Worcester Polytechnic Institute – Center for Project-Based Learning
Rubrics for Assessment of Integrative Student Projects

These rubrics are used to assess WPI's team-based interdisciplinary requirement, the Interactive Qualifying Project (IQP). Adoption or use is encouraged; please acknowledge WPI and let us know of your use. Thanks.

1. Formulate and complete a project that addresses a combination of social, cultural, humanistic, and technical issues			
IQP learning outcomes: 1-5, 9; *Sources of evidence:* Meetings, presentations, report, and project implementation in general			
	Excellent (A)	**Good (B)**	**Fair, Acceptable (C)**
Goal and objectives	Project has a well-conceived and clearly stated goal and objectives, and the goal is achieved.	Project has a stated goal and objectives, and the goal is achieved.	Project has a stated goal and objectives, and the goal is partially achieved.*
Background and project context	A sophisticated understanding of social, cultural, and technical issues related to the project is evident throughout the students' work	Shows a good understanding of social, cultural, and technical issues related to the project	Does not consider some important social, cultural, and/or technical issues related to the project or shows a poor understanding of them, limiting project outcomes and credibility.
Methods	Students select and implement sound methodologies to achieve the goal, understanding and communicating their limitations.	Students select reasonable methods, and implementation of methods is mostly sound. Limitations are acknowledged.	Weaknesses in methodology are often unrecognized or could have been anticipated and addressed, or students do not approach project systematically.
Analytical thinking	Students analyze data or design alternatives systematically, in-depth, and with critical thinking	Data or design alternatives are analyzed mostly systematically. Critical thinking is usually evident.	Little evidence that a systematic process was used to analyze data or design alternatives. Critical thinking is often weak.
Recommendations or other deliverables	Delivers clear, comprehensive recommendations to the sponsor that are well supported by project findings	Delivers useful recommendations to the sponsor that are supported by project findings	Recommendations may not be useful to sponsor or are weakly supported by project findings

*Sometimes the project goal is not entirely achieved for reasons that are beyond the students' control. Advisors evaluate only what is within the students' control.

	Excellent (A)	Good (B)	Fair/Acceptable (C)

2. *Communicate the process and outcomes of the project persuasively and professionally both in written and oral form*

IQP learning outcomes: 7,8; *Sources of evidence:* Presentations, report

	Excellent (A)	Good (B)	Fair/Acceptable (C)
	Team Products		
Use of guidelines and feedback	Students clearly make use of writing guidelines, such that each section meets its expected purpose. Students learn from advisor feedback such that advisors' role in writing improvement decreases as project progresses.	Students attempt to make use of writing guidelines, and each section/chapter mostly meets its expected purpose. Reliance on advisor feedback for writing improvements may be steady throughout the project.	Students often do not make use of writing guidelines. Report requires high levels of advisor effort to make it acceptable.
Persuasion and use of evidence	Writing and presentations reflect critical thinking: claims are persuasive because they are supported by credible evidence and because they are qualified appropriately.	Clear progress is shown in making writing and presentations more persuasive. Most claims are supported by credible evidence and are qualified appropriately, but some are overstated or exaggerated.	Some progress is shown in making writing and presentations more persuasive, but many claims are still not supported by credible evidence or qualified appropriately.
Organization and coherence	Writing and presentations are logically organized with a coherent line of reasoning. Formatting assists in conveying structure of paper or presentation. Paragraphs feature clear topic sentences and are tightly written about that point. Almost all transitions are smooth.	Writing and presentations are usually logically organized with a coherent line of reasoning. Formatting usually conveys structure of paper or presentation. Readers occasionally struggle through wandering paragraphs or unclear transitions.	Writing and presentations don't show much improvement in organization and coherence, and readers often struggle to identify a line of reasoning.
Clarity and writing mechanics	Writing is mostly clear and concise. Active constructions and a "research voice" is used throughout. Mostly free of errors in writing mechanics (e.g., grammar, spelling, punctuation, sentence structure). Word usage is almost always varied and appropriate.	Writing is usually clear and concise. Passive constructions may occasionally obscure meaning, and some writing may be conversational in tone. Most elements of writing mechanics are correct, and errors do not obscure meaning. Word choice sometimes does not convey intended meaning.	Frequent writing errors begin to obstruct meaning or cast doubt on the credibility of the authors. Overuse of passive constructions may obscure meaning and make reading hard to follow. Word choice often does not convey intended meaning. Conversational tone may not be consistent with credible research.
Visual aids	Visual aids are creative, engaging, and convey messages effectively to diverse audiences.	Visual aids are professional and add value beyond spoken remarks.	Visual aids are professional but do not add much value beyond spoken remarks.
	Individual Products		
Quality and extent of writing contributions	Authorship page indicates a substantial writing contribution. Produces writing of good quality that requires minimal revision and editing by team members.	Authorship indicates a reasonable amount of writing contribution. Produces writing of sufficient quality that team members can proceed with reasonable levels of revision and editing.	Authorship indicates few writing contributions. Or produces writing of insufficient quality such that it cannot be used without substantial revision from team members.
Presentation skills	Demonstrates professional presentation skills. Clearly prepared and succeeds in engaging the audience.	Shows noticeable effort and improvement in presentations skills. Clearly prepared and attempts to engage the audience.	Shows some effort and improvement in presentation skills. Sometimes does not seem prepared or is unable to engage the audience.

