

**Course structure, M. Sc. (Applied Physics)**  
**C.V. Raman College of Engineering - 2016 Admission Batch**

1 <sup>st</sup> Year: First semester (Theory)				Second semester (Theory)				
Code	Subject	Contact Hours	Credit (L-T-P)	Code	Subject	Contact Hours	Credit (L-T-P)	
PH51101	Classical Mechanics	50	4 (3-1-0)	PH51106	Condensed Matter Physics	50	4 (3-1-0)	
PH51102	Mathematical Physics	50	4 (3-1-0)	PH51107	Quantum Mechanics -II	50	4 (3-1-0)	
PH51103	Classical Electrodynamics	50	4 (3-1-0)	PH51108	Statistical Mechanics	50	4 (3-1-0)	
PH51104	Quantum Mechanics -I	50	4 (3-1-0)	PH51109	Numerical methods and Computational Techniques	40	3 (2-1-0)	
		<b>Total Theory</b>	<b>16</b>			<b>Totaltheory</b>	<b>15</b>	
Practical /Sessional				Practical /Sessional				
PH51205	Electromagnetism and Optics Lab		6 (0-0-6)	PH51210	Numerical methods and Computational Techniques Lab		3 (0-0-3)	
				PH51211	General Physics		6 (0-0-6)	
		<b>Total</b>	<b>22</b>		<b>Total</b>		<b>24</b>	
2 <sup>nd</sup> Year: Third semester (Theory)				Fourth semester (Theory)				
Code	Subject	Contact Hours	Credit (L-T-P)	Code	Subject	Contact Hours	Credit (L-T-P)	
PH61112	Advanced Quantum Mechanics and Field Theory	50	4 (3-1-0)	PH61123	Instrumental Techniques for Materials Characterization	50	4 (3-1-0)	
PH61113	Basic and Digital Electronics	50	4 (3-1-0)	PH61124	Nuclear and Particle Physics	50	4 (3-1-0)	
PH61114	Atomic & Molecular Physics	50	4 (3-1-0)	PH62125	<b>Elective Theory Subjects</b> 1. Fiber Optics and Optoelectronics -II 2. Materials Science and Technology -II 3. Plasma Physics-II	50	4 (3-1-0)	
PH62115	<b>Elective Theory Subjects</b> 1. Fiber Optics and Optoelectronics -I 2. Materials Science and Technology -I 3. Plasma Physics-I	50	4 (3-1-0)	PH62126				
PH62116								
PH62117								
PH63318	Seminar	24	2 (0-0-2)	PH63428	Project	60	6 (0-0-6)	
		<b>Total Theory</b>	<b>18</b>			<b>Totaltheory</b>	<b>18</b>	
Practical /Sessional				Practical /Sessional				
PH61219	Basic and Digital Electronics Lab		6 (0-0-6)	PH61229	Modern Physics Lab	50	6 (0-0-6)	
PH62220	<b>Elective Lab Subjects</b> 1. Fiber Optics and Optoelectronics -I 2. Materials Science and Technology -I 3. Plasma Physics-I		6 (0-0-6)	PH62230	<b>Elective Lab Subjects</b> 1. Fiber Optics and Optoelectronics -II 2. Materials Science and Technology -II 3. Plasma Physics-II	50	6 (0-0-6)	
PH62221				PH62231				
PH62222				PH62232				
	<b>Total</b>		<b>30</b>		<b>Total</b>		<b>30</b>	
<b>GRAND TOTAL : 106</b>								

**Course Structure for 2yr M.Sc. in Applied Mathematics & Computing**  
**C.V. Raman College of Engineering - 2016 Admission Batch**

1 <sup>st</sup> Semester				2 <sup>nd</sup> Semester			
Theory		Contact Hours		Theory		Contact Hours	
Code	Subject	L-T-P	Credit	Code	Subject	L-T-P	Credit
MA51101	Real Analysis	4-0-0	4	MA51109	Topology	4-0-0	4
MA51102	Probability And Stochastic Processes	4-0-0	4	MA51110	Numerical Analysis	3-0-0	3
MA51103	Discrete Mathematics	4-0-0	4	MA51111	Advanced Calculus	4-0-0	4
MA51104	Complex Analysis	3-0-0	3	MA51112	Linear Algebra	3-0-0	3
MA51105	Data Base Management Systems	3-0-0	3	MA51113	Applied Statistics	3-0-0	3
MA51106	C++ and Data Structure	3-0-0	3	MA51114	Design & Analysis of Algorithm	4-0-0	4
		<b>Total</b>	<b>21</b>			<b>Total</b>	<b>21</b>
Practical/Sessional				Practical/Sessional			
Code	Subject	L-T-P	Credit	Code	Subject	L-T-P	Credit
MA51007	C++ and Data Structure Laboratory	0-0-2	2	MA51215	Design & analysis of Algorithm laboratory	0-0-2	2
MA51208	Data Base Management Systems Laboratory	0-0-2	2	MA51216	Numerical and Statistical Methods laboratory	0-0-2	2
		<b>Total</b>	<b>4</b>			<b>Total</b>	<b>4</b>
		<b>Total</b>	<b>21+4=25</b>			<b>Total</b>	<b>21+4=25</b>
3 <sup>rd</sup> Semester				4 <sup>th</sup> Semester			
Theory		Contact Hours		Theory		Contact Hours	
Code	Subject	L-T-P	Credit	Code	Subject	L-T-P	Credit
MA61117	Abstract Algebra	4-0-0	4	MA61124	Machine Learning	4-0-0	4
MA61118	Functional Analysis	4-0-0	4	MA61125	Numerical Solution of Differential Equations	4-0-0	4
MA61119	Differential Equations	4-0-0	4	MA621YY	Elective II	4-0-0	4
MA61120	Numerical Optimization	3-0-0	3				
MA61121	Data Communication and Networking	3-0-0	3				
MA621XX	Elective - I	3-0-0	3				
		<b>Total</b>	<b>21</b>			<b>Total</b>	<b>12</b>
Practical/Sessional				Practical/Sessional			
Code	Subject	L-T-P	Credit	Code	Subject	L-T-P	Credit
MA61222	Optimization Laboratory	0-0-2	2	MA63526	Comprehensive Viva Voce		4
MA63423	DISSERTATION /THESIS (WITH SEMINER) - 01	0-0-2	2	MA63427	DISSERTATION /THESIS - 02		07
				MA63328	Seminar (Based on Dissertation)	0-0-2	02
		<b>Total</b>	<b>4</b>			<b>Total</b>	<b>13</b>
		<b>Total</b>	<b>21+4=25</b>			<b>Total</b>	<b>12+13=25</b>
					<b>GRAND TOTAL</b>		<b>100</b>