

Optical Engineering

Official Rating Form

CRITERIA	Minimal performance 1-4 points	Adequate Performance 5-8 points	Exemplary Performance 9-10	Record the scores in the column spaces below.
Evaluators: Using minimal (1-4 points), adequate (5-8 points) or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the far right. The X1, X2 or X3 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an “adequate” score of 7 for an X1 criterion = 7 points; an “adequate” score of 7 for an X2 criterion = 14 points; an “adequate” score of 7 for an X3 criterion = 21 points.)				

Documentation (150 Points)

Portfolio components See Regulation C (X1)	The portfolio is unorganized and missing many of the required sections and necessary materials.	The portfolio is somewhat organized and missing only a few required sections and materials.	The portfolio is completely organized and has all of the designated sections and materials included.	
Design brief (X2)	The proper design brief format is not used, and key elements of the process are missing.	The design brief format is followed, and most elements of process are included.	The design brief format is followed, and all elements of the process are stated completely and effectively.	
Problem solving steps (X1)	There is little attempt to describe and document the problem- solving steps.	The problem-solving steps are listed, with adequate descriptions of the process.	Problem-solving steps are listed, with complete and effective descriptions for each.	
Plan of Work log (X1)	The Plan of Work log is missing key elements.	The Plan of Work log includes most key elements.	The Plan of Work log effectively documents all key elements.	
Research (X1)	There is little evidence of documentation of the necessary research.	There is some evidence of documentation of the necessary research.	There is exemplary evidence of documentation of the necessary research.	
Brainstorming (X1)	There is little documentation of brainstorming.	There are somewhat adequate examples of brainstorming efforts.	There are detailed and effective examples of brainstorming activities.	
Possible solutions (X1)	Only one possible solution is presented, with a weak description.	Two or more possible solutions are presented, with adequate descriptions.	Three or more possible solutions are presented, with detailed and effective descriptions.	
Final solution (X1)	Only a very brief explanation of the final	A clear explanation of the final solution is	A clear and concise explanation of the	

	solution is presented, and it does not include an explanation of the steps of operation.	presented, with an adequate explanation of the steps of operation.	solution is offered, and it includes an explanation of the necessary steps of operation.	
Technical drawing (X1)	Drawings are not presented in the proper technical format, and/or they are of poor quality and missing key elements and notations.	Drawings are presented in the proper format and adequately represent the final solution.	Drawings are presented in the proper format, and they effectively represent the final solution.	
Math and science concepts (X1)	There is little evidence of the use of math and science concepts and/or applications, and/or they are poorly described.	Some math and science concepts and applications are included but they are only adequately described.	There are clear and concise descriptions of the math and science concepts and applications that were used.	
Technology areas (X1)	There is little explanation of the areas of technology that are applied to the solution, and/or they are poorly described.	An adequate explanation of at least two areas of technology are included.	There is a complete and detailed explanation of three or more areas of technology used and applied in the solution.	
References/resources (X1)	There is little evidence of documentation of references and resources in the format required.	Several resources and references are documented in the format required.	Many notable examples of resources and references are documented; the required format is used.	
Evaluation/impact (X2)	There is little attempt to evaluate the final design and its impact.	There is an adequate attempt to document the final design and its impact.	There is a clear and effective evaluation of the final design and its impact.	
Subtotal 150				
Display (40 Points)				
Presentation of design (X2)	The design presentation is weak and ineffective.	The design presentation is somewhat effective.	The design presentation is clear, concise, and effective.	
Appearance and impact (X2)	The appearance of the display is poor and has very little or no visual	The display is somewhat neat in appearance, with some visual impact.	The display is exemplary in appearance and	

	impact.		provides a strong and effective visual impact.	
Subtotal 40				
Model/Prototype (80 Points)				
Marketability and usefulness (X2)	There is little evidence of the design's marketability and usefulness.	There is some evidence of the marketability and/or usefulness of the design.	There is strong evidence of both the marketability and the usefulness of the design.	
Effectiveness of design (X3)	There is little evidence of an effective design.	There is some evidence of an effective design.	There is clear evidence of an effective and exemplary design.	
Creativity and innovation (X2)	The design lacks creativity and innovation.	There is some evidence of a creative and innovative design.	The design clearly reflects exemplary creativity and innovation.	
Appearance and quality (X1)	The appearance and quality of the construction of the device are poor.	The appearance of the device and the quality of construction are adequate.	The device exemplifies excellence in appearance and quality of design.	
Subtotal 80				
Presentation/Interview (60 Points)				
Organization (X1)	Participants seem unorganized and unprepared for the presentation and interview.	Participants are generally prepared for the interview, and they are somewhat organized in their presentation.	The presentation and interview with the evaluators are logical, well organized, and easy to follow.	
Knowledge (X2)	Participants seem to have little understanding of the concepts of their project; their responses to questions are vague.	Participants have a generalized understanding of the concepts discussed, and they answer questions fairly clearly.	Participants show clear evidence of a thorough understanding of the project.	
Articulation (X1)	The presentation provides an unclear, unorganized and/or illogical description of the project.	The presentation offers a somewhat logical and easy-to-understand project description.	The presentation provides a clear, concise, and easy-to-follow description of the project.	
Delivery (X1)	Participants are verbose, illogical in	Participants are logical and fairly well spoken,	Participants are well-spoken, distinct, and	

	presenting, and use many “uhs, ums, hmms,” etc.	with little use of “uhs, ums, hmms,” etc.	clear throughout the presentation.	
Team participation (X1)	Only one person on the team communicates and responds to questions.	Most members of the team participate and seem to understand the event.	All team members participate, with mutual understanding of the event, and respond effectively to questions.	
Subtotal (60)				
Bonus Points for Budget Efficiency (50 Points Possible)				
\$50 and under = 20 points \$50.01 to \$60 = 15 points \$60.01 to \$70 = 10 points \$70.01 to \$80 = 5 points Over \$80, or failure to list all components = 0 points				
Subtotal (50)				
Rules violations (a deduction of 20% of the total possible points) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the far right. Indicate the rule violated: _____				
To arrive at TOTAL score, add any subtotals and subtract rules violation points, as necessary. TOTAL (380 points)				

Comments:
I certify these results to be true and accurate to the best of my knowledge. Evaluator Printed Name: _____ Signature: _____