Name: Andrew Biaglow Date: 16 Jul 25

2025 Faculty Surveys

This is our annual faculty program assessment survey for academic year 2025 (2024-2025). The survey is required for all chemical engineering faculty members and is **very important** for our program assessment and future re-accreditation effort in 2026. The survey does three things. First, it documents that you have been made aware of the performance of our cadets on our program's student outcomes. Second, it serves to document your opinions of that performance. Third, it allows us to use your collective knowledge and experience to identify areas where we might need improvement. Thus, the completed surveys are your collective "thumbs up or down" to the various performance indicators we are tracking.

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- Direct any questions about the data or survey to Dr. Biaglow.
- Your responses will be consolidated, discussed at our program assessment meetings, and archived in our annual report.

Mission Statement: The mission of the chemical engineering program is to prepare commissioned leaders of character who possess the intellectual capital to leverage new and emerging technologies.

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

- Demonstrate effective leadership by leveraging chemical engineering expertise and precise technical communication.
- Contribute to the solution of complex problems in a dynamic environment.
- Apply disciplined technical expertise to succeed in advanced study programs.

Chemical Engineering General Program Outcomes (Outcomes 1-7): On completion of the chemical engineering program, our graduates demonstrate an ability to:

- [Student Outcome 1] 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.

Chemical Engineering Curriculum Outcomes (Outcome 8): The program provides the graduate with a thorough grounding and working knowledge of the chemical sciences, 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 Biaglow Date: 16 Jul 25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.				X	
• 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.					X
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.					X
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: Andrew Biaglow Date: 16 Jul 25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.					X
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Andrew Biaglow Date: 16 Jul 25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I believe a short 1.0-credit measurements course is needed prior to CH459. This course would include an experimental introduction to measuring current, voltage, resistance, temperature, pressure, level, and flow, as well as use of op amps. The course would probably also need a lesson or two on experimental statistics.

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

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

Name: LTC Cowart Date: 07/17/2025

2025 Faculty Surveys

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Name: LTC Cowart Date: 07/17/2025

Mission Statement: The mission of the chemical engineering program is to prepare commissioned leaders of character who possess the intellectual capital to leverage new and emerging technologies.

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

- Demonstrate effective leadership by leveraging chemical engineering expertise and precise technical communication.
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Chemical Engineering General Program Outcomes (Outcomes 1-7): On completion of the chemical engineering program, our graduates demonstrate an ability to:

- [Student Outcome 1] 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.
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- 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: LTC Cowart Date: 07/17/2025

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.					X
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.					X
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: LTC Cowart Date: 07/17/2025

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.				X	
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: LTC Cowart Date: 07/17/2025

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
Based on recent FEE performance in materials science, I recommend adding ME380 (Engineerning Materials) to the program. This could be accomplished by reducing the requirement for engineering electives from three 3-credit courses to two.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
The survey questions are ample for a quality assessment of the program.

Please add any additional comments that you would like to make below.
Cadets continute to be dissatisfied with ME362 (Fluid Mechanics) and MC300 (Statics). I recommend removing MC300 from the program; no replacement needed due to adequate amount of ET credits remaining (50.0) in the program. This would also allow space in a cadet's 8TAP should they wish to pursue additional non-engineering courses (i.e., organic II, quantum chemistry, biochemistry, etc.). For fluid mechanics, a discussion with MAE should happen to relay cadet concerns.

Name: Frey, Joshua D Date: 12 Aug 25

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Name: Frey, Joshua D Date: 12 Aug 25

Mission Statement: The mission of the chemical engineering program is to prepare commissioned leaders of character who possess the intellectual capital to leverage new and emerging technologies.

