

## Course Structure

Paper No	Paper Title	Credits
<b>Semester - I</b>		
<b>General Education Components</b>		
<b>VOC 101</b>	Linguistic Proficiency-I (English& Marathi) with Language lab training	4
<b>VOC 102</b>	Computer Fundamentals-I (Information Technology) : Theory	2
<b>VOC 103</b>	Computer Fundamentals-I (Information Technology): Laboratory Coursework	2
<b>VOC 104</b>	Professional Ethics and Management Practices	4
<b>Skill Development Components - Industrial Automation (A)</b>		
<b>VOC 111</b>	Analog and Digital Electronics	2
<b>VOC 112</b>	Electrical Systems	2
<b>VOC 113</b>	Industrial Electronics	2
<b>VOC 114</b>	Industrial Instrumentation	2
<b>VOC 115</b>	Laboratory Coursework – I (IA)(Analog and Digital Electronics)	2
<b>VOC 116</b>	Laboratory Coursework – II (IA) (Electrical Systems)	2
<b>VOC 117</b>	Laboratory Coursework – III (IA) (Industrial Electronics)	2
<b>VOC 118</b>	Laboratory Coursework – IV (IA) (Industrial Instrumentation)	2
<b>VOC 119</b>	In-plant Training – I (IA) ( MCC and PCC panel Wiring)	2
<b>Skill Development Components - Automobile (B)</b>		
<b>VOC 131</b>	Automobile Technology	2
<b>VOC 132</b>	Automotive Tools and Equipments	2
<b>VOC 133</b>	Workshop Technology	2
<b>VOC 134</b>	Engineering Drawing	2
<b>VOC 135</b>	Laboratory Course –I (AU)(Automobile Technology)	2
<b>VOC 136</b>	Laboratory Course –II (AU) (Automotive Tools and Equipments)	2
<b>VOC 137</b>	Laboratory Course – III (AU) (Workshop Technology)	2
<b>VOC 138</b>	Laboratory Course – IV (AU) (Engineering Drawing)	2
<b>VOC 139</b>	In-plant Training – I (AU)	2
<b>Total Credits = General Education Components + Skill Development Components (A/B)</b>		12+18 =30
<b>Semester - II</b>		
<b>General Education Components</b>		
<b>VOC 201</b>	Linguistic Proficiency-II (English & Hindi ) with Lang. lab training	4
<b>VOC 202</b>	Computer Fundamentals-II (English & Basic Computer Hardware System) : Theory Lang. lab training	2
<b>VOC 203</b>	Computer Fundamentals-II (Basic Computer Hardware System) : Lab- Course	2
<b>VOC 204</b>	Environment Management Theory Computer Fundamentals-II (Basic Computer Hardware System) : Lab- Course Environment Management	4
<b>Skill Development Components - Industrial Automation (A)</b>		
<b>VOC 211</b>	Interfacing and Signal Conditioning	2

VOC 212	Control Systems Fundamentals	2
VOC 213	Fundamentals of Drives	2
VOC 214	PLC Fundamentals	2
VOC 215	Laboratory Coursework–V (IA)(Interfacing and Signal Conditioning)	2
VOC 216		2
VOC 217	Laboratory Coursework – VI (Control Systems Fundamentals)	2
VOC 218	Laboratory Coursework – VII (Fundamentals of Drives)	2
VOC 219	Laboratory Coursework – VIII (PLC Fundamentals)	2
	In-plant Training – II (Control Panel Design and Wiring)	2
<b>Skill Development Components - Automobile (B)</b>		
VOC 231	Automobile - V	2
VOC 232	Automobile - VI	2
VOC 233	Automobile - VII	2
VOC 234	Automobile - VIII	2
VOC 235	Laboratory Coursework – V(AU)	2
VOC 236	Laboratory Coursework – VI (AU)	2
VOC 237	Laboratory Coursework – VII (AU)	2
VOC 238	Laboratory Coursework – VIII (AU)	2
VOC 239	In-plant Training – II (AU)	2
<b>Total Credits = General Educational Components + Skill Development Components(A/B)</b>		12+18 =30
<b>Semester – III</b>		
<b>General Education Components</b>		
VOC 301	Linguistic Proficiency-III	4
VOC 302	Business Software Tools –I	4
VOC 303	Statistical Tools (Probability and Statistics)	4
<b>Skill Development Components - Industrial Automation (A)</b>		
VOC 311	Voc-III ( Control Systems and Drives)	4
VOC 312	Voc-IV ( Industrial Electronics and Instrumentation )	4
VOC 313	Laboratory Course –V	3
VOC 314	Laboratory Course –VI	3
VOC 315	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components - Travel and Tourism (B)</b>		
VOC 321	Voc-III ( Travel Agency and Tour Operations)	4
VOC 322	Voc-IV ( Travel Documentation)	4
VOC 323	Laboratory Course –V	3
VOC 324	Laboratory Course –VI	3
VOC 325	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components – Automobile (C)</b>		
VOC 331	Automotive Components and Drawing	4
VOC 332	Automotive Electricals and Electronics	4
VOC 333	Laboratory Course –V	3
VOC 334	Laboratory Course –VI	3
VOC 335	In-plant Internship/Field Work/ Project	4

