



Supplemental Materials
for
Exploring Instagram To Promote Student Engagement in
an Online Didactic Environment

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Appendix 1: Recruitment Email for Students

You have been identified as a potential participant in a research study we are conducting to understand the benefits of using social media in distance learning. You have been asked to participate in this study because you are currently enrolled as a student at XYZ University.

Your participating will require you to answer a brief survey on your social media usage. You will also have the option to follow a selected social media account on Instagram for educational purposes. Data from the educational social media accounts, including clicks, shares, and posts, will be collected for research purposes even if you decide you do not want to take part in the survey. Although data will be tracked, it will not be linked to the individual.

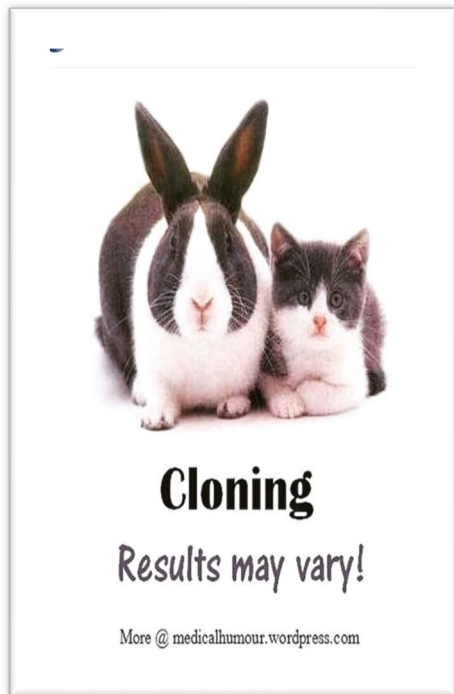
Data concerning user identity will not be part of this proposed study. Both the survey data and social media account will be considered for research purposes only. You may refuse to participate in the study and you may stop your participation in this study at any time.

It is our hope that the results of the study will be detailed and submitted for publication.

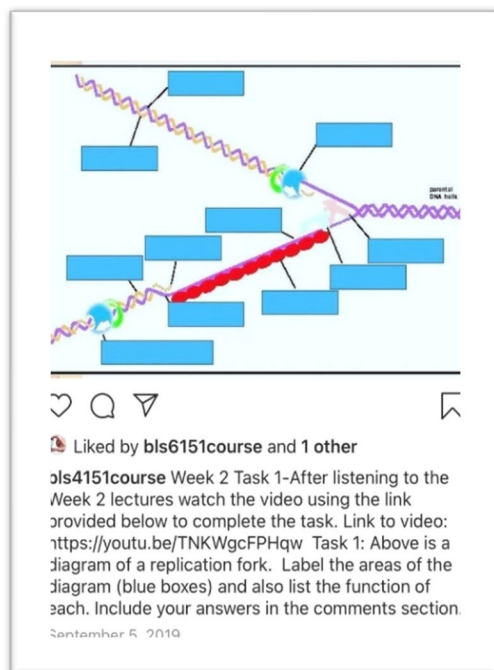
Thank you.

Appendix 2: Illustrative examples of Instagram posts

In Week 1 of the Microbial Pathogenesis course, a cartoon exploring the fun side of laboratory work was shared.



During Week 2 of the Molecular Diagnostics course, DNA replication was covered, students were asked to identify the key enzymes in the process.



In Week 3 of Molecular Diagnostics course, students were tasked with applying information from the genetic code to generate the sequence of amino acids in a protein.

bls4151course

		Second position of codon							
		U		C		A		G	
First position	U	UUU	Phenylalanine	UCU	Serine	UAU	Tyrosine	UGU	Cysteine
		UUC		UCC		UAC		UGC	
		UUA	Leucine	UCA		UAA	Ter (end)	UGA	Ter (end)
		UUG		UGG		UAG	Ter (end)	UGG	Tryptophan
C	CUU	Leucine	CCU	Proline	CAU	Histidine	CGU	Arginine	
	CUC		CCC		CAC		CGC		
	CUA		CCA		CAA	Glutamine	CGA		
	CUG		CCG		CAG		CGG		
A	AUU	Isoleucine	ACU	Threonine	AAU	Asparagine	AGU	Serine	
	AUC		ACC		AAC		AGC		
	AUA		ACA		AAA	Lysine	AGA	Arginine	
	AUG	Methionine	ACG		AAG		AGG		
G	GUU	Valine	GCU	Alanine	GAU	Aspartic acid	GGU	Glycine	
	GUC		GCC		GAC		GGC		
	GUA		GCA		GAA	Glutamic acid	GGA		
	GUG		GCG		GAG		GGG		

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bls4151course Week 3 Task 1. The Genetic Code. This activity is geared to help you properly use the genetic code. Using the code here, what would the amino acid sequence be for the following mRNA nucleotide sequence?

