

CS 4810-001 Intro to Computer Graphics - Spring 2014

ENGR (20600)

INSTRUCTORS: Tychonievich, Luther (lat7h)

Respondents: 16 / Enrollment: 47

Summary: CS 4810-001 Intro to Computer Graphics - Spring 2014 (20600)			
Overall Course Rating		Overall Instructor Rating	
CS-4810-001 Mean 4.56 CS-4810-001 Std Dev 0.90 CS-4810-001 Response Count 80		INSTRUCTOR: Tychonievich, Luther Mean 4.56 Std Dev 0.96 Response Count 112	
Difference from Category Mean, Expressed in Category Standard Deviations		Difference from Category Mean, Expressed in Category Standard Deviations	
SEAS, 4000-level courses Mean 4.19 SEAS, 4000-level courses Std Dev 0.89 SEAS, 4000-level courses Response Count 9293		SEAS, 4000-level courses Mean 4.38 SEAS, 4000-level courses Std Dev 0.80 SEAS, 4000-level courses Response Count 13773	

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~						
<p>1. Which topic/lecture in this course was your favorite and why?</p> <p>Question Type: Short Answer</p> <p>contributed by Tychonievich, Luther (lat7h)</p>	<table border="1"> <thead> <tr> <th colspan="2">Results for CS-4810-001, Tychonievich, Luther</th> </tr> <tr> <th>Total</th> <th>Individual Answers</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">16</td> <td style="text-align: center;"><i>See below for Individual Results</i></td> </tr> </tbody> </table> <p>OpenGL, because I think it is the most useful.</p> <p>I really enjoyed the stuff on fluid simulation and other natural phenomena being implemented. It was cool to see all the math we've learned being used to create beautiful things and the progression of simulation techniques in fluids from simple to more complex. It was also cool to see how things like vector fields could (very simply and in a way that is difficult to modify) simulate water!</p> <p>I enjoyed the Fluid lectures because of all the examples and you could see the mathematics in action.</p> <p>Animation lectures (covering kinematics, IK, tweeing, etc.) were my favorites. We covered static images well with the homeworks but didn't get a chance to work on animation unless it was chosen as a topic for the final project. It was nice to hear about the real world applications of the technology and how movie/game graphics work.</p> <p>Ray tracing, I found it very pleasing.</p> <p>particle systems & fluids</p> <p>Raycasting, because it was the most gratifying work and was the coolest to think about</p> <p>All topics went too quickly and it was hard for me to understand any one fully.</p> <p>It's very hard to say. The whole scan-converting series: It was incredibly interesting to see how it is that pixel placement, color, and fill is determined. Ray tracing: It is amazing to see how such beautiful images can be made with (relatively) simple code. The theories behind light, reflection, refraction, etc. are fun to learn.</p> <p>The lectures about fluids were my favorite because this topic interested me.</p> <p>I really enjoyed the lectures about Fractals - I've always seen pictures but never learned anything about them beyond that.</p> <p>I liked learning about the techniques that can make ray tracing look more realistic (such as global illumination and ambient occlusion) because it seemed like ray tracing could make the highest quality pictures</p> <p>Ray Tracing, 2D/3D scan converting, Geometry and Geometry Modeling, Fractal</p> <p>It is honestly really hard to pick a favorite. Perhaps everything after the particle systems lecture, because we were further into the course and could begin to comprehend how to do cooler stuff.</p> <p>that is an impossible question</p> <p>Blobbies! Just because I think they're cool</p>	Results for CS-4810-001, Tychonievich, Luther		Total	Individual Answers	16	<i>See below for Individual Results</i>
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~ QUESTIONS AND DETAILS ~

~ ANSWER MATRICES ~

2. Which topic/lecture in this class do you think you will find the most useful in the future?

Question Type: Short Answer

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther	
Total	Individual Answers
16	See below for Individual Results

The broad overview of the algorithms for each topic will be the most useful.

Kinematics modelling

Ray tracing -planes, spheres and triangles

Likely none for me because I don't plan on continuing with graphics but all would have been helpful otherwise.

I won't be going into graphics (or computer science in general), so it is hard to say. I will say, though, that you present everything in a very interesting way.