<b>Total Credits = General Education Components + Skill Development Components (A/B/C)</b>	<b>12+18 =30</b>
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<b>Semester - IV</b>		
<b>General Education Components</b>		
<b>VOC 401</b>	Industrial Ethics and Safety Management( for Industrial Automation and Automobile) / Ethical, Legal and Regulatory Aspects of Tourism( for Travel & Tourism )	4
<b>VOC 402</b>	Business Software Tools-II	4
<b>VOC 403</b>	Fundamentals of Business and Accounting	4
<b>Skill Development Components - Industrial Automation (A)</b>		
<b>VOC 411</b>	Voc-VI ( Embedded System and PLCs- I)	4
<b>VOC 412</b>	Voc-VII (Pneumatics and Hydraulics)	4
<b>VOC 413</b>	Laboratory Course –VII	3
<b>VOC 414</b>	Laboratory Course –VIII	3
<b>VOC 415</b>	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components - Travel and Tourism (B)</b>		
<b>VOC 421</b>	Voc-VI (Hotel Operation )	4
<b>VOC 422</b>	Voc-VII ( Tourist Transfer Operation)	4
<b>VOC 423</b>	Laboratory Course –VII	3
<b>VOC 424</b>	Laboratory Course –VIII	3
<b>VOC 425</b>	In-plant Internship/Field Work / Project	4
<b>Skill Development Components – Automobile (C)</b>		
<b>VOC 431</b>	Voc-VI (Measurement and Control)	4
<b>VOC 432</b>	Voc-VII (Automotive Materials)	4
<b>VOC 433</b>	Laboratory Course –VII	3
<b>VOC 434</b>	Laboratory Course –VIII	3
<b>VOC 435</b>	In-plant Internship/Field Work/ Project	4
<b>Total Credits = General Education Components + Skill Development Components (A/B/C)</b>		<b>12+18 =30</b>

<b>Semester - V</b>		
<b>General Education Components</b>		
<b>VOC 501</b>	Personality Development and Stress Management	4
<b>VOC 502</b>	Labour Laws and Taxation	4
<b>VOC 503</b>	Business Communication	2
<b>VOC 504</b>	Product Costing	2
<b>Skill Development Components - Industrial Automation (A)</b>		
<b>VOC 511</b>	Voc-IX ( Embedded Systems and PLCs-II)	4
<b>VOC 512</b>	Voc-X ( Manufacturing processes and Mechatronics)	4
<b>VOC 513</b>	Laboratory Course –IX	3
<b>VOC 514</b>	Major Project ( Phase – I)	3
<b>VOC 515</b>	In-plant Internship/Field Work/ Project	4

<b>Skill Development Components - Travel and Tourism (B)</b>		
<b>VOC 521</b>	Voc-IX( Entrepreneurship in Tourism )	4
<b>VOC 522</b>	Voc-X(Contemporary Issues in Tourism)	4
<b>VOC 523</b>	Laboratory Course –IX	3
<b>VOC 524</b>	Major Project ( Phase – I)	3
<b>VOC 525</b>	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components – Automobile (C )</b>		
<b>VOC 531</b>	Voc-IX (Engine Testing)	4
<b>VOC 532</b>	Voc-X (Farming Automotive and Machinery)	4
<b>VOC 533</b>	Laboratory Course –IX	3
<b>VOC 534</b>	Major Project ( Phase – I)	3
<b>VOC 535</b>	In-plant Internship/Field Work/ Project	4
<b>Total Credits = General Education Components + Skill Development Components (A/B/C)</b>		12+18 =30
<b>Semester - VI</b>		
<b>General Education Components</b>		
<b>VOC 601</b>	Human Resource Management	4
<b>VOC 602</b>	Entrepreneurship Development	4
<b>VOC 603</b>	Workshop Management ( for Industrial Automation and Automobile) / Outdoor Management ( for Travel & Tourism )	4
<b>Skill Development Components - Industrial Automation (A)</b>		
<b>VOC 611</b>	Voc-XI (Motion Control and Robotics)	4
<b>VOC 612</b>	Voc-XII (Process Control and Tools)	4
<b>VOC 613</b>	Laboratory Course –X	3
<b>VOC 614</b>	Major Project ( Phase – II)	3
<b>VOC 615</b>	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components - Travel and Tourism (B)</b>		
<b>VOC 621</b>	Voc-XI( Tourism Policy & Planning )	4
<b>VOC 622</b>	Voc-XII ( Tourism Administration in India)	4
<b>VOC 623</b>	Laboratory Course –X	3
<b>VOC 624</b>	Major Project ( Phase – II)	3
<b>VOC 625</b>	In-plant Internship/Field Work/ Project	4
<b>Skill Development Components - Automobile ( C )</b>		
<b>VOC 631</b>	Voc-XI (Noise and pollution Control)	4
<b>VOC 632</b>	Voc-XII (Vehicle Testing)	4
<b>VOC 633</b>	Laboratory Course –X	3
<b>VOC 634</b>	Major Project ( Phase – II)	3
<b>VOC 635</b>	In-plant Internship/Field Work/ Project	4
<b>Total Credits = General Education Components + Skill Development Components(A/B/C)</b>		12+18 =30

<b>Total Credits ( Semester I to VI)</b>	<b>180</b>
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