

The students get a Qualtrics survey with these questions.

Not-inclusive(biased)Designs - Brain storming

Start of Block: Block 4

Q5 Personal information:

First name: (1) _____

Last name: (2) _____

Q6 Please specify your section:

A01- Dr. Mantalaris - Dr. Nezafati (1)

A02- Dr. Leisen - Dr. Nezafati (2)

A03- Dr. Robles - Dr. Nezafati (3)

Q8 What is your age (in years)?

Q10 How do you identify with respect to gender?

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Q12 Which of the following best describes your ethnicity?

- White/Caucasian (1)
 - East Asian (2)
 - South Asian (3)
 - Hispanic/LatinX (4)
 - Black/African-American (5)
 - Native American (6)
 - Other (please specify) (7) _____
-

Q14 Which year of study are you in as an undergraduate?

- 1st year (1)
- 2nd year (2)
- 3rd year (3)
- 4th year (4)
- 5th year (5)
- 6th year (6)
- Beyond my 6th year (7)

End of Block: Block 4

Start of Block: Brain-storming

Q15 Scientists, engineers, physicians and healthcare providers efforts in medical science are focused on resolving any health disorder that people are facing in their life. We as biomedical engineers have a significant role in this process. Biomedical engineers use their knowledge to solve problems by creating

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new designs. These designs could be devices, processes, medicines, implants or equipments All of these designs are created with the intention of solving a health disorder, for example drug X is designed to cure cancer. But sometimes these designs intentionally or unintentionally have limited stakeholders. Neglecting a group of human population due to an implicit or explicit BIAS, is something that should be eliminated when a biomedical engineer creates a new design. In this part of course, we want you to find 3 cases of BIAS in MEDICAL SCIENCE DESIGNS and answer the following questions about them:

End of Block: Brain-storming

Start of Block: Case 1:

Q2 Please answer the following questions about case 1:

Describe the case (max 200 words) (1)

Explicitly define the design (Is it a device, a drug, a process, a treatment or an implant. Example: Hip joint implant, pace maker, Abraxane): (2)

What health problem(s) this design was created to solve? (Example: arthritis, breast cancer) (3)

Which category of medical science is this design fitted in (Example: pharmaceutical, physiology, OB-GYN, orthopedics, etc) (4) _____

What is the bias in this design (Example: the drug has side effect on women) (5)

Who are the affected demography (Example: Women, people with age 12-18, young male adults): (6) _____

Define a title for this case that describe it completely (max 20 words) (7)

End of Block: Case 1:

Start of Block: Case 2

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Q3 Please answer the following questions about case 2:

Describe the case (max 200 words) (1)

Explicitly define the design (Is it a device, a drug, a process, a treatment or an implant. Example: Hip joint implant, pace maker, Abraxane): (2)

What health problem(s) this design was created to solve? (Example: arthritis, breast cancer) (3)

Which category of medical science is this design fitted in (Example: pharmaceutical, physiology, OB-GYN, orthopedics, etc) (4) _____

What is the bias in this design (Example: the drug has side effect on women) (5)

Who are the affected demography (Example: Women, people with age 12-18, young male adults): (6) _____

Define a title for this case that describe it completely (max 20 words) (7)

End of Block: Case 2

Start of Block: Case 3

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Q4 Please answer the following questions about case 3:

Describe the case (max 200 words) (1)

Explicitly define the design (Is it a device, a drug, a process, a treatment or an implant. Example: Hip joint implant, pace maker, Abraxane): (2)

What health problem(s) this design was created to solve? (Example: arthritis, breast cancer) (3)

Which category of medical science is this design fitted in (Example: pharmaceutical, physiology, OB-GYN, orthopedics, etc) (4) _____

What is the bias in this design (Example: the drug has side effect on women) (5)

Who are the affected demography (Example: Women, people with age 12-18, young male adults): (6) _____

Define a title for this case that describe it completely (max 20 words) (7)

End of Block: Case 3
