

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1=Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

All of it. It's very practical, you build genuine skills, + solve a legitimate healthcare issue instead of a typical p-set class.

What did you like least about this course (both semesters)?

Some More lab skills! (we enjoyed the ones we had, so I'd like to see more)

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2 - this course is great!

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2 - I can't imagine doing/learning SW as I'm trying to design the first time

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1 - yes! 2 - only if they get to interact w/clinicians  
3 - only if they're interested in industry

Did you find the first semester helped with your work in the second semester (yes/no)

yes! and it was interesting to learn new skills w/o actually using them

What do you like most about this course (both semesters)?

I loved the interaction w/ the clinicians. I also love the weekly seminar setup w/ Palmeri. His input was helpful for pushing the project along.

What did you like least about this course (both semesters)?

I did not think that the writing reports portion was helpful - it made it more of a writing class - less engineering

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1 + 2

Did you find the first semester helped with your work in the second semester (yes/no)

yes

What do you like most about this course (both semesters)?

Learning the skills components (Solidworks/Altium)  
Working with client in Medical center  
Scrum style work flow ~ no class 2<sup>nd</sup> semester

What did you like least about this course (both semesters)?

The 1<sup>st</sup> semester lecture component ~~was~~ could have been condensed / removed. More time to ~~be~~ work on our actual project (identify roadblocks)

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1=Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

1

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, and maybe 3

Did you find the first semester helped with your work in the second semester (yes/no)

Meh

What do you like most about this course (both semesters)?

That I can develop ideas creative and  
~~it's not that fine~~ it relaxes the design process  
a lot.

What did you like least about this course (both semesters)?

I felt like we needed more strict deadlines, It was  
too easy to push design project off.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1 and 3 => depending on your ~~future~~ interest

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

I liked that we were taught various skills (ex Solidworks, PCB making, Altium, etc) so that we had a greater set of skills. I also really like that we have an entire semester to do iterative prototyping.

What did you like least about this course (both semesters)?

The least was some of the documentation we had to do. Some assignments we were asked to do individually even though we had to turn in a combine final report.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

1

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 3

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

The opportunity to learn new hand-on skills such as SolidWorks, Altium, or new signal processing techniques in software/hardware.

What did you like least about this course (both semesters)?

There was a lot of work first semester that felt like busy work - I have a whole K-12 education where I could write, but I just now have the opportunity to work in a stocked engineering design lab and want to seize it!

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 3

Did you find the first semester helped with your work in the second semester (yes/no)

yes

What do you like most about this course (both semesters)?

I like the hands on approach and honing of actual industry skills. It has really helped prepare me for my job to learn the design process and hit roadblocks and learn to overcome them.

What did you like least about this course (both semesters)?

I didn't like a lot of the in class worksheets. They seemed like a tedious, patronizing way to drive home points that would be better spent learning on our own projects.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 3

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

Loved focus on & skills building w/ in first semester and focus on project management skills for second semester.

What did you like least about this course (both semesters)?

Too much focus on non engineering aspects that were not useful to help with getting actual design work done, in the first Semester.

Would prefer more support from TAs/instructors or enforce working times to make it ~~more~~ convenient to work on design stuff.

I would have preferred more focus on skill building in the first semester



This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

- Practical Skills like Solidworks & Altium
- Design and independent motivation to work - very much like real-world

What did you like least about this course (both semesters)?

- Some lectures in 1<sup>st</sup> semester were slow
- Sometimes it was difficult to self-motivate, especially 2<sup>nd</sup> semester senior year, perhaps a bit more pushing from the faculty might be helpful.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

I felt as if the documentation part was an unnecessary time block.

What do you like most about this course (both semesters)?

Very interesting projects, and very applicable

What did you like least about this course (both semesters)?

Not enough work on design processes.  
Students who have taken a senior design class can find the 590 section a waste of time.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

Yes.

What do you like most about this course (both semesters)?

I really liked the lab portion of the design class in the first semester. I also liked the electronics class which is really helpful in the second semester. In the second semester I really like the free format of when we work on the project and the project is really interesting.

What did you like least about this course (both semesters)?

