

**Pandit Deendayal Energy University  
School of Energy Technology**

**Semester - I**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
1	University Physics – I	BSP101	Core	3	3-0-0
2	University Physics – I Lab	BSP101P	Core	1	0-0-2
3	Chemistry – I	16BSC101	Core	3	3-0-0
4	Chemistry – I Lab	16BSC101P	Core	1	0-0-2
5	Calculus and Analytical Geometry –I (For A Group)	BSM101	Core	3	3-0-0
6	General Mathematics (For B Group)	BSM102	Core		
7	Foreign Language	A111	Core	3	3-0-0
8	English Communication	A101	Core	2	3-0-0
				1	
				2	
<b>Elective Subject (Any Two)</b>					
8	Computer Science	A104	Elective	3	3-0-0
9	Linear Algebra	BSM101E	Elective	3	3-0-0
10	Leadership	A106	Elective	3	3-0-0
11	Understanding Theatrical Arts	A107	Elective	3	3-0-0

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**Semester - II**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
1	University Physics – II	16BSP201	Core	3	3-0-0
2	University Physics – II Lab	16BSP201P	Core	1	0-0-2
3	Chemistry - II	16BSC201	Core	3	3-0-0
4	Chemistry Lab-II	16BSC201P	Core	1	0-0-2
5	Calculus and Analytical Geometry –II For A Group	16BSM201T	Core	3	3-0-0
	General Mathematics For B Group	16BSM202T	Core		
6	Elements of Environment Studies	16BSP203	Core	3	3-0-0
7	Foreign Language II	16A219-221	Core	3	3-0-0
<b>Elective Subject (Any One)</b>					
8	Mechanics	16BSP202E	Elective	3	3-0-0
9	Introduction to Bio Chemistry	16BSC203E	Elective	3	3-0-0
10	Theory of equations	16BSM203E	Elective	3	3-0-0
<b>Elective Subject (Any One)</b>					
11	Fundamental of Programming and data structure	16A215	Elective	3	3-0-1
12	Musical styles	16A209	Elective	3	3-0-0
13	Overview of Indian art	16A217	Elective	3	3-0-0

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**Pandit Deendayal Energy University  
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**Semester - III (Verified and Updated July 7 2022)**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
<b>Compulsory Subjects</b>					
<b>Chemistry Major</b>					
1	Ordinary Differential Equations (For Gr A) / Basic Mathematics-III (For Gr B)		Core	4	4-0-0
6	Thermodynamics	17BSC301	Core	4	4-0-0
7	Chemistry - III	17BSC302	Core	4	4-0-0
	Chemistry - III Lab	17BSC302P	Core	1	0-0-2
8	Physics Subsidiary -Introduction to Modern Physics	17BSP304T	Core	4	4-0-0
<b>Elective Subject (Any Two) common for Physics, Chemistry &amp; Maths</b>					
1	<b>Any one from following group</b>				
	Physics Elective-I (Introduction to Geo-Informatics)	17BSP305T	Elective	3	3-0-0
	Physics Elective-II (Introduction to Astrophysics)	22BSP201T	Elective	3	3-0-0
	Chemistry Elective-I (Introduction to bio organic chemistry and chemical biology)	17BSC305	Elective	3	3-0-0
	Maths Elective-I (Number Theory)	BSMXXX	Elective	3	3-0-0
2	<b>Any one from Following group</b>				
	Films and Society	20A330	Elective	3	3-0-0
	Workplace Communication	17A309	Elective	3	3-0-0
	Environmental Psychology	20A329	Elective	3	3-0-0
	Atmospheric Sciences	17A311	Elective	3	3-0-0
	Indian Government and Politics	17A312	Elective	3	3-0-0
	Basics of Accounting	17A317	Elective	3	3-0-0
	Introduction to Human Resource Management	17A318	Elective	3	3-0-0
	Introduction to Law and Governance	17A320	Elective	3	3-0-0

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**Pandit Deendayal Energy University  
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**Semester - IV**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
<b>Compulsory Subjects</b>					
<b>Chemistry Major</b>					
1	Analytical Chemistry - I	17BSC401	Core	4	4-0-0
2	Polymers	17BSC402	Core	4	4-0-0

