

Magee - Course Survey Summary Data - Extracted from TV

Quantitative Course Survey Data

Table 1. Anatomy Teaching ACSU Student Survey Results

Course-Year Question (1-5 scale, 5 highly rated)	305- 12	305- 17	496- 17	496- 18	384- 17	384- 18	684- 17	531- 17	531- 18	633- 12	633- 18	MEAN ±SEM
How well were the course objectives communicated to students?	4.57	4.78	5.00	5.00	4.86	4.63	5.00	4.26	4.62	4.35	4.60	4.67±0 .1
How well did class sessions increase your understanding of the subject?	4.58	4.74	5.00	5.00	4.92	4.57	5.00	4.35	4.69	4.35	5.00	4.74±0 .1
How effectively did the instructor facilitate student learning?	4.77	4.84	5.00	5.00	4.93	4.75	5.00	4.58	4.69	4.06	5.00	4.75±0 .1
How well did the instructor create an atmosphere that was respectful of student opinions, ideas, and differences?	4.67	4.75	4.89	5.00	4.93	4.75	5.00	4.39	4.92	5.53	5.00	4.94±0 .1
How do you rate this instructor?	4.65	4.82	5.00	5.00	5.00	5.00	5.00	4.45	4.92	4.24	5.00	4.83±0 .1
Number of respondents/total class:	74/ 135	87/9 6	4/ 6	6/ 9	14/1 8	8/33	2/ 5	15/2 6	13/4 2	9/ 18	4/ 16	

Table 2. 2020 Anatomy Learning Ecology COVID-19 Transition Survey

Survey modeled after the 2014/5 TILT Learning Ecologies BMS305 Surveys

Course-Year Question (2020 & 2015 1-7 scale, 7 strongly agree; 2014 1-5 scale, 5 strongly agree)	531 -20	305 -20	305 -15	305 -14
I enjoy this subject.	6.88	6.65	6.68	4.56
This class has increased my interest in this subject	6.88	6.59	6.47	4.43
I would like to learn more about this subject.	6.88	6.60	6.53	4.61
I want to take other classes in this subject.	6.72	6.44	6.40	4.44
This course followed the syllabus.	6.36	6.69	6.73	4.51
I can explain course concepts to others who do not know anything about this course.	6.56	6.66	6.34	4.29
I can apply what I learn in this class to other classes.	6.68	6.52	6.40	4.35
Success in this course means getting an A	4.60	4.28		4.49
Success in this course means developing a deeper understanding of the subject.	6.92	6.70		4.78
Success in this course means being able to apply the knowledge gained in this course beyond this semester.	6.92	6.74		
I am confident I can get a passing grade in this course			6.34	
I consider my personal outcome in this course this semester to be a success.	6.48	5.91		
The quizzes in this course guide my study and self-assessment.	5.44	6.12		
The exams in this course accurately assess what I know about the subject.	6.12	5.92		
The exams in this course required me to think about anatomical relationships	6.44	6.44		
The Virtual Animal Anatomy (VAA) program helps me learn anatomy.	6.36	6.33		
The COVID-19 transition in this course was a success.	5.76	5.51		
The average time per week required by this course BEFORE Spring Break was appropriate.	5.40	5.84		
The average time per week required by this course AFTER Spring Break was appropriate.	5.44	5.41		
I believed in my ability to get a passing grade for this class BEFORE	6.40	6.20		
I believed in my ability to get a passing grade for this class AFTER Spring Break.	6.60	5.73		
The resources or activities made available to me BEFORE Spring Break facilitated my learning in this course.	6.68	6.61		
The resources or activities made available to me AFTER Spring Break facilitated my learning in this course.	5.64	5.31		
Performing cadaveric dissection is necessary for obtaining a deeper understanding of anatomical relationships.	6.76			
The Table Checks in this course guided my study and self-assessment.	6.60			
Survey response rate/course enrollment	28/ 31	120/ 131	85/ 106	70/ 93

