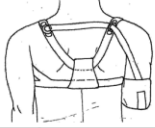
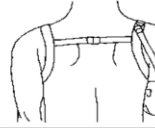
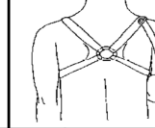


# BME Design Courses

## Design Matrix Requirements

- The design matrix should have at least 3 distinct, feasible design alternatives.
- Criteria should reflect the **most important design specifications** from the Product Design Specifications (PDS). Approximately 6-10 categories is sufficient. Cost and Safety must each be a criteria. Choose others specific to your project.
- Criteria should be evaluated 1-5 for each of the design alternatives, with 5 as best. Each criteria must be assigned an appropriate weight as a percentage. The rating (1-5) is then divided by 5 and multiplied by the weight. The weighted total must add up to 100. Each weighting must be an integer divisible by 5 to allow for ease of understanding at a glance.
- Within each design evaluation column, include the rating (1-5) and the final score as a result of multiplication by the weight. For example, if your design receives a score of 4 in a category with a weight of 25, the final weighted score is:  $(4/5)*25 = 20$ .
- The criteria should be listed in the table in the order of importance, with the most important (highest weight) at the top. Put the weight of each category in ( ) after the title, or in a separate column after the title.
- Choose short, self-explanatory titles for each design alternative. If possible, place a sketch of the design under each title.
- Use muted colors/shading/bolding etc. to differentiate categories/weighting/winning design etc., to allow easier understanding at a glance.
- Scoring criteria should be justified in the caption of your design matrix in your report. These and the values assigned to each design alternative for each criteria should also be thoroughly and clearly explained in the text of your report. (You should also very briefly explain your scoring during your presentation.) Presenting the design matrix with scores demonstrating a “winning” design without any explanation of the scoring criteria is unacceptable.
- Example Design Matrix: *Weighted Score = Weight\*(Score/5)*

### Design Matrix

Design	One Strap		Backpack		Ring	
Criteria (weight)						
Patient Comfort (25)	5/5	25	4/5	20	4/5	20
Effectiveness (20)	4/5	16	3/5	12	3/5	12
Ease of Use (20)	3/5	12	5/5	20	4/5	16
Adjustability (15)	4/5	12	2/5	6	3/5	9
Safety (10)	4/5	8	3/5	6	3/5	6
Cost (10)	3/5	6	4/5	8	2/5	4
<b>Total (100)</b>	<b>79</b>		<b>72</b>		<b>67</b>	

\*Scores are out of 5. Displayed as: score | weighted score