

MECH-322/420 ANONYMOUS BLACKBOARD Q/A: WINTER 2022

Your comments are requested below to share with future MECH-322/420 students and to provide a personal reflection on your learning. **YOUR COMMENTS ARE 100% ANONYMOUS AND ARE SUBMITTED WITHOUT NAMES OR EMAIL AND ARE NOT SEEN UNTIL ALL GRADES HAVE BEEN SUBMITTED. THANK YOU SO MUCH FOR YOUR TIME AND FOR YOUR COMMITMENT TO THE PATH.**

Often there is discussion regarding the development of independent thinkers and how to achieve? The development of the independent mindset is never achieved by providing all the questions and all the answers! All researchers will agree that at the beginning of any research endeavor that one will never know all the problems and will never have all the answers. But the hallmark of the independent mind is having a problem-solving mentality, having the ability to self-learn, having the ability to extrapolate data and to form conclusions, and having the fortitude to be unafraid to seek answers from multiple independent sources. Academic institutions at all levels have a formidable task for the 21st Century to transform student learners from an environment where “likes” and “dislikes” are more important than learning and demonstrated knowledge. Institutions that are successful will provide the next generation of independent thinkers that will face significant challenges in the next 20 years, considering the massive rate of technological advancement.

In the next 25 years, the world we will see a cure for Cancer, we will reach out and will start to colonize other planetary worlds, we will discover new materials that will forever change our understanding of physics, we will start to control and hopefully reverse the ravages of global warming and climate change, we will be able to see further back into the past than ever imagined and we will begin to understand the origins of “everything”. Academic leaders are faced with the challenge of teaching materials and concepts that have not changed for 100 years and are challenged to prepare students to solve problems that we cannot even imagine today, and to prepare students to develop and to use tools based upon concepts that have not even been conceived. We live in a daunting academic environment, and the only solution is to focus on student development that embraces discovery and inquiry, and to develop a mindset that “rejects” being told all the answers and to develop a mindset that expects to be challenged and to understand that it’s “ok” to not know the answers. Rather the most important skill that we can impart to students is to develop an understanding of the “*process and roadmap*” to find and to understand answers to unknown problems and questions, that we can only dream about today. It will be these students and these institutions that will contribute to the long-term survival and the universal expansion of humankind.

Thanks for completing and emailing back. Have a great educational and industrial career. Thank you for your time.

Please answer the following briefly:

1. Engineering design is the execution of applied physics for the development of technical solutions for challenges facing the survival of mankind, and the technical communications of those solutions. Please comment on if you think MECH-322/420 Fluids Mechanics/Heat Transfer and a focus on parametric thought has **enhanced your skills and ability as a student, and as a future engineering professional**, relative to engineering design thought and technical communications. Why or Why Not? Thank you.
 - a. It is the first class I've taken that has relied heavily on parametric equations, vs. just plugging numbers in. Definitely helped to ensure you truly understand the math.
 - b. MECH-322/420 had enhanced my engineering skills and thoughts to a much higher extent and help me build way of thinking as an engineer. I think they're critical and very helpful.
 - c. Yes, I believe I has enhanced my skills as a student. For every problem, there is a road path to follow. Knowing this, it has helped solving engineering problems much easier.
 - d. I think it has changed the way I approach classes and has enhanced my abilities since I'm now more proactive in getting help and more insistent on doing the homework, and I'm sure it'll assist in future development.
 - e. Yes, I believe it has helped me think problem through more thoroughly and realize what I'm trying to achieve instead of just plug and chug.
 - f. I think that MECH-322 has enhanced my ability to look at problems through a perspective of an engineer rather than just a student.
 - g. It created a different way of thinking about problems.
 - h. It was the first class that taught me to confirm units which would enhanced my understanding & skills.
 - i. Not particularly, just follow the path.
 - j. Fluid Mechanics has helped me build a stronger problem-solving skill by helping me not focus on the problem itself, but on the path that must be followed.
 - k. Yes, because it stresses the importance of definitions & that once you know definitions a lot fill fall into place. The rest will be up to your road map for how to handle problems.