Table 3. DVM Student Survey - Rating and Response Rate -

The instructor taught in a way that helped you learn the most important information - Mean Rating 1.8±0.08

Course -Year (1-5 scale, 1 strongly agree)	2014	2015	2016	2017	2018	2019
VM 722 Rating	1.52	1.74	2.26	2.00	1.55	2.00
VM 616 Rating	~	~	1.25	1.71	1.50	1.60
VM 618 Rating	~	1.72	1.67	2.28	2.21	1.71
VM 722 Response Rate	34/138	31/138	23/138	32/138	25/138	21/138
VM 616 Response Rate	~	~	29/138	46/138	22/138	8/138
VM 618 Response Rate	~	18/138	21/138	89/138	24/138	7/138

Table 4. DVM Student Survey - Rating (Response Rate shown in Table 3) -

The instructor created an environment that was conducive to learning - Mean Rating 1.6±0.08

Course -Year (1-5 scale, 1 strongly agree)	2014	2015	2016	2017	2018	2019
VM 722 Rating	1.50	1.52	2.35	2.00	1.55	1.71
VM 616 Rating	~	~	1.12	1.51	1.36	1.20
VM 618 Rating	~	1.44	1.52	1.80	1.42	1.71

Qualitative Course Survey Data - Summarized by topic and course/year

Class expectations and learning objectives are clear, examinations are fair, and students develop new active learning strategies.

- This class taught me an entire new way of learning. While I am great at memorizing, there was so much information in this class, that strategy had to be built upon. I learned how to draw out pictures, create full systems, and be able to synthesize a lot of information. This classes helped me to become a better student in my other classes too. I have never had to study for this many hours before exams or spend so much voluntary time, outside of class, to get the grade I wanted. I had to toughen up this semester. **(BMS 305 SP19)**
- As a course designed to replicate veterinary school anatomy (as most taking the class are planning to go to) I believe the learning expectations were amazing for the class level. **(BMS 305 SP19)**
- It seemed like A TON of things we needed to know at the beginning of the course, but considering the scope of anatomy and all the things we could have learned, I think the expectations were reasonable. I appreciate that the main muscles, attachment points, and innervations were stressed over learning every single detail that would be less helpful to remember in the future. **(BMS 305 SP19)**
- The teachers have been incredibly helpful and understanding of how the coursework is to students. They have also given as many resources as they could to help us succeed. There has been anatomy programs, pictures of posters that have been hung up in lab, open lab. The teachers have been completely honest with the students the entire time, they have been able to connect with us and encourage us to continue to work hard. I have felt completely supported throughout the course. **(BMS 305 SP19)**
- I enjoyed very much each session that we had with her because I felt that it was very hands on and it was techniques that are very important for our careers. **(VM 795 SP19)**
- Objectives made course learning expectations very clear, and Dr. Magee specifically was very good at mentioning important "take home" concepts in lecture. **(VM 618 F17)**
- The cumulative portion of the final exam was my favorite testing style. Everything was finally integrated, but they were independent enough that you didn't fail a whole swathe of questions if you couldn't remember one of the answers. Thank you! **(VM 618 F18)**
- The objectives were extremely helpful in this aspect, and the teachers always strove to be clear about this **(VM 618 F19)**
- I felt the exams did a good job of representing the important objectives and take aways from material learned in class. **(VM 618 F19)**