MRNA sequence:

AUG GUG GCG GGG GAA UUG UAA | Post your answers in the comments section and earn a star 🌟

View all 5 comments

bls6216course

MICROBIOLOGIST PICK-UP LINES

Are you community acquired pneumonia? Because you're taking my breath away. @bls6216course

You make me wanna be the Herpes virus; forever on your lips. @twisteddoodles

Girl, are you influenza? Because when I'm around you I'm all hot and confused.

You're like sepsis, because you're so a-cute.

If you were an antibiotic then I'd be a susceptible bacteria because I can't resist you.

You are like vaccination shots I want to fake you in my arms.

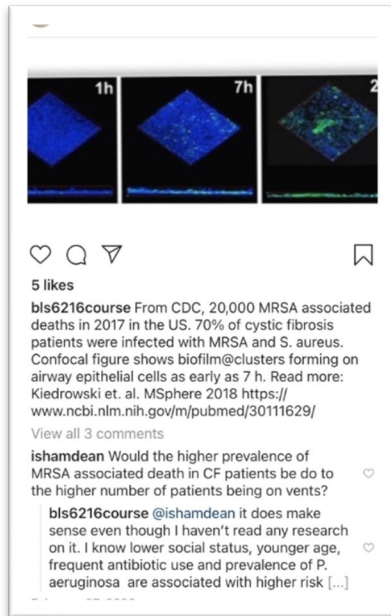
♡ 💬 🚩

7 likes

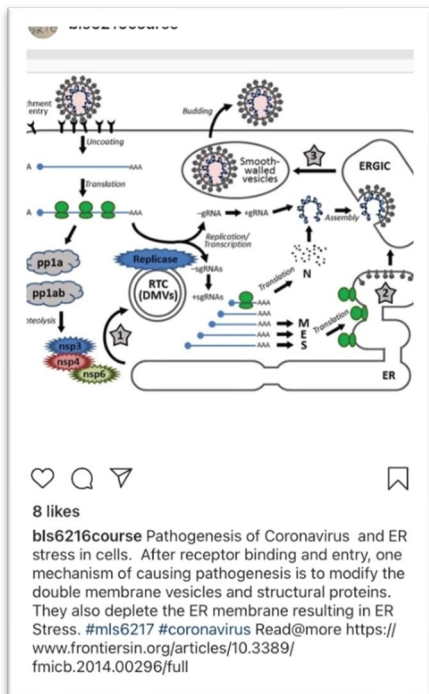
bls6216course In support of Valentine's Day and just being so cute, thought I'd share these with all of you! For more of such cuteness @ [https://instagram.com/twisteddoodles?](https://instagram.com/twisteddoodles?gshid=1syasrbh9fyx)

In Week 4 of the Microbial Pathogenesis course, memes were shared.