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?
 - a. The easiest way to do good is just follow the roadmap. Understand equations.
 - b. Follow the roadmap. It's easy to understand questions by applying the road map. Definitions are also extremely important because we can't do anything if we don't truly understand the definitions.
 - c. Review study aids and previous quizzes and exams, that is your game film to practice and correct mistakes from.
 - d. Be sure to always keep up with the HW whenever possible. It will be a life saver for understanding the thought process.
 - e. Follow the steps and the path given. Figure out the knowns & unknowns. State your equations needed then solve.
 - f. Pay attention and go through class examples to understand the concepts better.
 - g. Don't drop, you will improve. This class is scary and you might not do great at first but over time you will gain understanding.
 - h. Listen from the start. It is nearly impossible to go back and teach yourself.
 - i. DO THE HOMEWORK! Building critical thinking as well as parametric thinking is essential for this course, and it won't be done by looking at the way someone else solved a problem.
 - j. Definitions & practice are extremely important.

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?
 - a. Understand equations, how to adjust them to geometry and which ones to use when, like single vs multiple inlet/outlets.
 - b. Strictly follow the instructions and do homework.
 - c. Same as number 2, review game film to help practice and learn from previous mistakes.
 - d. Don't be afraid to ever ask questions.
 - e. Attend every lecture, do the homework, learn the path. It may be difficult at first but stick with it.
 - f. Follow the ROAD MAP.
 - g. Review the class notes in detail and start homework after you understand those problems.
 - h. Just follow what he says. Partial credit isn't really a thing if you don't know what you're doing.
 - i. Do as many examples as possible and stick to the path! Try to understand all concepts instead of ways to apply formula.
 - j. Understanding the process will make following the path easier.

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?
- a. I 100% understand fluids better than I started. I'm far from an expert, but one of the classes I feel like I know more better than some other I've taken.
 - b. Definitely enhanced. I have understood methods.
 - c. Yes, I struggled in the first half, however in the second I felt like something clicked and that I understood how to follow the path and has helped me understand Fluids much better.
 - d. Yes, but not at first. The class really went out of my way to hold the way I approached my classes, and only then I truly begin to understand.
 - e. Yes, before my knowledge of this class was plug and chug, but now I understand how to get from point A to B and what I am actually solving.
 - f. Yes because I see a problems core concepts that need to be solved. Basically, the Road Map lets me understand the problem.
 - g. I do, initially I struggled but I improved with time and practice.
 - h. I do know the material better than when I started. Whether I pass is up in the air. Following the specific route was helpful.
 - i. Yes, this is the course is probably the one where I've learned the most, because it is not focused on formulas, but in understanding all concepts.
 - j. Yes due to the amount of time spent on problems.

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?
- a. Truly understanding equations will be applicable to my career. It helps understand how values change, linear vs exponential.
 - b. Follow path and let engineering do the job. The engineering is most accurate and will always lead to a correct path.
 - c. Finding and following a path to solve a problem is the single greatest skill I have learned to this point. The path applies to all fields of engineering and all problems.
 - d. Diligence is absolutely imperative in this class.
 - e. When ever viewing a problem, I can identify my problem, then I can formulate how to solve with my knowns and unknowns and apply it to real life situations parametric thinking.
 - f. ROAD MAP because it helps me see the layers in a problem & helps me understand on how to tackle it.
 - g. Learning to ask questions frequently and how to ask the right questions.
 - h. Confirming the units. It helped me if I was on the right track.
 - i. Following a path that is clear, instead of try to step into conclusions.
 - j. Parametric eqns because they can be used to determine if your eqn is right or not.

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2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

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4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

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5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

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2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

Be sure to always keep up with the HW whenever possible. It will be a lifesaver for understanding the thought process.

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

Don't be afraid to ever ask questions

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

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5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

Dilligence is absolutely imperative in this class.

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FOLLOW The ROAD MAP

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Yes because I see a problem's core concept that needs to be solved.
Basically, The Road Map helps me understand the problem.

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Often there is discussion regarding the development of independent thinkers and how to achieve? The development of the independent mindset is never achieved by providing all the questions and all the answers! All researchers will agree that at the beginning of any research endeavor that one will never know all the problems and will never have all the answers. But the hallmark of the independent mind is having a problem-solving mentality, having the ability to self-learn, having the ability to extrapolate data and to form conclusions, and having the fortitude to be unafraid to seek answers from multiple independent sources. Academic institutions at all levels have a formidable task for the 21st Century to transform student learners from an environment where "likes" and "dislikes" are more important than learning and demonstrated knowledge. Institutions that are successful will provide the next generation of independent thinkers that will face significant challenges in the next 20 years, considering the massive rate of technological advancement.