Feedback is in the course is timely and the learning environment is supportive

- I performed very poorly on the first lab and lecture exam, I was able to progress and get some of the best grades I've received in a difficult class because of the feedback and support. **(BMS 305 SP19)**
- I think the feedback was good, the grading was made clear, and the teachers always communicated with us. **(BMS 305 SP19)**
- I believe this class is fantastic as is and I do not see anything that could be better as it is already amazing. **(BMS 305 SP19)**
- You guys provide us with so many tools to succeed in this class. Between the professor interactions to 20 TA's to hours of open lab, this course was set up for us to have the time and resources to do as well as we wanted to in this course. You pointed out areas that people struggled with and made sure to make clear what you wanted from us. You owned up to mistakes you made, everyone was included and you were right there on the floor with us **(BMS 305 SP19)**
- Y'all did a great job of getting us feedback. It was remarkably fast and very appropriate for how the class was paced. **(BMS 305 SP18)**
- Each exam, quiz helped me understand my weak parts and help me thrive **(BMS 305 SP18)**
- You have the opportunity to discuss the quizzes and exams with the professors and TA's which I often utilized and found helpful. During those times, you can ask what was wrong with your answer and how you can improve in the future. **(BMS 305 SP18)**

Teaching style is energetic, organized, and supportive

- She was very supportive and made a lot of the events very useful such as the horse head lab with nasal tubes, the nerve block lab and the hanging animals. **(VM 795 SP19)**
- I really appreciate all of Dr. Magee's efforts to get us amazing guests and learning opportunities! **(VM 795 SP19)**
- I really like the way she integrated first-year Concepts into her case, as none of the other Capstone lectures really did that. I think she probably could have prioritized the pharmacology of the case a bit more heavily to help Drive some of the concepts home, but I think it was well structured and

