SAC Name: Architectural Design & Drafting

Contact information:
Elizabeth Metcalf, emetcalf@pcc.edu 503.977.4160
Denise Roy, droy@pcc.edu 503.977.4166

1. *Describe your plan of action for 2009-10:*
   Several classes, (ARCH 101, ARCH 110, 200, 224), use small discussion student groups of 4-6, to evaluate final term projects. These projects are building designs (ARCH 101, 200), concept designs with models (Arch 200), and building systems' analysis (ARCH 224). Instructors have begun using a simple *Evaluation Rubric* for these class reviews, and for project grading. These rubrics are intended to facilitate student discussion within the small groups. Using the rubric was intended to help students to evaluate each others projects in a more open manner, while focusing on appropriate subject matter within class discussions.

   Several instructors began developing a *Critical Thinking Rubrics,* which could be used to define critical thinking as part of course content, and to define levels of achievement for a course. Since critical thinking is a learning outcome common to every class we teach, several instructors decided we may be able to develop *Critical Thinking Rubrics* to help define critical thinking opportunities, within appropriate classes.

   Instructors involved in these discussions decided they would develop both types of rubrics during fall-spring. They would informally review the *Evaluation Rubrics* during the academic year, and evaluate *Critical Thinking Rubrics* during In-Service.
   (Examples of these rubrics are attached, on subsequent pages of this document).

2. *When your project is completed, please describe the methods you used:*
   As described above, *Evaluation Rubrics* were developed by several instructors. The SAC has met with the participating instructors several times during this academic year to review them.
   The SAC also developed a *Critical Thinking Rubric* for one of the advanced courses (ARCH 224), which was reviewed during In-Service.
   (Example of Critical Thinking Rubric attached, on subsequent pages of this document).

SAC Name: Architectural Design & Drafting

Contact information:
Elizabeth Metcalf, emetcalf@pcc.edu 503.977.4160
Denise Roy, droy@pcc.edu 503.977.4166

1. *What did you learn?*
   All of the instructors are very impressed with the usefulness of the *Evaluation Rubrics*, both for evaluating and grading projects, and identifying critical thinking opportunities. Many courses currently have some form of an *Evaluation Rubric*. It was agreed that *Evaluation Rubrics* should be provided to students at the same time a project is assigned, so students can see both the assignment and expectations for excellent work verses average work. In fact most instructors are already doing this.

   Students should also receive a copy of the *Critical Thinking Rubric*, as they are developed, to become aware of the synthesis of concepts with technical skills intended for the course. Instructors realized that students may likely become more active participants in a class if a *Critical Thinking Rubric* is provided The rubric demonstrates the various levels of critical thinking involved in a course, and allows students to" see the big picture" of the course content and activities.

2. *What changes, if any, are you making or recommending as a result?*
   Our SAC will present examples of both *Evaluation Rubrics*, and *Critical Thinking Rubrics* at our next departmental meeting. We will suggest that they develop some type *of Evaluation Rubric* (if they haven't yet done so), as appropriate for their course content. The rubrics may become more general when used for group work, and more specific when used for project evaluation.

   We will also ask instructors to consider developing a *Critical Thinking Rubric* for each course, over time, with the benefits as noted in Item #3 (above).

3. *Follow-up in 2010-11, based on any changes you have made:*

We plan to introduce the idea of using the *Evaluation Rubric* and the *Critical Thinking Rubric* to all of our adjunct faculty during the 2010-11 year. Our goal would be to integrate *Evaluation Rubric* into more courses. Additionally, the SAC will work to establish *Critical Thinking Rubrics* for additional courses.

4. *What did you learn?*
   All of the instructors are very impressed with the usefulness of the *Evaluation Rubrics*, both for evaluating and grading projects, and identifying critical thinking opportunities. Many courses currently have some form of an *Evaluation Rubric*. It was agreed that *Evaluation Rubrics* should be provided to students at the same time a project is assigned, so students can see both the assignment and expectations for excellent work verses average work. In fact most instructors are already doing this.

   Students should also receive a copy of the *Critical Thinking Rubric*, as they are developed, to become aware of the synthesis of concepts with technical skills intended for the course. Instructors realized that students may likely become more active participants in a class if a *Critical Thinking Rubric* is provided The rubric demonstrates the various levels of critical thinking involved in a course, and allows students to" see the big picture" of the course content and activities.

5. *What changes, if any, are you making or recommending as a result?*
   Our SAC will present examples of both *Evaluation Rubrics*, and *Critical Thinking Rubrics* at our next departmental meeting. We will suggest that they develop some type *of Evaluation Rubric* (if they haven't yet done so), as appropriate for their course content. The rubrics may become more general when used for group work, and more specific when used for project evaluation.