In the next 25 years, the world we will see a cure for Cancer, we will reach out and will start to colonize other planetary worlds, we will discover new materials that will forever change our understanding of physics, we will start to control and hopefully reverse the ravages of global warming and climate change, we will be able to see further back into the past than ever imagined and we will begin to understand the origins of "everything". Academic leaders are faced with the challenge of teaching materials and concepts that have not changed for 100 years and are challenged to prepare students to solve problems that we cannot even imagine today, and to prepare students to develop and to use tools based upon concepts that have not even been conceived. We live in a daunting academic environment, and the only solution is to focus on student development that embraces discovery and inquiry, and to develop a mindset that "rejects" being told all the answers and to develop a mindset that expects to be challenged and to understand that it's "ok" to not know the answers. Rather the most important skill that we can impart to students is to develop an understanding of the "*process and roadmap*" to find and to understand answers to unknown problems and questions, that we can only dream about today. It will be these students and these institutions that will contribute to the long-term survival and the universal expansion of humankind.

Thanks for completing and emailing back. Have a great educational and industrial career. Thank you for your time.

Please answer the following briefly:

1. Engineering design is the execution of applied physics for the development of technical solutions for challenges facing the survival of mankind, and the technical communications of those solutions. Please comment on if you think MECH-322/420 Fluids Mechanics/Heat Transfer and a focus on parametric thought has **enhanced your skills and ability as a student, and as a future engineering professional**, relative to engineering design thought and technical communications. Why or Why Not? Thank you.

It created a different way of thinking about problems

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

Don't drop you will improve, this class is scary and you might not do great at first but over time you will gain understanding

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

review the class notes in detail and start home work after you understand those problems

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

I do, initially I struggled but I improved with time and practice

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

learning to ask questions frequently and how to ask the right questions

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Why or Why Not? Thank you.

THIS WAS THE FIRST CLASS THAT TAUGHT ME TO CONFIRM UNITS WHICH WOULD ENHANCE MY UNDERSTANDING & SKILLS.

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

LISTEN FROM THE START. IT IS NEARLY IMPOSSIBLE TO GO BACK AND TEACH YOURSELF

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

JUST FOLLOW WHAT HE SAYS. PARTIAL CREDIT ISN'T REALLY A THING IF YOU DON'T KNOW WHAT YOU'RE DOING

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

BETTER THAN WHEN I STARTED
I DO KNOW THE MATERIAL! WHETHER I PASSED IS UP IN THE AIR. FOLLOWING THE SPECIFIC ROUTE WAS HELPFUL

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

CONFIRMING THE UNITS, IT HELPED SHOW ME IF I WAS ON THE RIGHT TRACK

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Not particularly, just follow the path

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

Follow the path

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

Follow the path

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

Follow the path

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

Follow the path

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Fluid Mechanics has helped me build a stronger problem-solving skill, by helping me not focus on the problem itself, but on the path that must be followed.

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

Do the homework! Building critical thinking as well as parametric thinking is essential for this course, and it won't be done by looking at the way someone else solved a problem.

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

Do as many examples as possible, and stick to the path! Try to understand all concepts instead of ways to apply one formula.

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

Yes, this is the course is probably the one where I've learned the most, because it is not focused on formulas, but in understanding all concepts.

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

Following a path that is clear, instead of try to step into conclusions.

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Why or Why Not? Thank you.

yes because it stresses the importance of definitions
α that once you know definitions a lot will fall into place.
The rest will be up to your road map for how you handle
problems.

2. What suggestion would you provide to future students to enhance their understanding and performance within ME-322/420 Fluid Mechanics/Heat Transfer?

Definitions & practice are extremely important

3. What advice would you provide to MECH-322/420 Fluid/Heat Transfer students in Dr. Berry's class to enhance their success and performance?

Understanding the process will make following the path easier

4. Considering that you passed the course, do you feel that your understanding of the subject material was enhanced and why?

Yes due to the amount of time spent on problems

5. What was the single most important skill set taught that will hopefully assist your career as a practicing engineer and why?

Parametric eqns because they can be used to determine if your eqn is right or not