

## B.Sc. Hons. (Mathematics)

### First Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA101	Core1	Algebra	4	4
2	BS1MA102	Core2	Calculus	4	4
3	BS1HS201	AECC1	English	2	2
4	BS1CI201	SEC1	Computer Programming	3	3
5	BS1CI271	SEC1	Computer Programming Lab	4	2
6		GE1	Any 2 groups to be selected *	3	3
7		GE1		2	1
8		GE2		3	3
9		GE2		2	1
				<b>Total</b>	<b>27</b>

### Second Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA201	Core3	Linear Algebra	4	4
2	BS1MA202	Core4	Ordinary Differential Equations	4	4
3	BS1CH203	AECC2	Environmental Science	2	2
4	BS1CI202	SEC2	Object Oriented programming	3	3
5	BS1CI272	SEC2	Object Oriented programming lab	4	2
6		GE3	Any 2 groups to be selected *	3	3
7		GE3		2	1
8		GE4		3	3
9		GE4		2	1
				<b>Total</b>	<b>27</b>

### Third Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA303	Core5	Real Analysis	4	4
2	BS1MA401	Core6	Partial Differential Equation	4	4
3	BS1MA304	Core7	Group Theory	4	4
4	BS1CI301	SEC3	Data Structures	3	3
5	BS1CI371	SEC3	Data Structures lab	2	1
6		GE5	Any 2 groups to be selected *	3	3
7		GE5		2	1
8		GE6		3	3
9		GE6		2	1
			<b>Total</b>	<b>27</b>	<b>24</b>

### Fourth Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA301	Core8	Advanced Calculus	4	4
2	BS1MA402	Core9	Vector and Tensor Analysis	4	4
3	BS1MA403	Core10	Numerical Analysis	4	4
4	BS1MA404	Core11	Analytical geometry	4	4
5		GE7	Any 2 groups to be selected *	3	3
6		GE7		2	1
7		GE8		3	3
8		GE8		2	1
9	BS1HS401	Audit	Language lab	2	0
			<b>Total</b>	<b>28</b>	<b>24</b>

### Fifth Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA501	Core12	Analysis	4	4
2	BS1MA502	Core13	Abstract Algebra	4	4
3	BS1MAXXX	Core14	Probability Theory and Statistics	4	4
4	BS1MA471	Core 15	MATLAB Programming	4	2
5	BS2MA5XX	DSE1	Elective	4	4
6	BS2MA5XX	DSE2	Elective	4	4
7	BS2MA5XX	DSE3	Elective	4	4
			<b>Total</b>	<b>28</b>	<b>26</b>

### Sixth Semester

SN	Course Code	Course	Course Title	Contact hours	Credits
1	BS1MA6XX	Core16	Complex Analysis	4	4
2	BS1MA602	Core17	Operations Research	4	4
3	BS1MA604	Core18	Mechanics	4	4
4	BS2MA6XX	DSE4	Elective	4	4
5	BS2MA6XX	DSE5	Elective	4	4
6	BS2MA6XX	DSE6	Elective	4	4
7	BS2MA6XX	Core	Project	6	6
			<b>Total</b>	<b>30</b>	<b>30</b>

\* Generic Elective Groups ( Any 2 groups to be selected, groups selected in Sem I can not be changed)

	Group A	Group B	Group C
I sem	1. BS1PH101 Mechanics and Relativity 2. BS1PH171 Physics Lab I	1. Inorganic Chemistry 2. Inorganic Chemistry Lab	1. BS1CI101 Fundamentals of IT 2. BS1CI172 IT Lab
II sem	3. BS1PH201 Electricity & Magnetism 4. BS1PH271 Physics Lab II	3. Physical Chemistry 4. Physical Chemistry Lab	3. BS1CI203 Discrete Mathematics 4. BS1CI274 Multimedia Development Lab
III sem	5. BS1PH402 Quantum Mechanics 6. BS1PH371 Physics Lab III	5. Organic Chemistry 6. Organic Chemistry Lab	5. BS1CI302 Database Systems 6. BS1CI372 Database Systems Lab
IV sem	7. BS1PH403 Waves & Optics 8. BS1PH471 Physics Lab IV	7. Industrial Organic Synthesis 8. Industrial Organic Synthesis Lab	7. BS1CI401 Fundamental of Algorithms 8. BS1CI471 Algorithms Lab

AECC : Ability Enhancement Compulsory Course

Core : Core Course

DSE : Discipline Specific Elective Course

GE : Generic Elective Course

SEC : Skill Enhancement Course