

Name: CPT JOHN BELANGER

Date: 18 Nov 2014

2014 Faculty Surveys

This is your annual faculty survey for the 2014 program assessment. It is very important that you complete this survey. The survey is designed to do three things. First, it provides documentation that you have actually been made aware of the performance of our cadets. Second, it serves to certify and document your opinions of that performance. Third, it allows us to use your collective knowledge and experience to identify areas where we might be in need of improvement. The surveys are based on the data in the document entitled "Program Assessment Data - 5 November 2014." The completed surveys are your collective "thumbs up or down" to the various performance indicators we are tracking.

Instructions

- Please review the data in the document "Program Assessment Data - 5 November 2014" and answer the survey questions based on your opinions of this data. The data pertain to the achievement of our 2014 program graduates.
- The survey pertains to student outcomes and program objectives. Student outcomes are in Part 1 of the survey and program objectives are in Part 2. For outcomes, your replies should be based on the data presented. For objectives, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army.
- The surveys are required for all chemical engineering faculty members and are due by Friday 14 November 2013. Your responses will be consolidated, discussed at our next meeting, and included in my final report.
- 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.
- I will consolidate the data and include it in our program assessment, to be provided to you in a separate meeting.

Name: CPT JOHN BELANGER

Date: 18 NOV 2014

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:

- 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.
- Demonstrate effective leadership and chemical engineering expertise.

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

- Apply knowledge of mathematics, science, and engineering.
- Design and conduct experiments, as well as analyze and interpret data.
- Design a system, component, or process to meet desired needs within economic, environmental, social, political, ethical, health and safety, manufacturing, and sustainability constraints.
- Function on multidisciplinary teams.
- Identify, formulate, and solve engineering problems.
- Understand professional and ethical responsibilities.
- Communicate effectively.
- Understand the impact of engineering solutions in a global economic, environmental, and societal context.
- Recognize the need and develop the skills required for life-long learning.
- Demonstrate knowledge of contemporary issues.
- Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.

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

- General, organic, and physical chemistry.
- Material and energy balances on chemical processes, including 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: CPT JOHN BELANGERDate: 18 NOV 2014**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

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

Name: CPT JOHN BELANGERDate: 18 NOV 2014**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"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty have contributed to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: CPT JOHN BELANGER

Date: 18 Nov 2014

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'd like to see chemE thermo as a course.

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

I'd ask about if faculty feel they are being properly developed.

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

The question above might help shield our new faculty from summer details that take time away from course preparation.

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Name: Andrea Beagley

Date: 5 November 2018

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- Continuous and staged separation operations.
- Process dynamics and control.
- Modern experimental and computing techniques.
- Process design.

Name: Andrew BraglowDate: 5 November 2014**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

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

Name: Andrew BragdonDate: 5 November 2014**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"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty have contributed to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Andrew Bratton

Date: 5 November 2015

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?

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

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

Name: Bull

Date: 11/19/14

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- Modern experimental and computing techniques.
- Process design.

Name: BULLDate: 11/19/14**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

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

where do
the
embedded
indicator
expected
levels
come
from

Name: BullDate: 11/19/14**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 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 program 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 robust process for periodically assessing the achievement of its 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 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 have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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 have contributed to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name: Bull

Date: 11/19/14

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 ^{Chem Eng} thermodynamics course is a good addition.
I really would like to see a way to include some sort of introductory computational engineering course - the intent being that teaching the computer tools does not have to take time from the actual engineering courses.

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

I would change the questions that start with 'The faculty...' to "Do you..." Unless we have regular meetings discussing these topics, it is difficult to make an assessment about other faculty members.

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

Name: Kurt Gerfen

Date: 18 Nov 2013

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· function on multidisciplinary teams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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· Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
· Have attained a thorough grounding in and working knowledge of the chemical engineering curriculum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: Kurt Gerfen

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

Name: Kurt Gerfen

Date: _____

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?

We need to pull Thermal Fluids under the CLS department and have a Chem E faculty teach it.

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

Do we need more Chemical Engineering faculty?
How is the change in the core curriculum going to effect the Chem E program?

