# **APPENDIX**

| Rubric: Report/Presentation/Video clips on Data Organization/Official Statistics Learning |
|---|
| Module in Descriptive Statistics  |

| Criteria  | Needs<br>Improvement/1   | Satisfactory/2  | Good/3  | Excellent/4   | Score |
|---|--|---|---|---|-------|
| Significance                                    | Project is not<br>significant;<br>Demonstrates no<br>evidence that the<br>topic was selected,<br>researched, and<br>designed | Project is some-<br>what significant;<br>Demonstrates lim-<br>ited evidence that<br>the topic was se-<br>lected, researched,<br>and designed          | Project is sig-<br>nificant; Dem-<br>onstrates some<br>evidence that<br>the topic was<br>selected,<br>researched,<br>and designed   | Project is<br>significant;<br>Demonstrates<br>evidence that<br>the topic was<br>selected, re-<br>searched, and<br>designed well   | /4    |
| Content   | Demonstrates mini-<br>mal understand-<br>ing of statistical<br>concepts and skills<br>with so many errors                    | Demonstrates<br>some understand-<br>ing of statistical<br>concepts and<br>skills with mini-<br>mal errors   | Demonstrates<br>understanding<br>of statistical<br>concepts and<br>skills with one<br>or two errors   | Demonstrates<br>in-depth<br>understanding<br>of statistical<br>concepts and<br>skills with no<br>error  | /4    |
| Appropriateness<br>of descriptive<br>statistics | Inaccurate pre-<br>sentation of data<br>using inappropriate<br>tables/graphs/nu-<br>merical measures                         | Accurate<br>presentation of<br>data using inap-<br>propriate tables/<br>graphs/numerical<br>measures  | Accurate<br>presentation<br>of data using<br>appropriate<br>tables/graphs/<br>numerical<br>measures with-<br>out proper<br>labels/titles  | Accurate<br>presentation<br>of data using<br>appro-<br>priate tables/<br>graphs/numeri-<br>cal measures<br>with proper<br>labels/titles   | /4    |
| Extensiveness<br>of descriptive<br>statistics   | Presentation of<br>data uses minimal<br>number of graphs,<br>tables, and numeri-<br>cal measures<br>discussed                | Presentation of<br>data uses fewer<br>than 3 kinds of<br>graphs, one-way<br>table, two-way<br>table, and not all<br>numerical mea-<br>sures discussed | Presentation<br>of data uses at<br>least 3 kinds<br>of graphs,<br>one-way table,<br>two-way table,<br>and all numeri-<br>cal measures<br>discussed with<br>incorrect or<br>missing inter-<br>pretations | Presentation<br>of data uses at<br>least 3 kinds<br>of graphs,<br>one-way table,<br>two-way table,<br>and all numeri-<br>cal measures<br>discussed with<br>correct inter-<br>pretations | /4    |

| Criteria                                     | Needs<br>Improvement/1   | Satisfactory/2   | Good/3   | Excellent/4  | Score |
|--|--|--|--|--|-------|
| Organization                                 | Presented<br>concepts/<br>skills which were<br>poorly organized<br>and lacked support-<br>ing evidence | Presented con-<br>cepts/skills which<br>were minimally<br>organized<br>with minimal<br>supporting ideas                                | Presented<br>concepts/<br>skills which<br>were logically<br>organized with<br>some support-<br>ing ideas                       | Presented<br>concepts/<br>skills which<br>were logically<br>organized with<br>complete sup-<br>porting ideas | /4    |
| Integration                                  | Demonstrates no<br>integration with<br>other fields or dis-<br>ciplines                                | Demonstrates<br>limited integration<br>with other fields<br>or discipline  | Demonstrates<br>integration<br>with other<br>fields or disci-<br>pline   | Demonstrates<br>integration<br>with other<br>fields or dis-<br>cipline and<br>has long-term<br>impact        | /4    |
| Use of<br>resources/<br>visual aids          | Demonstrates<br>no use of quality<br>resources and ma-<br>terials                                      | Demonstrates<br>limited use of<br>quality<br>resources and<br>materials  | Demonstrates<br>some uses of<br>quality re-<br>sources and<br>materials  | Demonstrates<br>appro-<br>priate uses<br>of quality re-<br>sources and<br>materials                          | /4    |
| Overall<br>presentation<br>and<br>creativity | Overall presenta-<br>tion is neither cre-<br>ative nor artistic<br>with no innovative<br>ideas         | Overall presenta-<br>tion shows lim-<br>ited effort in its<br>creativity and ar-<br>tistic value with<br>limited innova-<br>tive ideas | Overall<br>presentation<br>shows some<br>effort in its<br>creativity and<br>artistic value<br>with some<br>innovative<br>ideas | Overall<br>presentation<br>is creative<br>and artistic<br>with innova-<br>tive ideas                         | /4    |
| TOTAL  |  |  |  |  | /32   |