I don't know if I've taken anything from this class since it went by at such a blur

The big ideas behind rasterization and ray tracing.

learning about scan line converting and ray tracers and their differences

Rasterizing. I want to go into real time graphics at some point.

OpenGL.

Learning about the GPU pipeline was probably the most useful topic for general purpose programming

well, i don't have a crystal ball, but maybe raytracing?

Most of them

The lecture on the paper was useful as previously papers had seemed byzantine and repetitive but Luther showed us how to deal with them in a manageable way and broke down the veil of academia.

Key frames/tweening/animation stuff Geometry modeling All the dynamics stuff I guess Also really appreciate the class on how to read a research paper. Really helped.

Scan line 3D graphics and ray tracing.

3. What lecture/topic(s) in this class "did not work" or were not seen as useful in the long run?

Question Type: Short Answer

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther	
Total	Individual Answers
14	See below for Individual Results

Tweening, movie making

None. Every class was really interesting. It's kind of hard to say if something wouldn't be useful to me in the long run because I guess I'm never really good at predicting the future. Every topic introduced was really interesting to me.

A lot of them.

Differences in OpenGL and the other one

I'm not really sure. I personally thought they were all really interesting. Maybe the weakest was the one covering the research paper on viscoelastic fluid simulations. Your analysis was very interesting, but it was clear that most of the students hadn't read the paper beforehand, which forced you to cover fewer things and in less detail. In the future, I would suggest a pass/fail assignment for it where they have to bring an annotated copy of the paper.

Vocabulary terms.

I probably won't use the different types of fluids

n/a

Going over research papers, the more researchy parts.

See above

There wasn't any particular subject covered earlier in the course that didn't help later .

Some of the stuff on lighting could have been more clear as when I got to implementing it I found it very hard.

I believe all of this class was on point, but fractals seemed least useful.

Still fuzzy on Nurbs...

4. How often did you make use of the TA office hours?

Question Type: Multiple Choice

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther					
Total	Every week (NA)	Every other week (NA)	Once per assignment (NA)	Rarely (NA)	Never (NA)
16	1 (6.25%)	4 (25.00%)	2 (12.50%)	5 (31.25%)	4 (25.00%)

Results for SEAS, 4000-level courses					
Total	Every week (NA)	Every other week (NA)	Once per assignment (NA)	Rarely (NA)	Never (NA)
16	1 (6.25%)	4 (25.00%)	2 (12.50%)	5 (31.25%)	4 (25.00%)

5. How would you rate the availability of TAs?

Question Type: Likert

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther							
Total	Mean	Std Dev	Excellent (4)	Good (3)	Average (2)	Weak (1)	Very Poor (0)
16	3.56	0.73	11 (68.75%)	3 (18.75%)	2 (12.50%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Excellent (4)	Good (3)	Average (2)	Weak (1)	Very Poor (0)
16	3.56	0.73	11 (68.75%)	3 (18.75%)	2 (12.50%)	0 (0.00%)	0 (0.00%)

6. How would you rate the helpfulness of the TAs?

Question Type: Likert

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther							
Total	Mean	Std Dev	Excellent (4)	Good (3)	Average (2)	Weak (1)	Very Poor (0)
16	2.88	1.02	6 (37.50%)	3 (18.75%)	6 (37.50%)	1 (6.25%)	0 (0.00%)

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Total	Mean	Std Dev	Excellent (4)	Good (3)	Average (2)	Weak (1)	Very Poor (0)
16	2.88	1.02	6 (37.50%)	3 (18.75%)	6 (37.50%)	1 (6.25%)	0 (0.00%)

7. Any specific comments about the TAs you would like to share?

Question Type: Short Answer

contributed by Tychonievich, Luther (lat7h)

Results for CS-4810-001, Tychonievich, Luther	
Total	Individual Answers
11	See below for Individual Results

Special shoutout to Puneet! Puneet's awesome. One of the most helpful TAs I've ever had. He was kind and gracious enough to even help me outside of office hours (whenever I randomly bumped into him in other places throughout the week).

They were available and I used them when I needed them, so it was helpful to have them. Sometimes they weren't able to help all that much since with graphics the error can be caused by just about any little thing, so that was a little frustrating because it still felt like sometimes we were just on our own.

