Dr. Brown

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| BME3403 | Fall 2024 |

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| A | B | C | D | E | F | G |
| H | L | H | L | L | H | M |

Course outcome table on file shows outcomes A, C, & F as high priority. Needed are 2 examples for each.

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| BME Outcome A |
| Number of Students: 23 |

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| First sample question to meet outcome A:Term Paper1. **Pick one disease that affects the human endocrine or nervous system and another disease that affects the musculoskeletal system. Describe what the defect is in each disorder.**
2. **Find an implanted medical device that was designed to correct or improve each disorder and go over in detail what design features were incorporated in the device to restore the function that had been lost or reduce symptoms.**
3. **Discuss the success or failure in each of the devices with achieving its desired result and what improvements could be incorporated in the future to make each function better. Were there any major unanticipated adverse events that occurred after implantation of either device?**

**The paper should be approximately 6-7 pages (3-3.5 pages per device) in length (12 point font, double spaced with no additional spaces between paragraphs) and will account for 80 points of the final grade.   References are required (your choice of format).****There are many examples of devices produced by companies that illustrate the above concept on the internet.  There are also a few companies that combine devices and cellular therapy as well.** | Second sample question to meet outcome A:**Test 3 question 36** **22. Cells have an overall negative charge on the inside with DNA, proteins and more Na+ than K+ and there’s an overall positive charge outside with more Na+ than K+, but the intracellular fluid and the extracellular fluid are both electrically neutral. How would you explain this? (5 points)**  |
| Average Score: 94.5 out of 100 = 94.5% | Average Score: 2.1 out of 5.0 = 42.0% |

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| BME Outcome C: |
| Number of Students: 38 |

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| **First sample question to meet outcome C:****Learning Assignment 1****Assignment for Sugar the Bitter Truth:  Sugar has multiple effects on the body that may be harmful.  You can write it as if you were trying to explain it to a member of your family or a friend.  Summarize what you felt were the most important points of the video and any other sources on sugar that you find.  You may also give your opinion as to whether you accept these conclusions or not.  Diet is extremely difficult to study in humans since there are so many variables and because most dietary studies use questionnaires asking people to remember what they ate.  Have your views on sugar changed since watching the video?**  | **Second sample question to meet outcome C:****Learning Assignment 3****Watch the following video on G-protein coupled receptors in the heart, summarize the main points and discuss the implications for the development of new drugs to treat cardiovascular disease.  Suggested length: 2-3 pages with a minimum of 750 words.  AI detection software will be used on this assignment.  If the Turnitin score indicates over 30% use of AI or greater than 30% similarity score to other works, you will be reassigned the paper with a 15% deduction.  Papers that do not meet these specifications a second time will be given a zero score.**[https://www.uctv.tv/shows/Beta-Adrenergic-Receptors-and-Their-Role-in-Heart-Function-38983Links to an external site.](https://www.uctv.tv/shows/Beta-Adrenergic-Receptors-and-Their-Role-in-Heart-Function-38983)   |
| Average Score:  | Average Score:  |
| 96 out of 100 96% | 32.8 out of 40 82.0% |

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| BME Outcome F |
| Number of Students: 38 |

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| **First sample question to meet outcome F:****Exam 5 Question 14****14. Complete transection (Cutting) of the Right Optic Nerve would cause which of the following visual defects?****a. Loss of vision on the Right Side of the Right Eye and loss of vision on the Left Side of the Left Eye b. Loss of vision in the Right Eye c. Loss of vision in the Left Eyed. Loss of vision on the Nasal Side of both the Right and Left Eyese. Loss of vision on the Right Side of both the Right and Left Eyes f. Loss of vision on the Left Side of both the Right and Left Eyes**  | **Second sample question to meet outcome F:****Exam 3 Question 2****2. A patient comes in to the hospital with cerebral edema (swelling of the brain cells which results in increased intracerebral pressure). You have six solutions that you could possibly give them (listed below) in their vascular system that would pull water out of the brain cells and into the vascular system. Which solution would be best to give the patient if you had only the information provided below? (Circle one choice, 2 points)** **a. A hyperosmotic solution b. A hyposmotic solution c. A isosmotic solution d. A hypertonic solution e. A hypotonic solution f. A isotonic solution** |
| Average Score: 1.2 out of 2 60.0% | Average Score: 1.53 out of 2 76.5% |