3. Work productively as a team, make effective use of all person-power, and reflect critically and constructively on group process

IQP learning outcome: 6; *Sources of evidence:* Teamwork assessments, meetings, report authorship

	Excellent (A)	**Good (B)**	**Fair/Acceptable (C)**
	Team as a whole		
Teamwork monitoring	Our team can identify specific processes, norms, and/or guidelines we use to work effectively and respectfully together. We regularly monitor our group processes along with individuals' ideas, feelings, and contributions. We can identify actions or adjustments made as a result.	Our team can identify processes, norms, and guidelines used to work effectively and respectfully together. We regularly monitor our group processes along with individuals' ideas, feelings, and contributions. We may have some difficulty showing useful, tangible outcomes and actions from that monitoring.	Our team attempted to develop processes, norms, or guidelines to work effectively and respectfully together. We tried to monitor our group processes but often did not succeed in making adjustments. We tried but did not always succeed in monitoring individuals' ideas, feelings, and contributions.
Team critique and conflict identification	Our team reflects critically on its effectiveness and communicates with each other and with advisors regarding challenges it is facing and how it has responded effectively to those challenges.	Team reflects on its effectiveness and attempts to communicate with each other and with advisors regarding challenges it is facing and how it has attempted to respond to those challenges.	Team does not critically reflect on its effectiveness or does not communicate with each other or with advisors regarding challenges it is facing. Conflict avoidance.
	Individuals		
Reliability, effort, quality of work	Partners would say that I am always reliable, and deliver my best effort and high quality work.	Partners would say that I am almost always reliable and deliver solid effort and good quality work.	Partners would say I am inconsistently reliable and don't always deliver solid effort. Quality of work sometimes suffers.
Openness to feedback	When partners or advisors target an issue that relates to me, I am not defensive and always open to discussion. I try to resolve the issue promptly and succeed in doing so.	When partners or advisors target an issue that relates to me, I am usually not defensive and am usually open to discussion. I try to resolve the issue promptly and usually succeed.	When partners or advisors target an issue that related to me, I sometimes am defensive or not always open to discussion. I still try to improve the situation satisfactorily.
Self-assessment and response to feedback	I show critical introspection in identifying my strengths and weaknesses as a team member from the perspective of diverse others. I can identify specific actions I have taken to modify my behavior.	I can identify my strengths and weaknesses as a team member from others' perspectives. I can identify some general ways in which I have attempted to modify my behavior.	I can identify some of my strengths and weaknesses as a team member but not always from others' perspectives. I have difficulty showing evidence of actions I took that led to noticeable improvement.
Support for other team members	I regularly share my feelings and opinions and elicit those of others. I give constructive, actionable feedback to team members and support their efforts to improve.	I usually share my feelings and opinions and consider those of others. I show attempts to give constructive feedback to team members and support their efforts to improve.	I occasionally share my feelings and opinions and sometimes disregard those of others. I show little progress in learning to give constructive feedback to team members.

4. Show professionalism			
IQP learning outcomes: All, but especially 6 ; *Sources of information:* Project implementation, meetings, development of report and presentations			
	Excellent (A)	**Good (B)**	**Fair/Acceptable (C)**
Conduct of meetings	Meetings between the team and advisors/liaisons are useful and productive. The team is always well prepared, and all team members have a meaningful role in meetings.	Most meetings between the team and advisors/liaisons are useful and productive. The team is almost always well prepared, and all team members usually play a role.	Team often comes to meetings unprepared, or not all members are engaged. Advisors often step in to ensure that important and useful discussion occurs during meetings.
Initiative	Students take the lead in project formulation and implementation. They are proactive and take initiative. They become increasingly self-directed with positive outcomes.	Students become more self-directed and less reliant on advisors as the project progresses. They are usually proactive, take initiative, and show some independent thinking.	Students are often reliant on direction from advisors to deliver a quality project. They do not show much initiative or original independent thinking that is sound.
Overall use of feedback	Students respect feedback from advisors and liaisons, critically reflect on it, ask for clarification when necessary, and always respond to the feedback in recognizable ways.	Students respect feedback from advisors and liaisons and attempt to critically reflect on it. They usually ask for clarification when necessary and respond to the feedback in recognizable ways.	Students don't always value feedback from advisors and liaisons and may not reflect critically on it. Feedback that isn't understood is often ignored, or team does not respond to feedback in recognizable ways.
Attitude	The team always responds with a positive attitude to unexpected changes in the project. They consistently show flexibility and adaptability.	The team usually responds with a positive attitude to unexpected changes in the project. They attempt to be flexible and adaptable.	The team has difficulty responding positively to unexpected changes and tends to get bogged down by them.
Commitment	The team is always in "continuous improvement" mode, shows intrinsic motivation to deliver the best project they can, and shows a commitment to learning.	The team is clearly committed to delivering a high quality product. May rely on advisors' evaluations in deciding how much effort to expend.	The team does what is necessary to deliver an acceptable project.

This rubric was developed by Prof. Chrysanthe Demetry of Worcester Polytechnic Institute. To ask questions, provide feedback, or notify us of your use or adoption of these rubrics, please contact Rick Vaz (vaz@wpi.edu) or Paula Quinn (pquinn@wpi.edu) in WPI's Center for Project-Based Learning.