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

Name: Frey, Joshua D Date: 12 Aug 25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X		
• 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.			X		
• Communicate effectively with a range of audiences.				X	
• 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.				X	
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.				X	
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.			X		
• Acquire and apply new knowledge as needed, using appropriate learning strategies.				X	
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.				X	

Name: Frey, Joshua D Date: 12 Aug 25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.				X	
The cadets in the program are aware of the program objectives.				X	
The cadets are given an opportunity to provide their opinion about the program objectives.				X	
The cadets are satisfied with the courses in the program.				X	
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Frey, Joshua D Date: 12 Aug 25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I think the program covers the basic body of chemical engineering knowledge, and that a diverse array of electives provide cadets with flexibility to study other areas.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
No suggestions

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

Name: Glinski, Denis Date: 23JUL25

2025 Faculty Surveys

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Name: Glinski, Denis Date: 23JUL25

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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: Glinski, Denis Date: 23JUL25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.				X	
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.				X	
• Acquire and apply new knowledge as needed, using appropriate learning strategies.				X	
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: Glinski, Denis Date: 23JUL25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.				X	
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.			X		
The cadets in the program are aware of the program objectives.			X		
The cadets are given an opportunity to provide their opinion about the program objectives.			X		
The cadets are satisfied with the courses in the program.				X	
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.				X	

Name: Glinski, Denis Date: 23JUL25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
Upon initial review it looks like the right classes are being taught. I will develop a better understanding after my first year as an Instructor within CBSE.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
No opinion at this time.

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

Name: Elizabeth Golonski Date: 08/18/2025

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Name: Elizabeth Golonski Date: 08/18/2025

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- Modern experimental and computing techniques
- Process design

Name: Elizabeth Golonski Date: 08/18/2025

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.				X	
• Communicate effectively with a range of audiences.					X
• 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.				X	
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.				X	
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.				X	

Name: Elizabeth Golonski Date: 08/18/2025

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.					X
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Elizabeth Golonski Date: 08/18/2025

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I think the program is doing a great job incorporating machine learning and coding into the course work. I have nothing to add.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
None.

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

Name: COL Corey James Date: 18 AUG 25

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Name: COL Corey James Date: 18 AUG 25

Mission Statement: The mission of the chemical engineering program is to prepare commissioned leaders of character who possess the intellectual capital to leverage new and emerging technologies.

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

- Demonstrate effective leadership by leveraging chemical engineering expertise and precise technical communication.
- Contribute to the solution of complex problems in a dynamic environment.
- Apply disciplined technical expertise to succeed in advanced study programs.

Chemical Engineering General Program Outcomes (Outcomes 1-7): On completion of the chemical engineering program, our graduates demonstrate an ability to:

- [Student Outcome 1] 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.

Chemical Engineering Curriculum Outcomes (Outcome 8): The program provides the graduate with a thorough grounding and working knowledge of the chemical sciences, 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: COL Corey James Date: 18 AUG 25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.				X	
• Communicate effectively with a range of audiences.				X	
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.				X	
• Acquire and apply new knowledge as needed, using appropriate learning strategies.				X	
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: COL Corey James Date: 18 AUG 25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.				X	
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: COL Corey James Date: 18 AUG 25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I would like to see another semester of design, but it would require removing a class.

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

Please add any additional comments that you would like to make below.
On a longer time horizon, I think it would be helpful to have the advisory board opine on our sequence. Specifically, I think we may benefit from moving separations to senior year and thermodynamics to sophomore year. This would help us improve the rigor of separations as we could discuss further about the thermodynamic underpinnings of separations.

Name: Samuel Lowell Date: 05AUG25

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- Chemical reaction engineering
- Continuous and staged separation operations
- Process dynamics and control
- Modern experimental and computing techniques
- Process design

Name: Samuel Lowell Date: 05AUG25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.					X
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.					X
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: Samuel Lowell Date: 05AUG25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.					X
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Samuel Lowell Date: 05AUG25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I believe that we are teaching the right classes. Creating a ChemE specific Controls course is very good for our Cadets. Continuing to create ChemE specific courses when faculty population can enable it will further support the program.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
No suggestions.

Please add any additional comments that you would like to make below.
None.

Name: Dr. Enoch Nagelli Date: 11AUG25

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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: Dr. Enoch Nagelli Date: 11AUG25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.					X
• Communicate effectively with a range of audiences.				X	
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.					X
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: Dr. Enoch Nagelli Date: 11AUG25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.					X
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.					X
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Dr. Enoch Nagelli Date: 11AUG25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
A chemE focused transport course that combines heat, mass, and momentum principles to be taken as yearling or cow year will be benficial for the cadets.