The few times I did talk to a TA, s/he didn't seem knowledgeable about the way the instructor presented the material.

At first they were a bit confused since they weren't sure what the rhythm of the course was going to be, but they became better and better at providing help. Puneet in particular was a tremendous help.

I went to two of the TAs, one was wonderful and was really able to help, the other didn't even glance at my problem.

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~																																																						
<p>I never went to office hours so no</p> <p>Puneet was really helpful!</p> <p>Puneet was outstanding -- both knowledgeable and friendly. All TAs were readily available and willing to help answer all questions.</p> <p>n/a</p> <p>They were all great when I needed them and knowledgeable.</p> <p>Puneet!!!</p>																																																							
<p>8. The course addressed technically rigorous subject matter consistent with the course objectives.</p> <p>~ Question Type: Likert ~ <i>contributed by Dean of the School of Engineering and Applied Science</i></p>	<table border="1"> <thead> <tr> <th colspan="9">Results for CS-4810-001</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>4.88</td> <td>0.34</td> <td>14 (87.50%)</td> <td>2 (12.50%)</td> <td>0 (0.00%)</td> <td>0 (0.00%)</td> <td>0 (0.00%)</td> <td>0 (0.00%)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="9">Results for SEAS, 4000-level courses</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>1860</td> <td>4.40</td> <td>0.72</td> <td>934 (50.22%)</td> <td>769 (41.34%)</td> <td>89 (4.78%)</td> <td>33 (1.77%)</td> <td>12 (0.65%)</td> <td>23 (1.24%)</td> </tr> </tbody> </table>	Results for CS-4810-001									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	16	4.88	0.34	14 (87.50%)	2 (12.50%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	Results for SEAS, 4000-level courses									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	1860	4.40	0.72	934 (50.22%)	769 (41.34%)	89 (4.78%)	33 (1.77%)	12 (0.65%)	23 (1.24%)
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<p>9. The instructor used methods other than/in addition to traditional lectures (for example, active learning, in-class problems, collaborative learning, in-class discussion) effectively in this course.</p> <p>~ Question Type: Likert ~ <i>contributed by Dean of the School of Engineering and Applied Science</i></p>	<table border="1"> <thead> <tr> <th colspan="9">Results for CS-4810-001, Tychonievich, Luther</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>4.06</td> <td>1.39</td> <td>9 (56.25%)</td> <td>3 (18.75%)</td> <td>2 (12.50%)</td> <td>0 (0.00%)</td> <td>2 (12.50%)</td> <td>0 (0.00%)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="9">Results for SEAS, 4000-level courses</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>1974</td> <td>4.29</td> <td>0.86</td> <td>924 (46.81%)</td> <td>731 (37.03%)</td> <td>161 (8.16%)</td> <td>63 (3.19%)</td> <td>26 (1.32%)</td> <td>69 (3.50%)</td> </tr> </tbody> </table>	Results for CS-4810-001, Tychonievich, Luther									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	16	4.06	1.39	9 (56.25%)	3 (18.75%)	2 (12.50%)	0 (0.00%)	2 (12.50%)	0 (0.00%)	Results for SEAS, 4000-level courses									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	1974	4.29	0.86	924 (46.81%)	731 (37.03%)	161 (8.16%)	63 (3.19%)	26 (1.32%)	69 (3.50%)
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<p>10. There was a reasonable level of effort expected for the credit hours received.</p> <p>~ Question Type: Likert ~ <i>contributed by Dean of the School of Engineering and Applied Science</i></p>	<table border="1"> <thead> <tr> <th colspan="9">Results for CS-4810-001</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>4.38</td> <td>1.09</td> <td>10 (62.50%)</td> <td>4 (25.00%)</td> <td>1 (6.25%)</td> <td>0 (0.00%)</td> <td>1 (6.25%)</td> <td>0 (0.00%)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="9">Results for SEAS, 4000-level courses</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>1860</td> <td>4.30</td> <td>0.84</td> <td>875 (47.04%)</td> <td>779 (41.88%)</td> <td>111 (5.97%)</td> <td>63 (3.39%)</td> <td>26 (1.40%)</td> <td>6 (0.32%)</td> </tr> </tbody> </table>	Results for CS-4810-001									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	16	4.38	1.09	10 (62.50%)	4 (25.00%)	1 (6.25%)	0 (0.00%)	1 (6.25%)	0 (0.00%)	Results for SEAS, 4000-level courses									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	1860	4.30	0.84	875 (47.04%)	779 (41.88%)	111 (5.97%)	63 (3.39%)	26 (1.40%)	6 (0.32%)
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<p>11. The homework assignments helped me learn the subject matter.</p> <p>~ Question Type: Likert ~ <i>contributed by Dean of the School of Engineering and Applied Science</i></p>	<table border="1"> <thead> <tr> <th colspan="9">Results for CS-4810-001</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>4.75</td> <td>0.77</td> <td>14 (87.50%)</td> <td>1 (6.25%)</td> <td>0 (0.00%)</td> <td>1 (6.25%)</td> <td>0 (0.00%)</td> <td>0 (0.00%)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="9">Results for SEAS, 4000-level courses</th> </tr> <tr> <th>Total</th> <th>Mean</th> <th>Std Dev</th> <th>Strongly Agree (5)</th> <th>Agree (4)</th> <th>Neutral (3)</th> <th>Disagree (2)</th> <th>Strongly Disagree (1)</th> <th>Not Applicable (NA)</th> </tr> </thead> <tbody> <tr> <td>1860</td> <td>4.20</td> <td>0.89</td> <td>724 (38.92%)</td> <td>680 (36.56%)</td> <td>191 (10.27%)</td> <td>56 (3.01%)</td> <td>30 (1.61%)</td> <td>179 (9.62%)</td> </tr> </tbody> </table>	Results for CS-4810-001									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	16	4.75	0.77	14 (87.50%)	1 (6.25%)	0 (0.00%)	1 (6.25%)	0 (0.00%)	0 (0.00%)	Results for SEAS, 4000-level courses									Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	1860	4.20	0.89	724 (38.92%)	680 (36.56%)	191 (10.27%)	56 (3.01%)	30 (1.61%)	179 (9.62%)
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16	4.75	0.77	14 (87.50%)	1 (6.25%)	0 (0.00%)	1 (6.25%)	0 (0.00%)	0 (0.00%)																																															
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~ QUESTIONS AND DETAILS ~