   We will also ask instructors to consider developing a *Critical Thinking Rubric* for each course, over time, with the benefits as noted in Item #3 (above).

6. *Follow-up in 2010-11, based on any changes you have made:*

We plan to introduce the idea of using the *Evaluation Rubric* and the *Critical Thinking Rubric* to all of our adjunct faculty during the 2010-11 year. Our goal would be to integrate *Evaluation Rubric* into more courses. Additionally, the SAC will work to establish *Critical Thinking Rubrics* for additional courses.

ARCH 224 - Active & Passive Systems

Critical Thinking Rubric

	Capstone	Milestones		Benchmark
	4	3	2	1
Analysis of building systems *Integration of passive and active elements*	Integrated systems throughout building; demonstrates understanding of interdependence of systems upon each other	Some Integrated systems in building; demonstrating understanding of interdependence of systems upon each other	A few integrated systems in the building; demonstrates a limited understanding of interdependence of systems upon each other	Only 1 or 2 integrated systems throughout building; demonstrates knowledge of interdependence of systems upon each other, but not application.
Building envelop *Integration of construction, style, energy goals*	Integration of construction, architectural style, and energy goals, resulting in a high-performance building.	Integration of construction, (but not architectural style), and energy goals, resulting in a high-performance building.	Integration of construction, (but not architectural style), and energy goals, resulting in a building exceeding OR Energy code requirements.	Integration of construction, (but not architectural style), and energy goals, resulting in a building that meets OR Energy code requirements.
Energy performance *Testing of components, analysis of evidence, drawing conclusions of performance*	Ability to run computer modeling of energy performance, evaluate heat loss, and adjust building envelop as needed to reach energy performance goals.	Ability to run computer modeling of energy performance, evaluate heat loss, and adjust 1-2 elements of building envelop as needed to reach energy performance goals.	Ability to run computer modeling of energy performance, evaluate heat loss in reference to energy performance benchmarks.	Ability to run computer modeling of energy performance, evaluate heat loss in reference general references used by HVAC subcontractors.
Passive solar *Testing of components, analysis of evidence, drawing conclusions of performance*	Ability to run computer modeling of solar gain, evaluate heat gain, and adjust aperture as needed to reach energy performance goals; design shading.	Ability to run computer modeling of solar gain, evaluate heat gain, and partially adjust solar aperture as needed to reach energy performance goals; design shading.	Ability to run computer modeling of solar gain, evaluate heat gain in reference to industry standard expectations, and design shading.	Ability to run computer modeling of solar gain, evaluate heat gain in reference to industry standard expectations, and size shading.

	Capstone 4	Milestones 3	 2	Benchmark 1
HVAC System Selection *Select heating system appropriate for requirements*	HVAC system selected in response to complete analysis of building's heat loss characteristics, including design loss, infiltration, budget, user requirements.	HVAC system selected in response to analysis of several building's heat loss characteristics.	HVAC system selected in response to partial analysis of building's heat loss characteristics, meeting basic code standards.	HVAC system selected to meet code standards and common industry practices for modest cost solution.
Onsite Water Management *Refer and use technical information to design on-site water collection*	On-site water is captured and diverted to collection area meeting specifications for site, location, and plant materials; along with aesthetic considerations.	On-site water is captured and diverted to collection area meeting specifications for site, location, and plant materials.	On-site water is captured and diverted to collection area meeting some specifications for site, location, and plant materials.	On-site water is captured and diverted to a simple, underground drywell system, meeting code requirements.
Graphic presentation *Graphics used clearly to summarize*	Information presented in graphic and written format; providing a clear and concise overview and summary of analysis & findings.	Information presented in graphic and written format; providing an overview and summary of analysis & findings.	Information presented in graphic and written format; mostly providing an overview and summary of analysis & findings.	Information presented in graphic and written format; providing a partial overview and summary of analysis & findings.

ARCH 110 Grade Sheet

Name _____ **Date** _____ **Project #** _____

Grading Criteria: H= High M=Medium L=Low

H	M	L		H	M	L	
			Line quality				Dimension Style
			Line weights				Lettering
			Line types				Standard drafting conventions
			Drawn to Scale				Neatness
			Straightness				Legibility
			Spelling				Accuracy (compared to assignment)
			Overall layout				Titleblock Information

POINTS EARNED ..... _____/10pts

RESUBMITTED ..... _____/10pts

ARCH 200 Intro to Architecture

Project #3 Kiosk — Total 30 Points

Expression of Unity, Contrast, Proportion	7 Points
Development of Theme and Parti Established theme for the design, Clear use of Parti (Repetition of elements, symmetry, lining up, stacking, geometric shapes, balance) **Development of variation, Unity, and contrast** Development of variation: size, shape, scale, proportion, symmetry, asymmetry with balance, texture.	