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

Please add any additional comments that you would like to make below.
For future semester beyond our ABET record year, the program should consider getting chemE majors to take CH362 in the fall of yearling year and move ME301 to spring semester of yearling year (since CH101/MA205 are pre-requisites). A standalone chemE transport course could be taught cow year first semester together with CH365 as cow year class. CH363 should be taught firstie year which will enable to include mass transfer concepts. This redesign will help us plan to get chemEs into their major courses sooner after declaring plebe year and will cover fundamental concepts earlier in the curriculum. Another thing to consider is removing an engineering elective from the cirriculum.

Name: Nijel J. Rogers Date: 12AUG25

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Name: Nijel J. Rogers Date: 12AUG25

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Chemical Engineering Curriculum Outcomes (Outcome 8): The program provides the graduate with a thorough grounding and working knowledge of the chemical sciences, including:

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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: Nijel J. Rogers Date: 12AUG25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.				X	
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.				X	
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.			X		
• Acquire and apply new knowledge as needed, using appropriate learning strategies.			X		
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.				X	

Name: Nijel J. Rogers Date: 12AUG25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.			X		
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.			X		
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.		X			
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Nijel J. Rogers Date: 12AUG25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
Based on the assessment data, non-CBSE courses consistently drew lower cadet satisfaction across outcome surveys. This trend can be expected, but I think it presents an opportunity to switch non-CBSE course requirements to assess improvements in student outcomes. In particular, MC300 scored below expectations and wasn't listed within Table 4-4 (S.O. 8). SE301 may be a worthwhile substitution as it also focuses on design and management in a computer lab envir., contributing to both 8.9 and 8.10 of S.O. 8. The spring term cpblty is lower, but may be worthwhile to pilot if it still meets program reqs.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
I think junior rotators would benefit by attending a ChemE program course taught by senior faculty. Not for the purpose of teaching improvement, but rather to observe the team-based presentations or simply their proficiency in demonstrating comprehension of technical content. I greatly benefited from observing the CH362 presentations to recognize what skills cadets demonstrated mastery of, or in contrast what they may potentially lack. Later in the semester, maybe opening the CH402 capstone design projects to junior faculty would help inform members of cadet performance and judgement when completing the following year's assessment.

Please add any additional comments that you would like to make below.
None at this time.

Name: Christopher Stewart Date: 12AUG25

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Name: Christopher Stewart Date: 12AUG25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.					X
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.					X
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: Christopher Stewart Date: 12AUG25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.					X
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.			X		
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.				X	
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: Christopher Stewart Date: 12AUG25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I think we are - we have a heavy focus on transport, thermodynamics, and kinetics. This is probably an oudated comment because I graduated a decade ago, but I think I would have appreciated a more fundamental look at thermodynamics (Maxwell relations, entropic/stamech origins...) in one of the three thermo classes.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
No suggestions, from what I can tell this survey is performing its intended task.

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

Name: MAJ Louis Tobergte Date: 22JUL2025

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Mission Statement: The mission of the chemical engineering program is to prepare commissioned leaders of character who possess the intellectual capital to leverage new and emerging technologies.

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

- Demonstrate effective leadership by leveraging chemical engineering expertise and precise technical communication.
- Contribute to the solution of complex problems in a dynamic environment.
- Apply disciplined technical expertise to succeed in advanced study programs.

Chemical Engineering General Program Outcomes (Outcomes 1-7): On completion of the chemical engineering program, our graduates demonstrate an ability to:

- [Student Outcome 1] 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.