~ ANSWER MATRICES ~

12. The textbook increased my understanding of the material.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.50	1.00	3 (18.75%)	0 (0.00%)	1 (6.25%)	0 (0.00%)	0 (0.00%)	12 (75.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1854	3.80	1.07	346 (18.66%)	387 (20.87%)	258 (13.92%)	109 (5.88%)	34 (1.83%)	720 (38.83%)

13. The course material was well organized and developed.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.31	1.35	11 (68.75%)	3 (18.75%)	0 (0.00%)	0 (0.00%)	2 (12.50%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1959	4.22	0.88	823 (42.01%)	803 (40.99%)	165 (8.42%)	75 (3.83%)	31 (1.58%)	62 (3.16%)

14. The instructor was knowledgeable about the subject matter.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.94	0.25	15 (93.75%)	1 (6.25%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1966	4.65	0.58	1344 (68.36%)	536 (27.26%)	44 (2.24%)	10 (0.51%)	6 (0.31%)	26 (1.32%)

15. The instructor was well prepared for class.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.81	0.54	14 (87.50%)	1 (6.25%)	1 (6.25%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1967	4.48	0.72	1111 (56.48%)	654 (33.25%)	105 (5.34%)	22 (1.12%)	13 (0.66%)	62 (3.15%)

16. I received adequate preparation from the prior courses in the curriculum to be successful in this course.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.25	1.13	9 (56.25%)	4 (25.00%)	2 (12.50%)	0 (0.00%)	1 (6.25%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1859	4.12	0.89	681 (36.63%)	803 (43.20%)	222 (11.94%)	85 (4.57%)	26 (1.40%)	42 (2.26%)

