Thermodynamics and Chemistry is designed primarily as a textbook for a one-semester course in classical chemical thermodynamics at the graduate or undergraduate level.

- Front Matter

<table>
<thead>
<tr>
<th>Physical quantity</th>
<th>SI unit</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>length</td>
<td>meter(^a)</td>
<td>m</td>
</tr>
<tr>
<td>mass</td>
<td>kilogram</td>
<td>kg</td>
</tr>
<tr>
<td>time</td>
<td>second</td>
<td>s</td>
</tr>
<tr>
<td>thermodynamic temperature</td>
<td>kelvin</td>
<td>K</td>
</tr>
<tr>
<td>amount of substance</td>
<td>mole</td>
<td>mol</td>
</tr>
<tr>
<td>electric current</td>
<td>ampere</td>
<td>A</td>
</tr>
<tr>
<td>luminous intensity</td>
<td>candela</td>
<td>cd</td>
</tr>
</tbody>
</table>

\(^a\)or metre

- 1: Introduction

- 2: Systems and Their Properties
3: The First Law

James Joule (1818 - 1889)
4: The Second Law

Willard Gibbs (1839 - 1903)

5: Thermodynamic Potentials
6. The Third Law and Cryogenics

7. Pure Substances in Single Phases
8: Phase Transitions and Equilibria of Pure Substances

9: Mixtures
12: Equilibrium Conditions in Multicomponent Systems

13: The Phase Rule and Phase Diagrams
14: Galvanic Cells

- **Symbol** | **Physical quantity**
---|---
\( A \) | Helmholtz energy
\( A_s \) | surface area
\( a \) | activity
\( B \) | second virial coefficient
\( C \) | number of components*
\( C_p \) | heat capacity at constant pr

- 15: Appendices

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