- entertaining. I appreciate that she keeps her energy up because that school has really beating me into submission lately and it's refreshing to learn from someone who is passionate about the material and our education. (VM 722 F18)
- I loved her demonstrations! Our use of mnemonics and various memory building methods were very helpful and I learned quite a bit! (VM 616 F18)
Reflection: Everyone needs to learn the equine ascending colon dance.
 - Very passionate about her job. Equine: demo was especially helpful and I enjoyed it a lot. (VM 616 F18)
 - Dr. McGee is a great professor. She is extremely knowledgeable and always super helpful In lab. I loved her sense of humor this semester as well! (VM 616 F18)
 - You are a very intense person but I do appreciate your high energy to keep spirits up for the last week of school. (VM 616 F19)
 - The objectives were extremely helpful in this aspect, and the teachers always strove to be clear about this (referring to the "take home" message) (VM 618 F19)
 - I enjoyed this course and learned A LOT. Especially when the organ systems aligned with anatomy(VM 618 F19)
 - I really enjoyed the footnotes in the power points, it made for more clear and well-rounded studying and understanding of each topic. I enjoyed her stories from practice, it really put some things into perspective and was a nice reality check. (VM 618 F19)
 - I learned very well with Doctor Maggie's style. She covered some difficult topics between endocrine signaling and the pulmonary system, but her energy and humour helped with staying engaged and remembering the highlights of each topic. (VM 618 F18)
 - Doctor McGee's lectures were always engaging and exciting. She had some of the most difficult material but she did a great job teaching it to us. If the class was confused she would stop her lectures and help resolve our confusion before continuing which I really appreciate it!(VM 618 F18)
 - Dr. Magee is always clear with her material and the energy she brings to a classroom makes it very easy to understand and pay attention to the lecture. (VM 618 F18)
 - You are my idol, thank you for being a fantastic professor (VM 618 F18)
 - Dr. Magee is a great teacher and very enthusiastic about what she is teaching. (VM 618 F18)
 - Dr. Magee's sections were the best!! Some of the best classes of this semester honestly. She was very energetic and enthusiastic, which kept me not just awake but actively listening and engaged. Dr. Magee is also extremely knowledgeable about endocrinology but at the same time knows how to portray the information in a way we can understand. I wish she taught more of the class, her lectures were the best! It also helped that endocrinology is a very fun subject. (VM 618 F18)
 - Dr. Magee had great examples and taught in such a lively manner that was very helpful to learn the material. However, sometimes she did get caught up in some details that made it hard to determine key takeaways. (VM 618 F17) **Reflection: Vet students are an interesting group - they want details about their area of interest, but often not someone else's. I've gotten better about telling specific students that we can discuss details or a case that they've seen outside of class time, as well as just staying out of the weeds in general.**
 - I love Dr. Magee's lectures!! I also love the notes she puts at the bottom of her power point slides: that really helped me in my studying and I wish other professors would use that method as well.
 - I really enjoyed Dr. Magee's energy and pace during lectures, and I feel prepared from her material not just going into exams but going into clinical application which I greatly appreciate. I will say that because of my background I had 0 knowledge about reproductive physiology and found that segment impossible to follow until another student led a review. I'm really grateful that Dr. Magee introduced the topic here instead of leaving it to future classes, but I know that a handful of us desperately needed that extra review and in the future you might consider offering something along those lines as either preparation or review (VM 618 F17) **Reflection: Scheduling review sessions with students outside of class time is challenging and after struggling with one-off requests for extra sessions, we've designed the DVM Tutoring program to provide this support.**
 - Dr. Magee is an incredible teacher. She does her best to create an environment that is stress free and best for learning. We took very small breaks throughout class that we a great time to take a deep breath before moving on. Her slides and material were fairly clear about what was most important but sometimes they could be overwhelming because it was not always clear what information was most important on each slide. She mentioned putting notes with each slide that had the take home message but I often felt that even that was somewhat difficult to understand. (VM 618 F17) **Reflection: I have reworked the slides and the notes in the bottom of the slides to differentiate TakeHome vs. Background content, as well as incorporated more applied, clinical examples in to the unit.**
 - Dr. Magee is great at engaging the class and giving applicable examples of the course material, but sometimes I feel lost in her examples that I don't understand the actual material outside of that one specific example. I feel like a lot of the material (and her notes) is disorganized and confusing. I am also distracted by all the memes! Sorry, I know they are meant to wake up the students, but...what was I learning again? (VM 618 F16) **Reflection: The memes are used to transition between topics and/or regroup mid-50 minute session. Further study is warranted as taking short breaks in the form of videos has been shown to improve students' affective states (Kogan et al. JVME 2018). Additional clinical examples have been added since 2016.**
 - Dr. Magee was very helpful and willing to take extra time to go over difficult concepts. I really appreciated how much time she dedicated to us and that she brought us candy! I also think it would be helpful if she could do a little more on the board than just having PowerPoints. I did enjoy that her powerpoints had notes with lots and lots of background information. That was very helpful to read if I was struggling with a certain concept. (VM 618 F15)
 - Dr. Magee's lectures were all very organized and straightforward. The information she presented, compared to all of the lecturers, seemed to flow the most logically. Her practice questions she gave during lecture were very useful in preparing for exams, and her exam questions were very fair and straightforward. I enjoyed her lecturing style, as she was very engaging and very to the point. She truly went above and beyond, holding multiple reviews for students before the exam, and I know that made a difference to a lot of us! (VM 618 F15)

VM618 Pulmonary Physiology 2017/2018

- The only thing that I would say should be changed is how pulmonary physiology is taught. Dr. Frye is a very mathematical learner, and the things that she teaches (even though we think in different ways) makes sense the way she teaches them. Dr. Magee is a very visual learner, and the things that she teaches make sense the way she teaches them. In both cases, things make sense to us because we are being taught in a way that makes sense to the instructor. So I do want to preface this by saying both instructors are very talented and phenomenal. (VM 618 F18)
- Pulmonology was highly confusing. A more math based approach instead of conceptual would help. The material was presented too much as theory, instead of cause/effect, or analytical. (VM 618 F18)
- Dr. Magee is a great instructor, and when she taught neuro and endocrine it made a whole lot of sense, and I would have put "strongly agree" for everything--if it weren't for pulmonary physiology as a whole. However, the parts of the pulmonary physiology lectures that really worked well were the ones where she brought in balloons and showed us how negative pressure works--the ones that she taught us using her visual learning method. And again, those parts worked well. (VM 618 F18)
- I thought I learned more when she did presentations during group tutoring sessions than in lecture. She talked about what she did to learn concepts in physiology, but she did not often apply those same concepts to her teaching style. The slide were often excellent suplimental material, but I think if she taught us more in the way and process she took to learn it, the material might be easier to follow. (VM 618 F18)
- It was an egregious disservice to our education to have her teach this topic. (VM 618 F18)

