



## Course Structure of BTech

Vishwakarma Institute of Technology  
Title : Course Structure

### S.Y. B.Tech - Instrumentation and Control Engineering Structure for Pa

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1	MD2201	Data Science	2	2	1	5
S2	CS2221	Internet of Things	2	2	1	5
S3	CS2218	Object Oriented Programming	2	2	1	5
S4	CS2227	Database Management Systems	2	2	1	5
S5	IC2223	Applies Electronics	2	0	0	2
S6	IC2236	Design Thinking-3	0	0	1	1
S7	IC2240	Engineering Design and Innovation - III	0	8	0	8
		<b>Total</b>	<b>10</b>	<b>16</b>	<b>5</b>	<b>31</b>

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### S.Y. B.Tech - Instrumentation and Control Engineering Structure for Pattern

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1	IC2222	Advanced Data Structures	2	2	1	5
S2	IC2224	Data Communication	2	2	1	5
S3	IC2226	Signal and Image Processing	2	2	1	5
S4	IC2228	Industrial Automation	2	2	1	5
S5	IC2230	Sensors and Transducers	2	0	0	2
S6	IC2236	Design Thinking-3	0	0	1	1
S7	IC2240	Engineering Design and Innovation - III	0	8	0	8
		<b>Total</b>	<b>10</b>	<b>16</b>	<b>5</b>	<b>31</b>

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### T.Y. B.Tech - Instrumentation and Control Engineering Structure

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1	IC3231	Process Instrumentation	2	2	1	5
s2	IC3233	Measurement Systems	2	2	1	5
s3	IC3237	Control Theory	2	2	1	5
s4	IC3243	Artificial Intelligence and Machine Learning	2	2	1	5
s5	IC3255	Design Thinking - 5	0	0	1	1
s6	IC3256	Engineering Design and Innovation - 3	0	12	0	12
		<b>Total</b>	<b>8</b>	<b>20</b>	<b>5</b>	<b>33</b>

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### T.Y. B.Tech - Instrumentation and Control Engineering Structure

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1	IC3232	Web Technologies	2	2	1	5
S2	IC3234	Building and Process Automation	2	2	1	5
S3	IC3236	Computer Network	2	2	1	5
s4	IC3259	Cyber Security	2	2	1	5
s5	IC3257	Design Thinking - 6	0	0	1	1
s6	IC3258	Engineering Design and Innovation - 4	0	12	0	12
		<b>Total</b>	<b>8</b>	<b>20</b>	<b>5</b>	<b>33</b>
		<b>Proposed Audit Course</b>				
s7	IC3220	Instrumentation Project Engineering	3			
s7	IC3222	Batch Process Control	3			

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**Final Year B.Tech - Instrumentation and Control Engineering Struct**

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1-OE1	MD4201	Engineering and Managerial Economics	2	0	0	2
S1-OE1	MD4202	Project Management				
S1-OE1	IT4219	From Campus to Corporate				
S1-OE1	MD4203	Business Proposal Writing				
S1-OE1	MD4251	Linkedin Learning				
S2-OE2	IC4201	Industrial Electronics	2	0	0	2
S2-OE2	CS4217	Human Computer Interaction				
S2-OE2	CS4272	Neural Networks				
S2-OE2	ET4230	Natural Language Processing				
S2-OE2	IT4216	Data Management, Protection and Governance				
S3-OE3	IC4242	Deep Learning (Proposed NPTEL course)	1	0	0	2
S4	IC4243	Major Project	0	18	0	18
		<b>Total</b>	<b>5</b>	<b>18</b>	<b>0</b>	<b>24</b>
<b>Sem-2</b>						
S4	IC4244	Major Project	0	20	0	20

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**Final Year B.Tech - Instrumentation and Control Engineering Struct**

