

# Table of Contents

<b>Introduction.....</b>	<b>1</b>
Objective of This Textbook.....	1
Textbook Outline .....	1
Textbook Conventions .....	2
Exercise Files .....	2
Introduction to SmartAssembly 5.0 .....	3
SmartAssembly and Pro/ENGINEER .....	4
Definitions and Terminology.....	4
SmartAssembly / Pro/ENGINEER User Interface.....	5
SmartAssembly / Pro/ENGINEER User Interface (continued).....	6
Create New Project.....	7
Create New Project (continued).....	8
Create New Project (continued).....	9
Modify Project .....	10
Create New Component.....	11
Create New Component (continued) .....	12
Create New Component (continued) .....	13
Library Folders and Favorites .....	14
Library Folders and Favorites (continued) .....	15
Create Existing Component .....	16
Modify Component .....	17
Remove Component .....	18
<b>Exercise 1 – Introduction.....</b>	<b>19</b>
<b>The Crimson Editor .....</b>	<b>20</b>
Introduction.....	20
<b>Exercise 2 – The Crimson Editor .....</b>	<b>21</b>
<b>User Defined Features (UDFs) .....</b>	<b>25</b>
Introduction.....	25
Creating UDFs .....	26
Placing UDFs with Pro/ENGINEER .....	27
Placing UDFs with Pro/ENGINEER (continued) .....	28
<b>Exercise 3 – User Defined Features (UDFs) .....</b>	<b>29</b>
<b>SmartAssembly Configuration.....</b>	<b>38</b>
Introduction.....	38
Configuration File .....	38
Recommended Configuration .....	40
<b>Exercise 4 – SmartAssembly Configuration.....</b>	<b>41</b>
<b>The Component Engine .....</b>	<b>42</b>
Introduction.....	42
<b>Exercise 5 – The Component Engine .....</b>	<b>43</b>

<b>'Select List' Files .....</b>	<b>44</b>
Introduction.....	44
<b>Exercise 6 – 'Select List' Files .....</b>	<b>45</b>
<b>GIF Images .....</b>	<b>46</b>
GIF Images for Program Icons.....	46
GIF Images for Program Dialog Boxes.....	47
<b>Exercise 7 – GIF Images .....</b>	<b>48</b>
<b>Program Structure.....</b>	<b>50</b>
Introduction.....	50
GUI Description Section.....	51
GUI Section Commands .....	53
GUI Section Examples.....	62
Table Description Section .....	63
Assembly Description Section .....	66
Assembly Description Section Commands.....	67
Valid Reference Types.....	77
Specifying the Pro/ENGINEER Model .....	78
Logical Expression Conditions.....	82
String Expressions .....	83
Math Expressions.....	85
Commands for Arrays .....	87
For Loop Option Keywords .....	91
Component Description Section .....	92
Dependency Description Section.....	93
<b>UDF Programs .....</b>	<b>94</b>
Introduction.....	94
<b>Exercise 8 – UDF Programs .....</b>	<b>102</b>
<b>Part Programs.....</b>	<b>122</b>
Introduction.....	122
<b>Exercise 9 – Part Programs.....</b>	<b>127</b>
<b>Assembly Programs.....</b>	<b>144</b>
Introduction.....	144
Specifying Assembly Components .....	145
<b>Exercise 10 – Assembly Programs.....</b>	<b>146</b>
<b>Drawing Programs.....</b>	<b>153</b>
Introduction.....	153
<b>Exercise 11 – Drawing Programs.....</b>	<b>161</b>
<b>Other Programming Techniques .....</b>	<b>179</b>
Introduction.....	179
The BUW_OBJECT_ROLE Parameter.....	183
Interference Checking .....	184
<b>Exercise 12 – Other Programming Techniques .....</b>	<b>185</b>