- I do think that the "modules" for respiratory physiology were confusing and I wish the information in those was lectured on first before we had the quizzes. (VM 618 F17)
- Pulmonary physiology was a mess! Dr. Magee would get confused and state things incorrectly and then struggle to fix the mistakes. I spent most of the section teaching myself because it was hard to get through. (VM 618 F17)
- The only thing I would change is how pulmonary physiology was taught. I find how Dr. Bowen taught GI to be very helpful and I think that if pulmonary was taught in a similar manner (on the board) I would have more easily understood the material. I understand that there is a lot of math so also doing problems in class more would be helpful I think. I ended up looking on YouTube to completely understand the material. (VM 618 F17)
- I thought it was very apparent that Dr. Magee had not taught the respiratory unit before and I feel like her's and Dr. Frye's teaching style and test questions are very different from each other and this made the respiratory exam very difficult. (VM 618 F17)
- I enjoyed learning from Dr. Magee, her powerpoints have helpful notes on them and she made it clear what large concepts she wanted us to grasp. For pulmonary I had a harder time both following her and figuring out how to study the material. The practice questions she wrote were helpful, and I think it would be helpful in the future if there were more of those that reflected the type of questions that were on that exam. (VM 618 F17)
- **Reflection:** I took on the 11 lecture Pulmonary Physiology unit from Dr. Melinda Frye in 2016 and was prepared to deliver it when my father became unexpectedly ill and died 4 hours in to the unit. Dr. Frye graciously completed the unit for me. 2017 was my first time teaching the unit all the way through and it was a challenge. Despite careful preparation and a positive attitude before each class, I was turned around and felt battered by the end of each session. Looking for guidance, I asked Dr. Andrew West for a Peer Review (see Appendix) and his perception of the lecture hour was positive and very helpful. This unit in 2018 felt exponentially better. As suggested by Dr. West, I used the board to draw more concepts and integrated more clinical cases, but it was still not on par with my endocrinology and cell biology unit. Dr. Frye uses a more mathematical approach to the cardiovascular unit and I had integrated that with my more conceptual approach in the pulmonary unit. The pulmonary physiology unit was taken on by the anesthesia faculty in 2019 and although it was well received, cardiopulmonary physiology in general - and mathematical vs. conceptual learning styles - continue to be a challenge in this course. In the move to online teaching Fall 2020 in response to COVID-19, the teaching team continues to evolve accessibility to the subject matter and align our teaching with our DVM Curriculum Renewal to provide learning opportunities for different types of learners.