Expression of Program (Function, Purpose)	10 points
A kiosk as a "front door" to the PCC campus; creating visibility for the visitor. Relates to some architectural elements, patterns, proportion, and/or scale of the campus architecture.	

Development of Spatial Ambiguity (Interplay of Figure/ground) and Order (Organizing strategies)	8 points
The enclosed and adjacent outdoor spaces (defined by architectural elements) becomes the focus of the experience, enlivened by figure-ground relationship, and the potential relationship to other shelters; identify if scheme uses low, high, or lively level of ambiguity	

Model Building	5 Points
Craft of presentation, appropriate selection of materials to describe design scheme, removable roof as needed, correct scale ¼" = 1'- 0", name and project label, north arrow.	

Other Comments:

ARCH 111 Working Drawings I

ARCHITECTURAL DESIGN & DRAFTING

Portland Community College

PROJECT SEVEN GRADE SHEET name _____

CONSTRUCTION DOCUMENTS

COMPLETE SET: Although this is not truly a "complete set" it does include each drawing type.

GRAPHICS....._____/150 pts.

- Line quality
- Line weights
- Lettering
- Overall layout and presentation
- Neatness
- Material representation
- Standard drafting conventions
- Spelling
- Consistency of graphics
- Continuity

CONTENT....._____/150 pts.

- Site plan
- Floor plans (office plan)
- Foundation plan/Framing plans
- Elevations
- Sections
- Title, Scale and North arrow
- Title Block, Section l Flags, Sheet Numbers
- Continuity

TOTAL POINTS....._____/300pts.

ARCH 111 Working Drawings I

ARCHITECTURAL DESIGN & DRAFTING

Portland Community College

PROJECT 1 GRADE SHEET name _____

FLOOR PLANS

- Replicate First and Second floor plan drawings at ¼"=1'0" scale on 24x36 sheets to match examples given. Mistakes noticed on examples should be corrected by student.
-

GRAPHICS..... _____/50pts

Line quality
Line weights
Lettering
Overall layout and presentation
Neatness
Material representation
Standard drafting conventions
Spelling
Drawn to Scale

CONTENT ..... _____/50pts

Exterior and water walls at 6" thick
Interior walls at 4"
Windows, sizes
Doors, sizes
Bathroom layout
Kitchen layout
Casework-built in cabinetry
Stair layout – including handrail
Closets, shelves and rods
Furnace and water heater (on 18" non-combustible platform if in garage)

Crawl space access size and location
Attic access, size and location
Room names
Balconies, decks and porches
Dimension walls and openings
Notes
Title, scale, north arrow and date

PERCENT OF COMPLETION ..... _____/100%

TOTAL POINTS..... _____/100pts

ARCH 111 Working Drawings I
ARCHITECTURAL DESIGN & DRAFTING
Portland Community College

PROJECT 2 GRADE SHEET name _____

KITCHEN PLANS & ELEVATIONS - INTERIORS

- Kitchen floor plan, four wall elevations, a list of specifications on at 1/2"=1'0" scale on 24x36 sheets

GRAPHICS ..... _____/50pts

Line quality	Standard drafting conventions
Line weights	Drawn to Scale
Lettering	Neatness
Overall layout and presentation	Coordination
Spelling	Accuracy

CONTENT ..... _____/50pts

Floor Plan Drawing:

Walls, windows, and doors

Wall hatch

Countertops, lower & upper cabinets, cabinet inserts

Base cabinet (#11), wall cabinet (#12); Corner wall cabinets w/ "Lazy Susan", Revolving Door (#5 + #9); Corner base cabinets w/ "Lazy Susan" – Trash pullout – (#6 + 310); Wall cabinet over refrigerator (#13); Pantry cabinet (#14)

Breakfast table and nook bench

Plumbing fixtures with keynotes

Appliances with keynotes

refrigerator, range, hood, dishwasher, garbage disposal, microwave

NKBA style dimensions

Elevation tags

Room Tag & Floor material
Title, North Arrow, Scale
Four Wall Elevations:
Cabinet fronts & reference numbers, indicate hinge direction
Windows, doors
Furniture
NKBA style dimensions
Title, Scale

PERCENT OF COMPLETION ....._____/100%

TOTAL POINTS....._____/100pts