3	Materials Chemistry	17BSC403	Core	4	4-0-0
4	Analytical Chemistry Lab - I	17BSC401P	Core	1	0-0-2
5	Physics (Subsidiary)	17BSP404	Core	4	4-0-0
	<b>Elective Subject (Any Two) common for Physics, Chemistry &amp; Maths</b>				
	<b>Any one from following group</b>				
1	Physics Elective-2	17BSP405E	Elective	3	3-0-0
2	Chemistry Elective-2 (Environmental Chemistry)	17BSC405E	Elective	3	3-0-0
3	Applications of Advanced Calculus	17BSM405E	Elective	3	3-0-0
	<b>Any one from Following group</b>				
1	Statistics	A408	Elective	3	3-0-0
2	Rural Development in India	A409	Elective	3	3-0-0
3	Cognitive Psychology	A410	Elective	3	3-0-0
4	Educational Psychology	A411	Elective	3	3-0-0
5	Soft Skills	A412	Elective	3	3-0-0
6	Advanced Atmospheric Science	A414	Elective	3	3-0-0
7	Principles of Financial Management	A420	Elective	3	3-0-0

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**Pandit Deendayal Energy University  
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**Semester - V**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
<b>Chemistry Major</b>					
7	Chemical Kinetics and Catalysis	18BSC501	Core	4	4-0-0
8	Liquid State and Ionic Equilibria	18BSC502	Core	4	4-0-0
9	Oxygen containing functional groups	18BSC503	Core	4	4-0-0
10	Coordination Chemistry	18BSC504	Core	4	4-0-0
11	Inorganic Chemistry Lab-1	18BSC501P	Core	1	0-0-2
12	Organic Chemistry Lab-1	18BSC502P	Core	1	0-0-2
13	<b>Elective (any one)</b>				
	Green Chemistry	18BSC505	Elective	3	3-0-0
	Fundamentals of Biotechnology	18BSC506	Elective	3	3-0-0
	Open Elective (from Basket, under discussion)		Elective	3	3-0-1

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**Pandit Deendayal Energy University  
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**Semester - VI**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
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Chemistry Major					
1	Spectroscopy & Photochemistry	18BSC601	Core	4	4-0-0
2	Heterocyclic & Stereochemistry	18BSC602	Core	4	4-0-0
3	Electrochemistry	18BSC603	Core	4	4-0-0
4	Group Chemistry & Organometallic Chemistry	18BSC604	Core	4	4-0-0
5	Physical Chemistry Lab - I	18BSC601P	Core	1	0-0-2
6	Organic Chemistry Lab - II	18BSC602P	Core	1	0-0-2
<b>Elective (any one)</b>					
7	Petroleum Chemistry	18BSC605E	Elective	3	3-0-0
8	Chemistry of Paints and Dyes	18BSC606E	Elective	3	3-0-0
9	Pharmaceutical Chemistry	18BSC607E	Elective	3	3-0-0
10	Chemistry of Cosmetics & Perfumes	18BSC608E	Elective	3	3-0-0

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**Semester - VII**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
<b>Chemistry Major</b>					
7	Nano Chemistry	19BSC701	Core	4	4-0-0
8	Advance Spectroscopy	19BSC702	Core	4	4-0-0
9	Reagents name reactions	19BSC703	Core	4	4-0-0
10	Organic Chemistry Lab-3	19BSC701P	Core	1	0-0-2
11	Inorganic Chemistry Lab -2	19BSC702P	Core	1	0-0-2
12	Seminar	21BSC708	Core	8	X-X-X
<b>Electives (any Two)</b>					
13	Computer Application in Chemistry	19BSC705	Elective	3	3-0-0
14	Heterogeneous Catalysis	19BSC706	Elective	3	3-0-0
15	Supramolecular Chemistry	19BSC707	Elective	3	3-0-0
<b>OR One Elective and one NPTEL</b>					
	NPTEL Subjects (under discussion)		Elective	3	3-0-0

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22+16

**Pandit Deendayal Energy University  
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**Semester - VIII**

**B.Sc CHEMISTRY (Hons.)**

Sr.No.	Paper Title	Course Code	Core/Elective	Credit	L-T-P
<b>Chemistry Major</b>					
1	Natural Products	19BSC801	Core	4	4-0-0
2	Analytical Methods and Equipments	19BSC802	Core	4	4-0-0
3	Project	21BSC803	Core	7	X-X-X
4	Dissertation	21BSC804	Core	8	X-X-X
5	Quantum and Computational Chemistry	21BSC805	Core	4	3-1-0

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**Pandit Deendayal Energy University**  
**School of Energy Technology**  
**B.Sc CHEMISTRY (Hons.)**

	<b>Toatl Credit</b>	<b>Grand Total</b>
Semester 1	23	189
Semester 2	23	
Semester 3	23	
Semester 4	23	
Semester 5	21	
Semester 6	21	
Semester 7	28	
Semester 8	27	