

Architecture of Complex Systems

Project Scoring Rubric

WEEK 2: FUNCTION AND EMERGENCE

Step 1: Abstractions of Form

Prompt	Step 1: Abstractions of Form. Did you identify the object elements / abstractions of form and provide an explanation of why you used those elements as per the example project?
Points	Criteria
3	Complete: Five or more object elements/abstractions of form are identified at level one of the decomposition. Explanation for choosing these elements is also provided.
2	Partially Complete: Only the basic object elements/abstractions of form for the system are identified (less than five). Explanation for choosing these elements is also provided.
1	Incomplete: Some of the basic object elements/abstractions of form for the system are missing.
0	Not attempted: The project template is without work, in its original state. The project is copied from the samples.

Step 2: System Operands and Functions

Prompt	Step 2: System Operands and Functions. <ol style="list-style-type: none"> 1. Did you identify the value related operand, its stages, and the process that changes the stages? 2. Did you identify the principal internal process, operands, and functions? 3. Did you identify how the primary value pathway is created and how it is externally delivered to create emergence? 4. Did you identify the form to function mapping and how the operands move and change state within the system?
Points	Criteria
3	Complete: All criteria as specified in the prompt are complete.
2	Partially Complete: Two to three of the criteria are complete.
1	Incomplete: Less than two of the criteria are complete.
0	Not attempted: The project template is without work, in its original state. The project is copied from the samples.

Step 3: Develop an OPM Diagram

Prompt	Step 3: Develop an OPM Diagram. Did you develop an OPM diagram, identify, and describe the main elements as per the project template?
Points	Criteria
3	<p>Complete: An OPM diagram includes the value related operand, delivered function, internal functions (operands and processes), and form properly highlighted in the diagram.</p> <p>The following syntax is used within the OPM diagram:</p> <ol style="list-style-type: none"> 1. System Boundary 2. All lines labeled 3. Only OPM symbols used 4. No object-object links unless clearly explained why. 5. No process-process links unless clearly explained why.
2	<p>Partially Complete: An OPM diagram is presented with two of the four main elements: the value related operand, delivered function, internal functions (operands and processes), and form, highlighted in the diagram.</p> <p>Three of the five syntax requirements described previously are met.</p>
1	<p>Incomplete: An incomplete OPM diagram is provided. Two or less of the required elements are provided.</p> <p>None of the syntax requirements are met.</p>
0	<p>Not attempted: The project template is without work, in its original state. The project is copied from the samples.</p>

Step 4: Functional Information

Prompt	Step 4: Functional Information. Did you give a brief description of your field and how functional information is normally conveyed via at least one example as per the example project?
Points	Criteria
3	Complete: A brief description of the field is provided with details about how functional information is normally conveyed. An example is also provided.
2	Partially Complete: A brief description of the field is provided. The details of functional information or the example, but not both, are missing.
1	Incomplete: Only the description of field is provided.
0	Not attempted: The project template is without work, in its original state. The project is copied from the samples.