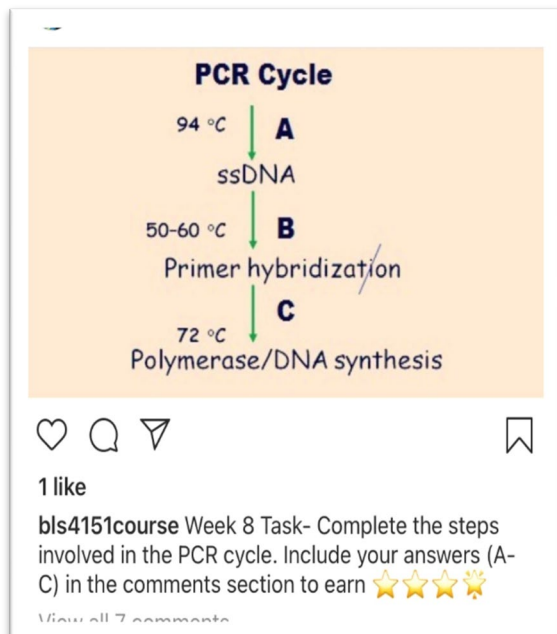
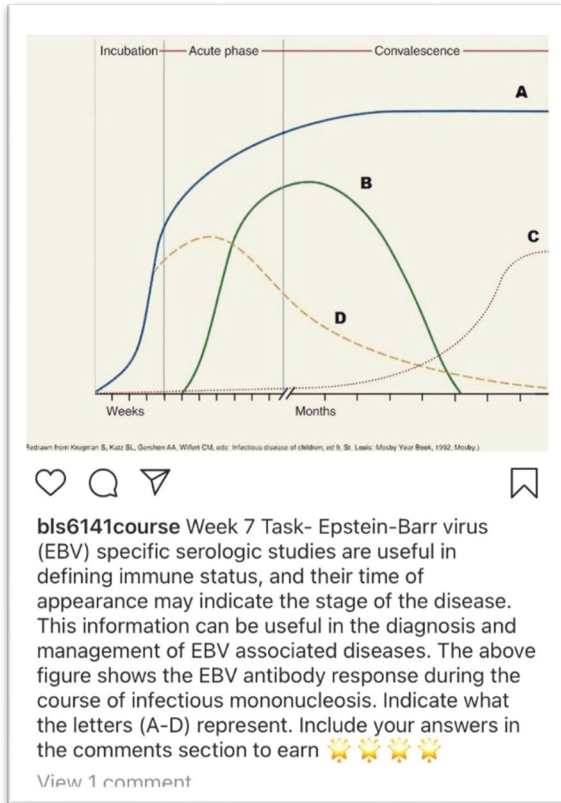
While explaining antibiotic resistance in Week 5 of Microbial Pathogenesis, the role of biofilms in the process was highlighted in the post.



In the Microbial Pathogenesis course, a mechanism of coronavirus pathogenesis by causing endoplasmic reticulum stress was reinforced during Week 6.



During week 7 of the Advanced Immunology and Serology course, the serological response to the Epstein-Barr virus was highlighted.



Below, in Week 8 of the Molecular Diagnostics course, student comprehension of the PCR cycle steps was queried.

In another, Week 8 post in the Advanced Immunology and Serology course, students were encouraged to utilize laboratory results to analyze test results.

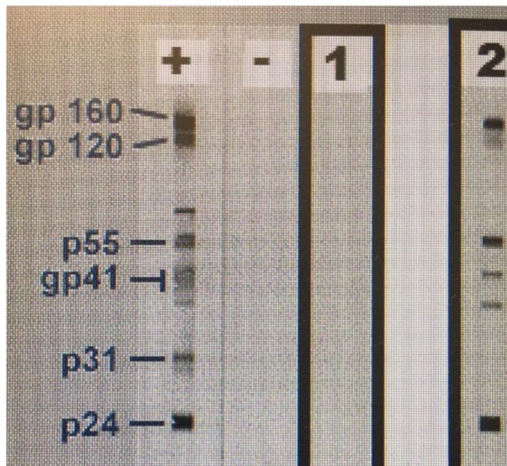
Tests	Results	Interpretation
HBsAg	1	Susceptible (Vaccinate)
Anti-HBc	2	
Anti-HBs	3	
HBsAg	4	Immune because of natural infection (Resolved HBV infection)
Anti-HBc	5	
Anti-HBs	6	
HBsAg	7	Immune because of hepatitis B vaccination
Anti-HBc	8	
Anti-HBs	9	
HBsAg	10	Acutely infected
Anti-HBc	11	
Anti-HBc IgM	12	
Anti-HBs	13	
HBsAg	14	Chronically infected
Anti-HBc	15	
Anti-HBc IgM	16	
Anti-HBs	17	

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bls6141course Week 8 Task-This is a table of Hepatitis B Panel. Complete the Results section by indicating wether the serologic markets would be positive or negative. Include your answers in comments section to earn 🌟🌟🌟🌟

[View 1 comment](#)

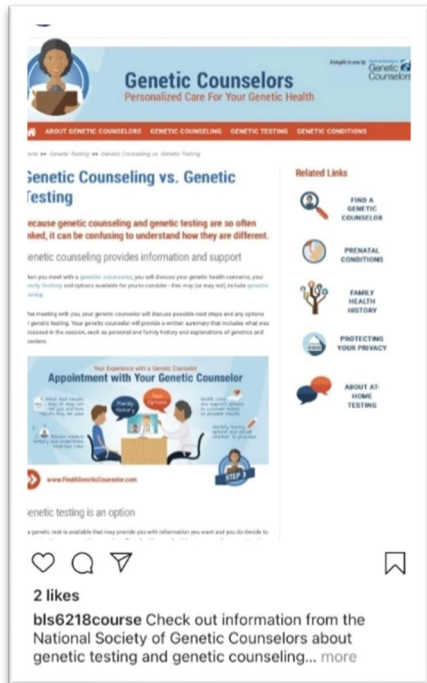
In the Advanced Immunology and Serology course, the importance of laboratory techniques to diagnose immune disorders was covered in Week 9 and reinforced with this post.



