

---

# CONTENTS

---

Preface	ix
Prologue—The International System of Units (SI)	xiii
<b>1</b> Introduction	1
<b>2</b> Process Design Development	12
<b>3</b> General Design Considerations	57
<b>4</b> Cost and Asset Accounting	133
<b>5</b> Cost Estimation	147
<b>6</b> Interest and Investment Costs	225
<b>7</b> Taxes and Insurance	267
<b>8</b> Depreciation	279
<b>9</b> Profitability, Alternative Investments, and Replacements	302
<b>10</b> Optimum Design and Design Strategy	357
<b>11</b> Materials and Fabrication Selection	445
<b>12</b> The Design Report	483

<b>13</b>	<b>Materials Transfer, Handling, and Treatment Equipment—Design and Costs</b>	508
<b>14</b>	<b>Heat-Transfer Equipment—Design and Costs</b>	632
<b>15</b>	<b>Mass-Transfer and Reactor Equipment—Design and Costs</b>	711
<b>16</b>	<b>Statistical Analysis in Design</b>	810
<b>Appendixes</b>		
<b>A</b>	<b>The International System of Units (SI)</b>	851
<b>B</b>	<b>Auxiliary, Utility, and Chemical Cost Data</b>	873
<b>C</b>	<b>Design Problems</b>	890
<b>D</b>	<b>Tables of Physical Properties and Constants</b>	933
<b>Indexes</b> 957		
<b>Name Index</b>		
<b>Subject Index</b>		