Chemical Engineering Curriculum Outcomes (Outcome 8): The program provides the graduate with a thorough grounding and working knowledge of the chemical sciences, 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: MAJ Louis Tobergte Date: 22JUL2025

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.					X
• 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.				X	
• Communicate effectively with a range of audiences.					X
• 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.					X
• Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.					X
• Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.				X	
• Acquire and apply new knowledge as needed, using appropriate learning strategies.					X
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					X

Name: MAJ Louis Tobergte Date: 22JUL2025

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					X
The program objectives are consistent with the needs of the Army.				X	
The program curriculum supports the program objectives.					X
The student outcomes are consistent with the program mission and objectives.					X
The program has a process for periodically assessing the achievement of its student outcomes.					X
The survey methods used by the program are effective.					X
The cadets in the program are aware of the program objectives.				X	
The cadets are given an opportunity to provide their opinion about the program objectives.					X
The cadets are satisfied with the courses in the program.					X
The faculty are aware of the program objectives.					X
The faculty are given an opportunity to provide their opinion about the program objectives.					X

Name: MAJ Louis Tobergte Date: 22JUL2025

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
Overall, I think we're teaching the right courses and material given the many constraints on an engineering program at USMA, though I think we could remove CH102 as a pre-requisite for CH362 to move CH362 up to the first semester of yearling year, which would enable the program to spread across 6 semesters instead of only 5. We should facilitate open-ended inquiry by allowing CH489 to count as an elective, if there is sufficient engineering content to the research project.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
Yes, we are.

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

Name: Simuck F. Yuk Date: 07/17/25

2025 Faculty Surveys

This is our annual faculty program assessment survey for academic year 2025 (2024-2025). The survey is required for all chemical engineering faculty members and is **very important** for our program assessment and future re-accreditation effort in 2026. The survey does three things. First, it documents that you have been made aware of the performance of our cadets on our program's student outcomes. Second, it serves to document your opinions of that performance. Third, it allows us to use your collective knowledge and experience to identify areas where we might need improvement. Thus, the completed surveys are your collective "thumbs up or down" to the various performance indicators we are tracking.

Instructions

- Print your name and date on the top of this page.
- Please review the data in the document "AY25 Program Assessment Data - 16 July 2025." The data pertains to the level of achievement of our cadets for AY2025. Answer the survey questions in "Part I" on page 3 of this document based on your opinions of that data.
- The survey also asks additional questions pertaining to the program objectives in "Part II" on page 4. For this part of the survey, we are interested in your opinion of the relevance of the objectives and their consistency with the Academy mission and needs of the Army.
- Finally, there are some open questions in Part III on page 5 where you can comment on the quality of the curriculum, the process itself or any other items you would like us to address.
- Submit the completed document to Dr. Biaglow by COB **Friday 29 August 2025**. Please be prompt.
- Direct any questions about the data or survey to Dr. Biaglow.
- Your responses will be consolidated, discussed at our program assessment meetings, and archived in our annual report.

Name: Simuck F. Yuk Date: 07/17/25

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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: Simuck F. Yuk Date: 07/17/25

Part I. Student Outcomes. Review the data and then mark the box in the column that most closely represents your opinion.

The cadets in the program are able to:	Strongly Disagree		Neutral		Strongly Agree
• 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.				+	
• Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.					+

Name: Simuck F. Yuk Date: 07/17/25

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

	Strongly Disagree		Neutral		Strongly Agree
The program objectives are consistent with the USMA mission.					+
The program objectives are consistent with the needs of the Army.					+
The program curriculum supports the program objectives.					+
The student outcomes are consistent with the program mission and objectives.					+
The program has a process for periodically assessing the achievement of its student outcomes.					+
The survey methods used by the program are effective.					+
The cadets in the program are aware of the program objectives.					+
The cadets are given an opportunity to provide their opinion about the program objectives.					+
The cadets are satisfied with the courses in the program.					+
The faculty are aware of the program objectives.					+
The faculty are given an opportunity to provide their opinion about the program objectives.					+

Name: Simuck F. Yuk Date: 07/17/25

Part III. Open Questions.

Are we teaching the right classes? Based on the assessment data or on your personal opinion, is there a course or content area that the program should add to the curriculum?
I believe we are asking the right class to enchance cadets' understanding in the field of chemical engineering. For now, no course needed to be added into the current program.

Are we asking the right questions? Do you have any suggestions to improve the faculty survey for next year?
I believe we are asking the right questions and no improvements need to be added in the faculty survey for the next year.

Please add any additional comments that you would like to make below.
No additional comments from my end.