The image shows a Western blot assay for HIV-1 serodiagnosis. The blot has four lanes labeled '+', '-', '1', and '2'. On the left side, there are six protein targets labeled with arrows: gp 160, gp 120, p55, gp41, p31, and p24. Lane '+' shows a positive control with bands for all six targets. Lane '-' shows a negative control with no bands. Lane '1' shows a patient sample with bands for gp 160, gp 120, p55, gp41, p31, and p24. Lane '2' shows a patient sample with bands for gp 160, gp 120, p55, gp41, p31, and p24.

bls6141course Week 9 Task- This is a figure of Western blot assay for serodiagnosis of HIV-1 infection. Interpret the Western blot assay results for patients 1 and 2. Write your answer in the comments section to earn 🌟🌟🌟🌟

In the Genetics course, the importance of genetic counselors was emphasized and promoted in Week 10.



In Week 12 of the Genetics course, students were asked to solve a genetics problem applying the concepts of linked genes.



Individuals heterozygous for dominant and recessive alleles of two linked genes are crossed with others who are homozygous recessive for both genes. The number of offspring's observed among 640 progeny are as follows:
 AB/ab 95
 Ab/ab 216
 aB/ab 232
 Ab/ab 97
 What is the frequency of recombination between the genes?



Liked by bls6141course and 2 others

bls6218course Thomas Hunt Morgan born in Kentucky discovered linked genes. Second Image: Calculate the frequency of... more

Appendix 3: Social Media Survey

1. Sex
Male / Female
2. Age
20-24/ 25-29/ 30-34/ 35-39/ 40-44/ 45-49/50-54/55-60
3. Do you work?
More than 40 hours per week / 20 – 40 hours per week / 10 – 20 hours per week/ Less than 10 hours per week
4. Do you currently use social networking sites (social media)?
Yes/No
5. If Yes, which platforms do you use? (Check all that apply)
Facebook /Twitter / Instagram/ Tumbler / YouTube / SnapChat / Pinterest / Google + /
Reddit/Other
6. Do use social networking sites for educational purposes? Yes / No
7. If Yes, which platforms do you use for educational purposes? (Check all that apply)
Facebook /Twitter / Instagram/ Tumbler / YouTube / SnapChat / Pinterest / Google + /
Reddit/Other
8. If you don't use social media for medical education purposes, why not (check all that apply)?
Privacy issues/ waste of time/ distraction/ not suitable for education
9. During the Spring 2019 course, on average I viewed the Instagram course feeds:
Rarely / Few times per month / Few times per week / Few times per day/ Few times per hour
10. During the Spring 2019 course, on average I engaged in discussions on Instagram course feeds:
Rarely / Few times per month / Few times per week / Few times per day/ Few times per hour

11. The Instagram course feeds was a valuable way to receive feedback on my learning:
Strongly disagree / Disagree / Neutral / Agree / Strongly Agree
12. The Instagram course feeds allowed me to stay engaged with my Instructor and peers.
Strongly disagree / Disagree / Neutral / Agree / Strongly Agree
13. Which of the following aspects of the Instagram course feeds did you find especially useful in stimulating your learning (check all that apply)
Exam type questions/ explanatory comments/ post-lecture questions/ videos/ books or article recommendations/ course-related humor
14. The Instagram course feeds boosted my morale/lifted my spirits during learning:
Strongly disagree / Disagree / Neutral / Agree / Strongly Agree
15. The Instagram course feeds made it easier to communicate/engage with teachers:
Strongly disagree/ Disagree / Neutral / Agree / Strongly Agree
16. The Instagram course feeds made it easier to communicate/engage with my peers
Strongly disagree/ Disagree / Neutral / Agree / Strongly Agree
17. The Instagram course feeds was a useful adjunct to learning this semester :
Strongly disagree/ Disagree / Neutral / Agree / Strongly Agree
18. I would like to see social media sites used in future distance learning:
Strongly disagree/ Disagree / Neutral / Agree / Strongly Agree
19. Please use this space to provide any additional comments regarding the Instagram course feeds.