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## Using Rubrics for Assessment Methodology

### ***What is Rubrics?***

Many faculty members consider using rubrics when looking for ways to grade, give feedback, and assess learning outcomes. It is known as a direct assessment method. Keep in mind that rubrics can be designed such that they track a student's performance across several courses or learning experiences and show improvements in performance over time rather than in a single instance. In this case the rubric should be part of a portfolio of work.

For most educators, a rubric is a printed set of scoring guidelines (criteria) and standards for evaluating work (a performance or a product) and for giving feedback. A rubric helps address several important issues:

1. It identifies the key elements (criteria) of the work that will be judged.
2. It indicates the differences between good and poor work (standards) on each criteria.
3. It is a tool to ensure that judgments (or scores) of work or performance are valid and reliable.
4. It helps both performers and judges to be more clear about what is expected for excellence.

### ***What to use?***

We developed Rubrics for evaluating:

1. Design Project
2. Data analysis, Experiment Design
3. Written Communication
4. Oral Communication
5. Ethics, Life-long learning and Teamwork

Similar assessment Rubrics for assessing other skills, knowledge and behavior can be designed in the same fashion,

### ***Where to use?***

The DAC is suggesting to apply the assessment Rubrics to Laboratory courses and Project II (CHE499). It can be extended to other courses too.

### ***Rubrics Forms implementation***

Example of Rubrics for assessing written communication is adopted from the Chemical Engineering Department at Auburn University and given in the next page. The form has a 4-point score. When instructor evaluates a written work for a student he inspects for example the first criteria *organization and style*. The instructor match the student work in that criteria to four standards "unacceptable", "marginal", "acceptable", and "exceptional". Accordingly a score between 0 and 3 should be recorded. The procedure

should be repeated for the other criteria. All student's work should be evaluated in the same fashion. The results should be archived in the designated course binder.

### Written Communication Assessment Rubric

course No \_\_\_\_\_

Date \_\_\_\_\_

Student \_\_\_\_\_

Reviewer \_\_\_\_\_

Topic (Weight)	Unacceptable 0	Marginal 1	Acceptable 2	Exceptional 3	Points
<b>Organization &amp; Style</b>	Sequence of information is difficult to follow. No apparent structure or continuity. Purpose of work is not clearly stated.	Work is hard to follow as there is very little continuity. Purpose of work is stated, but does not assist in following work.	Information is presented in a logical manner, which is easily followed. Purpose of work is clearly stated assists the structure of work.	Information is presented in a logical, interesting way, which is easy to follow. Purpose is clearly stated and explains the structure of work.	
<b>Content &amp; Knowledge</b>	No grasp of information. Clearly no knowledge of subject matter. No questions are answered. No interpretation made.	Uncomfortable with content. Only basic concepts are demonstrated and interpreted.	At ease with content and able to elaborate and explain to some degree.	Demonstration of full knowledge of the subject with explanations and elaboration.	
<b>Format &amp; Aesthetics</b>	Work is illegible, format changes throughout, e.g. font type, size etc Figures and tables are sloppy and fail to provide intended information.	Mostly consistent format. Figures and tables are legible, but not convincing.	Format is generally consistent including heading styles and captions. Figures and tables are neatly done and provide intended information.	Format is consistent throughout including heading styles and captions. Figures and tables are presented logically and reinforce the text.	
<b>Spelling &amp; Grammar</b>	Numerous spelling and grammatical errors.	Several spelling and grammatical errors.	Minor misspellings and/or grammatical errors.	Negligible misspellings and/or grammatical errors.	
<b>References</b>	No referencing system used.	Inadequate list of references or references in text. Inconsistent or illogical referencing system.	Minor inadequacies in references. Consistent referencing system.	Reference section complete and comprehensive. Consistent and logical referencing system.	
<b>OVERALL PERFORMANCE</b>	<b>Unacceptable</b>	<b>Marginal</b>	<b>Acceptable</b>	<b>Exceptional</b>	<b>TOTAL</b>
<b>POINTS REQUIRED</b>	<b>0-4</b>	<b>5-7</b>	<b>8-11</b>	<b>12-15</b>	

#### *Additional resources:*

To know more about Rubrics check the web site:

<http://www.web.virginia.edu/iaas/assessment/assessrubrics.htm>

<http://learnweb.harvard.edu/alps/thinking/docs/rubricar.htm>

[http://department.txwes.edu/psy/mskerr/files/rubric\\_pres\\_su07.ppt](http://department.txwes.edu/psy/mskerr/files/rubric_pres_su07.ppt)