Course Type	Course Code	Course Name	Teaching Learning Scheme (Hrs./Week)			
			Th	Lab	Tut	Total
S1	IC4211	Industry Internship		30		30
S1	IC4224	Global Internship				
S1	IC4226	Research Internship				
S1	IC4240	Project Internship				
		<b>Total</b>		<b>30</b>		<b>30</b>

*Note : 1. Students can opt for any module in any semester.  
register for new courses of module-7 as module-8 courses instead of Internship module-8*

## (Instrumentation and Control) Programme

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### tern B-23, Module-3 with effect from Semester-1 of Academic Year 2023-24 (SY Common)

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab	CP	MSE-MCQ	MSE Review	Seminar / GD / HA			ESE			ESE Review
	10	20	30	30	20			30			70
					Seminar	GD	HA	Written	MCQ	Practical	
4	10	20			20			30			
4	10	20				20			30		
4	10	20								50	
4	10	20			20			30			
2								100			
1											
4				30							70
23	40	80		30	40	20	0	160	30	50	70

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### tern B-23, Module-4 with effect from Semester-1 of Academic Year 2023-24 (Department module)

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab	CP	MSE-MCQ	MSE Review	Seminar / GD / HA			ESE			ESE Review
	10	20	30	30	20			30			70
					Seminar	GD	HA	Written	MCQ	Practical	
4	10	20								50	
4	10	20				20			30		
4	10	20			20			30			
4	10	20				20		30			
2								100			
1											
4				30							70
23	40	80	0	30	20	40	0	160	30	50	70

**Assessment Scheme for Pattern C-23, Module-5 with effect from Semester-1 of Academic Year 2023-24**

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab 10	CP 20	MSE-MCQ 30	MSE Review 30	Seminar / GD / HA 20			ESE 30			ESE Review 70
					Seminar	GD	HA	Written	MCQ	Practical	
4	10	20				20			30		
4	10	20			20			30			
4	10	20			20			30			
4	10	20					20		30		
1											
6				30							70
23	40	80		30	40	20	20	60	60		70

**Assessment Scheme for Pattern C-23, Module-6 with effect from Semester-2 of Academic Year 2023-24**

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab 10	CP 20	MSE-MCQ 30	MSE Review 30	Seminar / GD / HA 20			ESE 30			ESE Review 70
					Seminar	GD	HA	Written	MCQ	Practical	
4	10	20								50	
4	10	20				20			30		
4	10	20				20		30			
4	10	20			20			30			
1											
6				30							70
23	40	80		30	20	40	0	60	30	50	70

0							30		40		
0							30		40		

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**Structure for Pattern D-23, Module-7 with effect from Semester-1 of Academic Year 2023-24**

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab	CP	MSE-MCQ	MSE Review	Seminar / GD / HA			ESE			ESE Review
					Seminar	GD	HA	Written	MCQ	Practical	
2			30				10		30		
2			30				10		30		
3			30				10		30		
9				30							70
16			90	30			30		90		70

10				30							70
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**Structure for Pattern D-23, Module-8 with effect from Semester-2 of Academic Year 2023-24**

Credits	Assessment Scheme (100 mark scale)										
	In Semester Assessment							End Semester Assessment			
	Lab	CP	MSE-MCQ	MSE Review	Seminar / GD / HA			ESE			ESE Review
					Seminar	GD	HA	Written	MCQ	Practical	
15				30							70
15				30							70







	Total
CVV 20	100
20	100
20	100
20	100
20	100
	100
	Graded
	100
80	600

	Total
CVV 20	100
20	100
20	100
20	100
20	100
	100
	Graded
	100
80	600

	Total
CVV 20	100
20	100
20	100
20	100
20	100
	Graded
	100
80	500

	Total
CVV 20	100
20	100
20	100
20	100
20	100
	Graded
	100
80	500
30	100
30	100

	Total
CVV	100
30	100
30	100
30	100
	100
90	400
	100

	Total
CVV	100
	100
	100

2. *Students can*