### **Rubric: Games of Chance Exhibit**

| Criteria                                       | Needs<br>Improvement/1   | Satisfactory/2   | Good/3  | Excellent/4   | Score |
|--|--|--|---|---|-------|
| Accuracy of<br>probabilities<br>calculated     | Probabilities are<br>calculated incor-<br>rectly   | Probabilities<br>are calculated<br>with some er-<br>rors   | Probabilities<br>are calculated<br>correctly but<br>not<br>explained well   | Probabilities are<br>calculated and<br>explained cor-<br>rectly with no<br>error  | /4    |
| Use of<br>resources/<br>visual aids            | Demonstrates<br>no use of quality<br>resources and ma-<br>terials                              | Demonstrates<br>limited use of<br>quality<br>resources and<br>materials  | Demonstrates<br>some uses of<br>quality re-<br>sources and<br>materials   | Demonstrates<br>appropriate<br>uses of quality<br>resources and<br>materials  | /4    |
| Overall<br>presentation<br>and creativ-<br>ity | Overall presenta-<br>tion is neither cre-<br>ative nor artistic<br>with no innovative<br>ideas | Overall pre-<br>sentation<br>shows limited<br>effort in its<br>creativity and<br>artistic value<br>with lim-<br>ited innovative<br>ideas | Overall pre-<br>sentation<br>shows some<br>effort in its<br>creativity and<br>artistic value<br>with some in-<br>novative ideas | Overall<br>presentation is<br>creative and<br>artistic with in-<br>novative ideas   | /4    |
| Mechanics<br>and organi-<br>zation             | Presented no<br>background and<br>unorganized me-<br>chanics of the<br>game                    | Presented<br>background<br>of the game<br>and mechanics<br>which are not<br>logically orga-<br>nized                                     | Presented<br>background<br>of the game<br>and mechan-<br>ics which are<br>logically orga-<br>nized                              | Presented back-<br>ground of the<br>game and<br>mechanics<br>which are logi-<br>cally<br>organized and<br>understood<br>by every<br>participant | /4    |
| TOTAL  |  |  |   |   | /16   |

| Criteria                               | Needs<br>Improvement/1  | Satisfactory/2  | Good/3  | Excellent/4  | Score |
|--|---|---|---|--|-------|
| Organiza-<br>tion                      | Manuscript and<br>the flow of infor-<br>mation are disor-<br>ganized                    | Manuscript<br>shows organiza-<br>tion but has sev-<br>eral portions that<br>are not relevant                    | Manuscript<br>shows orga-<br>nization but<br>lacks coher-<br>ence                         | Manuscript<br>is well-<br>organized and<br>structured                        | /4    |
| Statistical<br>accuracy                | Statistical<br>explanations or<br>facts presented/<br>cited are all mis-<br>conceptions | Statistical<br>explanations or<br>facts<br>presented/cited<br>show a signifi-<br>cant number of<br>inaccuracies | Statistical<br>explanations<br>or facts pre-<br>sented/cited<br>show some<br>inaccuracies | Statistical<br>explanations or<br>facts<br>presented<br>are 100%<br>accurate | /4    |
| Presenta-<br>tion of ex-<br>planations | Explanations pre-<br>sented do not in<br>any way address<br>the problem/topic           | Explanations<br>presented only<br>partially<br>addressed the<br>problem/topic                                   | Explanations<br>are clear,<br>valid, and<br>convincing<br>but have sev-<br>eral flaws     | Explanations<br>are clear, valid,<br>and convincing                          | /4    |
| TOTAL                                  |   |   |   |  | /12   |

## Rubric: Movie /Article/Book Review/Game Critique

#### Needs Good/3 Excellent/4 Criteria Satisfactory/2 Score *Improvement/1* /4 Signifi-Project is not sig-Project is Project is sig-Project is significant; cance nificant; somewhat nificant; Dem-Demonstrates no significant; Demonstrates onstrates some Demonstrates evidence that the evidence that the evidence that topic was selectlimited topic was selectthe topic was ed, researched, evidence that the ed, researched, selected, reand designed topic was and designed searched, and selected, designed well researched, and designed Content Demonstrates Demonstrates Demonstrates /4 Demonstrates minimal undersome understandunderstanding of in-depth understanding standing of staing of statistical statistical contistical concepts and cepts and skills of statistical concepts and skills with with one or two concepts and skills with so minimal errors errors skills with no many errors error Accuracy Incorrect use of Some statistical All statistical All statis-/4 inferential statisanalyses are not analyses are cortical of statistical tical analysis correct rect with missanalyses are ing or lacking accurate with analysis interpretations correct interpretations /4 Extensive-No estima-Only one estima-At least At least ness of tion procedure/ tion procedure/ 2 estimation 2 estimation statistical test is procedures are statistical statistical test is procedures are analysis included in the included in the presented or at presented analysis analysis least 2 statistical and at least 2 statistical tests tests are included in the are analyses included in the analyses Presented Presented con-Presented con-Presented /4 Organization cepts/skills which concepts/ concepts/ cepts/skills skills which were were minimally which were logiskills which poorly organized organized with cally were logically and lacked supminimal organized with organized porting evidence supporting ideas with complete some supporting ideas supporting ideas