VM618 Exam 3 - Fall 2017 - Course Organization and Leadership

- Overall I thought her objectives were extremely well-written, but the pulmonary objectives made me want to kick a chair. "Name the 3 contributors to..." felt incredibly arbitrary (I usually felt like I could name 12), and I was even more dismayed to find this on the exam. I hope this feedback does not read as excessively negative, as I would like to convey just the opposite. I really enjoyed Dr. Magee as an instructor and I feel like I learned more from her in this one course than I have in potentially the rest of my education up to this point. (VM 618 F17)
- The same exam was too long - while most people finished the other exams with 30-40 minutes left, many people struggled to even finish the respiratory/GI exam. (VM 618 F17)
- Dr. Magee's first section of info (endocrinology), I was really able to follow her ideas, understand PowerPoints, etc. The respiratory section was very difficult to follow though, which is why I put a 3. I am not sure if it was more I struggled to grasp the concepts or if I just couldn't follow her style for that material, but I found it incredibly difficult to understand those lectures. I found myself and others teaching one another the material which we had not grasped from her in lecture. I also had serious issue with how she addressed the class after the disaster that was exam 3. When she received numerous emails about how dozens of students were given additional time, she came to the class to "apologize", during which she said that those who spent extra time were not honorable. I had serious issue with this statement, as she was overheard by several students asking the other professors when they should "cut off" those given extra time. She was well aware that people were taking extra time, but she seemed to imply that she was not. I also feel like an apology was not the best way to address this issue. Remedial action should have been taken. An apology does not fix our badly skewed grades (VM 618 F17)
- **Reflection:** As a new course director, I began working with the VM618 course learning objectives and ensuring equal weight distribution of the lectures to exam questions/points. In 2017, this resulted in several additional points in the form of new questions on the GI/pulmonary exam, and a test that many students struggled to complete in the 2 hour session. Previous course leaders had allowed students a few extra minutes (sometimes up to 30m) beyond a test session and miscommunication at the conclusion of the exam period resulted in the proctors (including myself) leaving a cohort of students taking a "few extra minutes" in a conference room. These students effectively had an extra hour to complete the exam, which theoretically was a violation of the Honor Code, but the students claimed that they thought that they were being allowed this extra time. There was no way to undo or fix what happened. The exam was followed by Fall Break. Despite my efforts to communicate with students over this period, their anger escalated and upon our return from break my attempt at an apology, ownership as Course Director of the mistake, and explanation of policies moving forward, was not well received. We now have a strict proctoring policy with no extra time unless you have approved accommodations, and I split the units in the course up to add an extra exam and make each exam more reasonable in a 2 hour period. We also continue to refine course learning objectives and align them throughout the DVM curriculum.

Comments from Peer Review of Teaching (2015 and 2017)

- **Dr. Andrew West, VM618 Pulmonary Physiology lecture hour - 2017:** You seamlessly adjusted your instruction based on student confusion (the students had looks of confusion, so you re-drew the ideas on the whiteboard to clarify and explain it differently). This flexibility of instruction, based on feedback from students, is very helpful for supporting student learning. You intentionally made sure that you understood student questions before giving an answer or response. This is very helpful, as it ensures that you are answering the question that was actually asked and that it encourages students to ask more questions because they know that their questions are valued. Throughout the lecture, you toggled between the PowerPoint presentation and the dry erase board. This was an effective strategy, and one that I do not see very often. It wasn't that you used the dry erase board as an afterthought for bringing clarity to ideas (most common), but instead, planned the lecture so that the PowerPoint served as the outline and medium for housing text and images, while the whiteboard served as your medium for explanation. If you have not already asked students, it would be fascinating to know how they feel about this strategy. I suspect that they like it very much.
- **Dr. Sherry Stewart, VM618 Endocrinology lecture hour - 2015:** Pacing good; enthusiasm at first came across as a bit rushed, but that stopped about 5-10 minutes into the lecture, especially with use of lots of embedded questions, from review of previous material, to "Have you ever seen this in practice," to a brief pause for a funny transition to another topic. After presenting major concept stopped, asked how students were doing, then asked a series of about 3 questions over the topic she just covered -- excellent!
- **Dr. Andrew West, VM618 Endocrinology lecture hour - 2015:** Nice job asking lots of questions and allowing students to respond! I wonder if you might be able to incorporate a few more higher order think questions? Maybe give them a few seconds to talk to their neighbor and respond? I love that you integrated the case!! What if you gave them a few seconds to talk to each other about the 'why it's a problem'? Can you think of any way to incorporate even more critical thinking types of strategies in the lecture?
- **Reflection:** I continue to explore strategies incorporate higher order thinking to learning objectives and assessments and integration of concepts. In 2019, I introduced a Team-Based Learning exercise to facilitate this in a more structured manner during acid-base unit.