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

None

Name: Maj Stephen Winter

Date: 11-27-14

2014 Faculty Surveys

This is your annual faculty survey for the 2014 program assessment. It is very important that you complete this survey. The survey is designed to do three things. First, it provides documentation that you have actually been made aware of the performance of our cadets. Second, it serves to certify and document your opinions of that performance. Third, it allows us to use your collective knowledge and experience to identify areas where we might be in need of improvement. The surveys are based on the data in the document entitled "Program Assessment Data - 5 November 2014." The completed surveys are your collective "thumbs up or down" to the various performance indicators we are tracking.

Instructions

- Please review the data in the document "Program Assessment Data - 5 November 2014" and answer the survey questions based on your opinions of this data. The data pertain to the achievement of our 2014 program graduates.
- The survey pertains to student outcomes and program objectives. Student outcomes are in Part 1 of the survey and program objectives are in Part 2. For outcomes, your replies should be based on the data presented. For objectives, we are interested in your opinions on the relevance of the objectives and their consistency with the Academy mission and needs of the Army.
- The surveys are required for all chemical engineering faculty members and are due by Friday 14 November 2013. Your responses will be consolidated, discussed at our next meeting, and included in my final report.
- 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.
- I will consolidate the data and include it in our program assessment, to be provided to you in a separate meeting.

Name: Maj. Stephen Winter

Date: 11 - 27 - 14

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:

- 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.
- Demonstrate effective leadership and chemical engineering expertise.

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

- Apply knowledge of mathematics, science, and engineering.
- Design and conduct experiments, as well as analyze and interpret data.
- Design a system, component, or process to meet desired needs within economic, environmental, social, political, ethical, health and safety, manufacturing, and sustainability constraints.
- Function on multidisciplinary teams.
- Identify, formulate, and solve engineering problems.
- Understand professional and ethical responsibilities.
- Communicate effectively.
- Understand the impact of engineering solutions in a global economic, environmental, and societal context.
- Recognize the need and develop the skills required for life-long learning.
- Demonstrate knowledge of contemporary issues.
- Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.

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

- General, organic, and physical chemistry.
- Material and energy balances on chemical processes, including 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: Ma, Stephen WinterDate: 11-27-14**Part I. Student Outcomes.** Check the box that most closely represents your opinion.

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

Name: Maj Stephen WinterDate: 11-27-14**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"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets are satisfied with the courses in the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The faculty have contributed to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Name: Maj Stephen Winter

Date: 11-27-14

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?

- We made great strides by adding a ChemE Thermo!
- If we had the ability to add another course, I would add a transport course taught by ChemE faculty early-on - exposure to shell balances, Navier-Stokes, Dimensionless Quantities etc.

MC311/312 - seems to take a more process thermo approach

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

- No issues

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

- Great accomplishment w/ ABET; we set ourselves apart from other programs, and built a great foundation to continue to grow in future years

2014 Faculty Surveys

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Instructions

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- The surveys are required for all chemical engineering faculty members and are due by Friday 14 November 2013. Your responses will be consolidated, discussed at our next meeting, and included in my final report.
- 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.
- I will consolidate the data and include it in our program assessment, to be provided to you in a separate meeting.

Name: WOOKA

Date: 11/22

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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- Function on multidisciplinary teams.
- Identify, formulate, and solve engineering problems.
- Understand professional and ethical responsibilities.
- Communicate effectively.
- Understand the impact of engineering solutions in a global economic, environmental, and societal context.
- Recognize the need and develop the skills required for life-long learning.
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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.

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

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

Name: WOODKADate: 11/22**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"/>
The program objectives are consistent with the needs of the Army.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The program curriculum supports the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program outcomes are consistent with the program mission and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a robust process for periodically assessing the achievement of its objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The program has a process for periodically assessing the achievement of its outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The survey methods used by the program are effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets in the program are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The cadets have input into the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
The faculty are aware of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The faculty have contributed to the development of the program objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name: WOOKA

Date: 11/22

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?

None

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

None

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

None