~ QUESTIONS AND DETAILS ~

~ ANSWER MATRICES ~

17. The grading policy was fair.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.19	1.22	9 (56.25%)	4 (25.00%)	1 (6.25%)	1 (6.25%)	1 (6.25%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1969	4.24	0.87	879 (44.64%)	744 (37.79%)	208 (10.56%)	72 (3.66%)	22 (1.12%)	44 (2.23%)

18. The instructor responded adequately to in-class questions.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.81	0.40	13 (81.25%)	3 (18.75%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1973	4.48	0.70	1092 (55.35%)	715 (36.24%)	86 (4.36%)	20 (1.01%)	14 (0.71%)	46 (2.33%)

19. The instructor effectively used technology in support of the learning goals for this course.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4810-001, Tychonievich, Luther								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
16	4.80	0.41	12 (75.00%)	3 (18.75%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (6.25%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
1965	4.28	0.82	851 (43.31%)	779 (39.64%)	169 (8.60%)	54 (2.75%)	18 (0.92%)	94 (4.78%)

20. The average number of hours per week I spent outside of class preparing for this course was:

Question Type: Multiple Choice

contributed by Office of the Provost

Results for CS-4810-001					
Total	Less than 1 (NA)	1 - 3 (NA)	4 - 6 (NA)	7 - 9 (NA)	10 or more (NA)
16	0 (0.00%)	1 (6.25%)	2 (12.50%)	3 (18.75%)	10 (62.50%)

Results for SEAS, 4000-level courses					
Total	Less than 1 (NA)	1 - 3 (NA)	4 - 6 (NA)	7 - 9 (NA)	10 or more (NA)
1862	61 (3.28%)	569 (30.56%)	776 (41.68%)	281 (15.09%)	175 (9.40%)

21. I learned a great deal in this course.

Question Type: Likert

contributed by Office of the Provost

Results for CS-4810-001							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
16	4.62	0.89	13 (81.25%)	1 (6.25%)	1 (6.25%)	1 (6.25%)	0 (0.00%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1849	4.29	0.85	888 (48.03%)	727 (39.32%)	146 (7.90%)	66 (3.57%)	22 (1.19%)

~ QUESTIONS AND DETAILS ~

~ ANSWER MATRICES ~

22. Overall, this was a worthwhile course.

Question Type: Likert

contributed by Office of the Provost

Results for CS-4810-001							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
15	4.60	1.06	12 (80.00%)	2 (13.33%)	0 (0.00%)	0 (0.00%)	1 (6.67%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1855	4.30	0.90	935 (50.40%)	684 (36.87%)	139 (7.49%)	58 (3.13%)	39 (2.10%)

23. The course's goals and requirements were defined and adhered to by the instructor.

Question Type: Likert

contributed by Office of the Provost

Results for CS-4810-001, Tychonievich, Luther							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
16	4.81	0.54	14 (87.50%)	1 (6.25%)	1 (6.25%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1963	4.36	0.77	959 (48.85%)	828 (42.18%)	114 (5.81%)	44 (2.24%)	18 (0.92%)

24. The instructor was approachable and made himself/herself available to students outside the classroom.

Question Type: Likert

contributed by Office of the Provost

Results for CS-4810-001, Tychonievich, Luther							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
16	4.88	0.34	14 (87.50%)	2 (12.50%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1964	4.45	0.78	1137 (57.89%)	643 (32.74%)	131 (6.67%)	33 (1.68%)	20 (1.02%)

25. Overall, the instructor was an effective teacher.

Question Type: Likert

contributed by Office of the Provost

Results for CS-4810-001, Tychonievich, Luther							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
16	4.56	1.03	13 (81.25%)	1 (6.25%)	0 (0.00%)	2 (12.50%)	0 (0.00%)

Results for SEAS, 4000-level courses							
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1969	4.41	0.79	1081 (54.90%)	700 (35.55%)	130 (6.60%)	36 (1.83%)	22 (1.12%)

26. Please make any overall comments or observations about this course:

Question Type: Short Answer

contributed by Office of the Provost

Results for CS-4810-001	
Total	Individual Answers
12	See below for Individual Results

One of the hardest courses I've ever taken. Yet, one of the most interesting courses I've ever taken. (Ironic how something that fascinates me so much is something I am so bad in - but hey we all have to start somewhere I guess). Made me wish I paid more attention in my math courses, but all's good. Graphics is such a wide topic, and I think Prof Tychonievich did an excellent job touching on lots of different parts - enough to make you realize which parts interested you the most about graphics to continue pursuing it if you wanted to. The final project gave us the opportunity to do just that. One of my favorite parts of the course was the way Prof Tychonievich opened each class by asking "anything cool you've seen lately?" Not only was it cool to see everything in the lens of a graphics designer, but it also made me a much more reflexive person by the end of the semester. I really appreciate this. All in all, one of my most favorite courses taken in UVA so far. Thank you so much Professor Tychonievich - it's been such a pleasure to have been your student this past semester!