### **Rubric: Portfolio for Statistical Analysis**

| Criteria                                       | Needs<br>Improvement/l  | Satisfactory/2   | Good/3  | Excellent/4   | Score |
|--|---|--|---|---|-------|
| Integration                                    | Demonstrates no<br>integration with<br>other fields or<br>disciplines                             | Demonstrates<br>limited integra-<br>tion with other<br>fields or<br>discipline   | Demonstrates<br>integration with<br>other fields or<br>discipline   | Demonstrates<br>integration<br>with other<br>fields or dis-<br>cipline and<br>has long-term<br>impact | /4    |
| Use of<br>resources/<br>visual aids            | Demonstrates no<br>use of<br>quality<br>resources and<br>educational<br>materials                 | Demonstrates<br>limited use of<br>quality<br>resources and<br>educational ma-<br>terials   | Demonstrates<br>some uses of<br>quality<br>resources and<br>educational ma-<br>terials  | Demonstrates<br>appro-<br>priate uses of<br>quality<br>resources and<br>educational<br>materials      | /4    |
| Overall<br>presenta-<br>tion and<br>creativity | Overall<br>presentation<br>is neither<br>creative nor artis-<br>tic with no inno-<br>vative ideas | Overall<br>presentation<br>shows limited<br>effort in its<br>creativity<br>and artistic value<br>with<br>limited<br>innovative ideas | Overall<br>presentation<br>shows some<br>effort in its cre-<br>ativity and ar-<br>tistic value with<br>some innovative<br>ideas | Overall<br>presentation<br>is creative<br>and artistic<br>with<br>innovative<br>ideas                 | /4    |
| TOTAL  |   |  |   |   | /32   |

### **Rubric: Group Member Assessment**

| Criteria           | Needs<br>Improvement/1   | Satisfactory/2  | Good/3   | Excellent/4  | Score |
|--------------------|--|---|--|--|-------|
| Contribution       | Group member<br>contributions<br>were insignificant<br>or nonexistent                                | Group<br>member<br>contributed<br>little toward the<br>project  | Group<br>member<br>contributed sig-<br>nificantly, but<br>other members<br>clearly<br>contributed<br>more          | Group member<br>completed an<br>equal share of<br>work and strived<br>to maintain that<br>equity throughout<br>the project | /4    |
| Depend-<br>ability | Group member<br>was undepend-<br>able, forcing<br>other members to<br>take up the slack              | Group member<br>contributions<br>were regularly<br>late and often<br>missed sched-<br>uled group work | Group<br>member<br>contributions<br>were mostly<br>punctual and al-<br>most always ap-<br>peared for group<br>work | Group member<br>provided con-<br>tributions with<br>100% punctual-<br>ity and always<br>appeared for<br>group work         | /4    |
| Efficiency         | Work<br>performed was<br>completely inef-<br>fective and use-<br>less<br>in the final prod-<br>uct   | Work<br>performed was<br>inappropriate<br>and mostly use-<br>less toward the<br>final<br>product      | Participation was<br>inefficient and<br>thus contribu-<br>tions were less<br>than expected                         | Work<br>performed was<br>very useful and<br>contributed sig-<br>nificantly to the<br>final product                         | /4    |
| Attitude           | Group member<br>often<br>complained and<br>generally demor-<br>alized the group                      | Group member<br>sometimes com-<br>plained and was<br>somewhat<br>of a burden                          | Group member<br>didn't complain<br>but offered little<br>enthusiasm  | Group member<br>was very<br>positive and<br>pleasant to work<br>with   | /4    |
| Quality of<br>work | Group<br>member's work<br>product was<br>routinely of poor<br>quality and lacked<br>a sense of pride | Group<br>member's work<br>product was fre-<br>quently<br>unpolished and/<br>or<br>incomplete          | Group member's<br>work product<br>was sometimes<br>unpolished and/or<br>incomplete                                 | Group<br>member's work<br>product was of<br>extremely high<br>quality  | /4    |

| Cooperation | You would<br>never work with<br>this<br>person again<br>under any<br>circumstances | You would<br>prefer to never<br>work<br>in a group<br>setting with this<br>person again | You would work<br>with this person<br>again but would<br>choose someone<br>else if given the<br>opportunity | This person was<br>an excellent<br>partner, and you<br>would eagerly<br>work with him/<br>her again | /4 |
|-------------|--|---|---|---|----|
| TOTAL       |  |   |   |   |    |

