chemical reaction engineering.
  - Continuous and staged separation operations.
  - Process dynamics and control.
  - Modern experimental and computing techniques.
  - Process design.

Name: Taylor Vessel

Date: 18 January 20

**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

The cadets who graduated last year have demonstrated that they	Strongly Disagree		Neutral		Strongly Agree
<ul style="list-style-type: none"> <li>Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Communicate effectively with a range of audiences.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Acquire and apply new knowledge as needed, using appropriate learning strategies.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Understand the chemical engineering curriculum.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name: Taylor Vessel

Date: 18 January 20

**Part II. Program Objectives.** Check the box that most closely represents your opinion.

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.	<input type="checkbox"/>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The student outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<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 student outcomes.	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are given an opportunity to provide their opinion about the program objectives.	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Name: Taylor Vessel

Date: 18 January 20

### Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course that the program should add to the curriculum?

I definitely believe these are all the right classes. I think that there should be a course dedicated to Aspen, CHEMCAD, Mathematica, Excel, and MATLAB though that could take the place of EE301. I think it would be extremely beneficial if this was done.

Are we asking the right questions? Do you have any suggestions to improve the survey for next year?

No these are all solid questions, in my opinion. I have no suggestions, this survey covered everything.

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

I just think that EE301 and MC300 are classes that could be removed from the curriculum. Could be taught in a different way like in a different class. Other than that, I am more than happy with this experience and my undergraduate study here in this department.