Rubric for Deadline A

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| --- | --- | --- | --- | --- |
| **Section**  **(Total Points)** | **Exemplary** | **Above Average** | **Developing** | **Score** |
| **Simplified First Law for Evaporator**  **(20)** | First Law written and simplified according to information given in prompt.  (20) | First Law has one term that is incorrect after simplification.  (15) | First Law either not simplified or has more than one term that is incorrect after simplification.  (0) |  |
| **Simplified First Law for Heat Exchanger**  **(20)** | First Law written and simplified according to information given in prompt.  (20) | First Law has one term that is incorrect after simplification.  (15) | First Law either not simplified or has more than one term that is incorrect after simplification.  (0) |  |
| **Simplified First Law for Compressor**  **(20)** | First Law written and simplified according to information given in prompt.  (20) | First Law has one term that is incorrect after simplification.  (15) | First Law either not simplified or has more than one term that is incorrect after simplification.  (0) |  |
| **Simplified First Law for Condenser**  **(20)** | First Law written and simplified according to information given in prompt.  (20) | First Law has one term that is incorrect after simplification.  (15) | First Law either not simplified or has more than one term that is incorrect after simplification.  (0) |  |
| **Simplified First Law for Expansion Valve**  **(20)** | First Law written and simplified according to information given in prompt.  (20) | First Law has one term that is incorrect after simplification.  (15) | First Law either not simplified or has more than one term that is incorrect after simplification.  (0) |  |
|  |  |  | **Total Score** | **/ 100** |

Rubric for Deadline B

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| --- | --- | --- | --- | --- |
| **Section**  **(Total Points)** | **Exemplary** | **Above Average** | **Developing** | **Score** |
| **Detailed Inputs**  **(25)** | Every input is defined with appropriate units. Data loads and user inputs used appropriately.  (25) | Missing a few inputs and/ or units. Missing one or two instances where data loads or user inputs are needed.  (19) | Missing most inputs and/ or units. Many data loads or user inputs are not specified.  (0) |  |
| **Detailed Outputs**  **(25)** | All outputs are described. All formatted output to command window and file exports shown.  (25) | Missing a few outputs to the command window and/ or file exports.  (19) | Missing most outputs to the command window and/ or file exports.  (0) |  |
| **Detailed Workflow**  **(25)** | Algorithm is logical and includes appropriate decision-making and loops where required. Includes all data validations, calculations, manipulations, and results. All items defined prior to use.  (25) | Algorithm is illogical in one or two places. It may be missing a few calculations or show them incorrectly.  (19) | Algorithm is illogical or incomplete in more than two places.  (0) |  |
| **Complete Algorithm – Necessary Information**  **(25)** | Algorithm includes all equations, assumptions, and variables needed.  (25) | Algorithm is missing an equation, assumption, or variable in one or two places.  (19) | Algorithm is missing more than two equations, assumptions, or variables.  (0) |  |
|  |  |  | **Total Score** | **/ 100** |

Rubric for Deadline C

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| --- | --- | --- | --- | --- |
| **Section**  **(Total Points)** | **Exemplary** | **Above Average** | **Developing** | **Score** |
| **Code for Task 1**  **(33)** | Code for task 1 works. Data is loaded and all appropriate data validations are completed.  (33) | Code for task 1 has correct data loads but one or two data validations are missing or completed incorrectly.  (25) | Data not loaded or more than two data validations missing or completed incorrectly.  (0) |  |
| **Code for Task 2**  **(33)** | Code for task 2 works. All inputs and data validations are correctly programmed.  (33) | Code for task 2 is missing one or two inputs or data validations or they are done incorrectly.  (25) | More than two inputs or data validations are missing or done incorrectly.  (0) |  |
| **Code for Task 3**  **(34)** | Code for task 3 works. Enthalpies are correctly found, including interpolation where needed.  (34) | Code for task 3 is missing interpolation.  (25). | Code for task 3 not completed.  (0) |  |
|  |  |  | **Total Score** | **/ 100** |

Rubric for Deadline D

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| --- | --- | --- | --- | --- |
| **Section**  **(Total Points)** | **Exemplary** | **Above Average** | **Developing** | **Score** |
| **Results CSV File**  **(34)** | All results are correct.  (34) | One result is incorrect.  (25) | More than one result is incorrect.  (0) |  |
| **Compressor Work Output**  **(33)** | Compressor work output is correct with correct units.  (33) | Units are missing or compressor work is slightly incorrect.  (25). | Compressor work is incorrect.  (0) |  |
| **Heat Removed Output**  **(33)** | Heat removed is correct with correct units.  (33) | Units are missing or heat removed is slightly incorrect.  (25) | Heat removed is incorrect.  (0) |  |
|  |  |  | **Total Score** | **/ 100** |