I wasn't a huge fan of the design class (not the lab portion) in the first semester. It would be really cool if we did more of the lab stuff during the class time as well.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

all the above

Did you find the first semester helped with your work in the second semester (yes/no)

yes -- going through the finger tumor / ELC helped

What do you like most about this course (both semesters)?

the autonomy -- we make all the design choices

What did you like least about this course (both semesters)?

all the paper work in the beginning -- some as it was very repetitive

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 3

Did you find the first semester helped with your work in the second semester (yes/no)

yes

What do you like most about this course (both semesters)?

Working in Chesterfield

JP lecture

Solidworks & Altium Sessions

What did you like least about this course (both semesters)?

Writing some technical documents

Learning engineering practices, but then applying them to hypothetical examples & not our design

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1 2 3

Did you find the first semester helped with your work in the second semester (yes/no)

yes

What do you like most about this course (both semesters)?

Great course! Get to make and design a new device, learning a lot.

What did you like least about this course (both semesters)?

Some of the assignments from 1st semester were repetitive.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

③

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

① 1st semester is good for consulting

Did you find the first semester helped with your work in the second semester (yes/no)

Somewhat - the lab was helpful for this semester

What do you like most about this course (both semesters)?

lab first semester was very helpful  
in general & for this semester

What did you like least about this course (both semesters)?

all the writing first semester and the  
some of the classes that have had non applicable examples

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1.5

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

yes - wish it had  
helped more though, but that was circumstantial  
not a problem with the class

What do you like most about this course (both semesters)?

lab skills, getting to actually build things  
hands on, getting to work with an  
actual clinician & work on a project  
that has more meaning

What did you like least about this course (both semesters)?

clinician should have been instructed  
on what his role in the project  
actually is

busy work during first semester was a  
little annoying



This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

2

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

1, 2, 3

Did you find the first semester helped with your work in the second semester (yes/no)

yes

What do you like most about this course (both semesters)?

First semester- lab skills (CAD, Altium, putting skills to use with finger tremor project)

Second semester- self-directed, design-focus, Agile workflow client interaction

What did you like least about this course (both semesters)?

overlap of finger tremor with prototype work

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1= Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

industry or grad school

Did you find the first semester helped with your work in the second semester (yes/no)

Yes

What do you like most about this course (both semesters)?

hands-on work

Solidworks

2<sup>nd</sup> semester = structure of course, weekly meetings, no class time.

What did you like least about this course (both semesters)?

that it wasn't as hands-on early on the first semester.

This is the first year that two-semester design is being offered at Duke. So, we are trying to gather as much feedback as we can to make improvements for future students.

We would appreciate your time answering these few questions:

Drs. Salinas, Malkin, Palmeri

Overall, how satisfied or dissatisfied are you with this course (both semesters)? (1=Extremely, 5=not at all satisfied)

1

If given the opportunity to take one- or two-semester design again which would you select (1=one semester, 2=two semester)

2

⇒ I was enrolled in grad circuits 1<sup>st</sup> sem, undeniably helpful. Depends on enrollees background really

Do you think you'd recommend two-semester design to students interested in (1) industry, (2) medical school and/or (3) graduate school (select all that apply)?

(3)

(1)

Did you find the first semester helped with your work in the second semester (yes/no)

YES

What do you like most about this course (both semesters)?

→ so real world applicable

→ hands on

→ textbook/ to actual practice.  
scientific knowledge

What did you like least about this course (both semesters)?

although important, design thinking exercises could interfere with time for more rigorous work.



## Survey

- 1) 1 - extremely satisfied, I learned a lot of applicable skills for industry
- 2) 2 - two semester
- 3) 1, honestly I feel that people going to med/grad school are very time-stressed and so maybe are better suited for a 1 semester class, but if you want to build up your resume / be more prepared for industry, this is well worth it
- 4) I wish we had less busy work and more assignments directed at really building the device, I think what we did in the whole semester could have been condensed to 1 or 2 months.
- 5) My favorite parts of the class were all the times we learned / used Altium and Solidworks, I thought the first assignments were helpful in teaching these tools, and then it was really cool to be able to use them in our actual project.
- 6) My least favorite part was when we did all those in class activities during the first semester because they felt like a waste of time that could have been better spent actually making progress on our projects.