Using piazza was really helpful so I'm glad that started. The quizzes were really hard when they weren't open note. I think making them open note made them a lot more reasonable, otherwise they went into so much detail that you really had to take the time to study and it was more like studying for a test every week - that kind of detail. And I just felt like I didn't do very well and I had a hard time improving my scores, I just didn't feel like I was able to do very well on them ever. I think it would be helpful if the quizzes were due at the same time each week. It gets really confusing keeping up with whether there is a quiz out and when it's due and it's due at different times, and it would just be helpful if there were one quiz each week, due at a certain time. In addition, I think HW2 was a really large and big homework assignment, and none of us were really prepared for how hard it would be. I think it would be helpful if we kind of divided up assignments like that into weekly chunks, (first week triangles, then next week bezier curves etc), because when doing an assignment that large it can be really difficult to get all the little pieces to work, and the TAs can't really help find those small random issues and when it's that massive of code it becomes a headache. I know that's the truth about coding in general but I think when you're first learning the material it's helpful to break concepts up into small chunks when you try to apply them. Web & Mobile I think does a good job of this with weekly assignments. All in all though I learned a lot and Professor Tychonievich has a lot of enthusiasm and energy for teaching and for the course which is great!

He's a great teacher for this course: Great Drawer Very Knowledgeable The perfect amount of dweebiness

Hard course but very rewarding!

Course moved very quickly. Lectures were very helpful but were difficult to review without relistening to the audio, and even then could be challenging because the completed images on the slides were often hard to read/understand when they weren't being drawn in real time in front of you. In the future I would recommend either taking a video of the lecture to post or having some supplementary notes in a PowerPoint or Word document with text rather than strictly images. Quizzes were very difficult and homework assignments took a tremendous amount of effort and time but this was clearly explained as the expectation at the beginning of the course. Professor is obviously very knowledgeable and an entertaining lecturer. He is also great at his office hours, which you will likely need to attend at some point.

Aside from being an overall excellent "person", Professor Tychonievich is an excellent professor and it would be a shame if he doesn't get to teach this class again. I have never seen someone with such a genuine and pure enthusiasm and curiosity for a subject a professor is teaching before. The course is a little daunting at first, especially regarding the transition from HW0 to HW1. Most people have difficulty with this jump. After HW1 I felt that it was relatively smooth sailing.

Luther is one of the most fair teachers and best teachers I have had in this department. I enjoyed his lectures and attended routinely because experiencing him live is way better than on recordings.

I learned so much in this class. I like the way he lectures, he's engaging and informative and obviously knows what he's talking about and makes it easy to pay attention. The quizzes were really hard and I think it was a good thing to make them open note after the first few. They were still hard but it made my average closer to 85 instead of 50... Some questions were still weirdly worded though. Also, I really like all of the optional parts of hw1 and 2 because I felt that as long as I put in enough effort I could guarantee a good grade. On the third hw I just got frustrated because if I couldn't get one thing to work it meant my grade was automatically lowered. Having the optional things did not make it any easier and I still found myself taking a really long time to get my code to work.

Lectures were boring. The core course material did not seem well developed or organized. Too much time was spent discussing researchy graphics techniques and stuff that just interested the instructor (and some members of the class), and not enough was spent on core material.

The first 2/3 of the course was great. The last 1/3 of the course have more than enough diversity of material for me. There were too many concepts and ideas to cover, but very few details like, how in detail meshes are represented in data structure, tips to implement tweening, to simulate bones, etc.

Smartest Man in the World.

Great class! I loved the "Have you seen any interesting fish?" moments in class.