

Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Fundamental of Chemistry -I		
Course Code	BSCH0101[T]		
	CO1- To remember basic knowle Remember) CO2- To understand Properties CO3- To Apply the compounds i CO4- To Analyse the Structure a CO5- To Evaluate the results an	of Inorganic Compo n the application (B and Properties of In	ounds(BL2-Understand) L3-Apply) organic Compounds(BL4-Analyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	1	1	-	-	-	-	-	-	-	-	-	3	2	2
CO2	3	3	1	-	-	-	-	-	-	-	-	-	3	2	1
CO3	3	3	1	-	-	-	-	-	-	-	-	-	2	2	1
CO4	3	3	1	-	-	-	-	-	-	-	-	-	1	2	2
CO5	3	2	1	-	-	-	-	-	-	-	-	-	1	1	2
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Calculus and Differential Equation	alculus and Differential Equations											
Course Code	BSMA0101[T]												
Course Outcomes & Bloom's Level	CO1- To get insight of fundamental differential equation.(BL1-Remental CO2- To understand various technical (BL2-Understand) CO3- To apply notation of derivative extreme values, concavity, convex applied sciences.(BL3-Apply) CO4- To analyze behavior of curvequation.(BL4-Analyze) CO5- To evaluate Area, Quadratucurves.(BL5-Evaluate)	nber) niques to solve rea ve in identifying inc kity and also higher e through tracing a	I life problems through examples. creasing/ decreasing function, r order derivatives which arise in all and solution of ordinary differential										
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X												

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	2	2	-	1	-	-	-	-	1	-	1
CO2	3	3	1	3	3	2	-	1	-	1	-	-	2	-	2
CO3	3	2	-	1	3	-	-	-	-	-	-	-	1	3	2
CO4	3	2	-	2	-	-	-	-	-	-	-	-	-	3	1
CO5	2	2	-	1	-	-	-	-	-	-	-	-	-	2	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Mechanics	echanics											
Course Code	BSPH0101[T]												
	CO3- To enable students to appl systems(BL3-Apply) CO4- To analyze the applications systems.(BL4-Analyze)	2- Understand the basic concepts of Newtonian Mechanics, (BL2-Understand) 3- To enable students to apply the Laws of mechanics to various mechanical tems(BL3-Apply) 4- To analyze the applications of Laws of mechanics to various mechanical tems. (BL4-Analyze) 5- To evaluate the laws of mechanics and its application to various mechanical tems. (BL5-Evaluate)											
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)										

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	P08	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	3	3	2	-	1	1	-	-	-	-	-
CO2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	_	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Properties of Matter	operties of Matter											
Course Code	BSPH0102[T]												
	CO2- Understand the basic cond CO3- To enable students to apply CO4- To analyze the applications	- To remember the basic laws of Properties of Matter. (BL1-Remember) - Understand the basic concepts of Properties of Matter (BL2-Understand) - To enable students to apply the Laws of Properties of Matter (BL3-Apply) - To analyze the applications of Laws of Properties of Matter(BL4-Analyze) - To evaluate the laws of Properties of Matter and its application to various hanical systems.(BL5-Evaluate)											
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)										

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	3	3	2	-	1	1	-	-	-	-	-
CO2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	India in 21st centuary	dia in 21st centuary											
Course Code	VAC0101[T]	C0101[T]											
Course Outcomes & Bloom's Level	Freedom movement and de CO2- 2. Students are able after Independence India.(I CO3- 3. Students are able change with reference to m CO4- 4. Students are able	ill Dovolopment /											
Course Elements	Skill Development ✓ Entrepreneurship X Employability X Professional Ethics X Gender ✓ Human Values ✓ Environment X	SDG (Goals)	SDG3(Good health and well-being) SDG4(Quality education) SDG5(Gender equality) SDG10(Reduced inequalities) SDG12(Responsible consuption and production) SDG13(Climate action)										

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
CO2	-	-	-	-	-	1	-	-	2	-	-	-	1	1	1
CO3	-	-	-	-	-	2	2	-	-	-	-	-	2	1	1
CO4	-	-	-	-	-	1	-	-	-	-	-	-	2	1	2
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Hindi[T]	
Course Code	AEC0101	
Course Outcomes & Bloom's Level	CO1- भारतीय ज्ञान परम्परा सेवि द्यार्थि यर्थि ों को अवगत करान् CO2- सांस्कृतिक ,एवं राष्ट्रिय एकता।।(BL3-Apply) CO3- भाषा अध्ययन एवं अध्यापन का उद्देश्य विद्यार्थियों के सर्वां जीविकोपार्जन के लक्ष्यों का सहज संधान कर सके। जीविकोपार्ज (BL2-Understand) CO4- पाठ्यक्रम में व्याकरण ,सामान्य तथा पारम्परिक साहित्य , समग्र व्यक्तित्व का विकास करना है। (BL3-Apply)	े गीण विकास में सहायक है। छात्र न के लक्ष्यों का सहज संधान कर सके ।
Course Elements	Skill Development ✓ Entrepreneurship X Employability X Professional Ethics X Gender X Human Values ✓ Environment X	SDG (Goals)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	-	-	2	-	-	-	-	2	-	-	-	-	-	-
CO2	-	2	-	-	-	2	-	1	-	-	-	-	-	-	-
CO3	2	-	-	1	-	-	-	-	-	2	-	-	-	-	-
CO4	2	-	-	-	-	2	-	-	1	-	-	-	-	-	-
CO5	1	-	-	-	1	-	-	2	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	NCC	CC											
Course Code	NCC0101												
	CO1- Develop the qualities CO2- Imbibe leadership qu CO3- Be motivated to serve CO4- Contribute in environ CO5- Keep abreast of curre CO6- Effectively contribute	alities. () e the nation by jo mental awarenes ent affairs & geno	pining Armed forces. () ss and conservation activities() eral awareness.()										
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values ✓ Environment ✓	SDG (Goals)	SDG3(Good health and well-being) SDG4(Quality education) SDG6(Clean water and sanitation) SDG13(Climate action) SDG15(Life on land)										

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Analytical Chemistry	alytical Chemistry											
Course Code	BSCH0201[T]												
Course Outcomes & Bloom's Level	Understand) CO3- To use/apply the basic stati correct result and analytical meth CO4- To Analyse Qualitative and	nember) 2- To understand the difference between the analytical techniques(BL2-											
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)										

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	1	1	-	-	-	-	-	-	-	-	-	3	3	2
CO2	3	3	1	-	-	-	-	-	-	-	-	-	3	2	1
CO3	3	1	-	2	-	-	-	-	-	-	-	-	1	1	2
CO4	2	3	-	-	-	-	-	-	-	-	-	-	1	1	2
CO5	2	2	-	-	-	-	-	-	-	-	-	-	2	2	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Abstract Algebra		
Course Code	BSMA0201[T]		
Course Outcomes & Bloom's Level	CO1- CO1: To remember the basic Subgroups, Cyclic Groups, Homor Automorphisms, Ring and Field.(ECO2- CO2: To understand the function Fields and integral domains.(BL2-CO3- CO3: To apply the knowledge the fields of learning including high CO4- CO4: To analyze and solve the different groups, rings, and fiel CO5- CO5: To evaluate the studie the results of the different theorem	morphism and Ison BL1-Remember) damental concept a Understand) July of groups, rings, her research and e the well-defined product (BL4-Analyze) d problems from a	norphism of groups, and properties of Groups, Rings, fields and integral domains in all xtensions.(BL3-Apply) oblems in mathematics related to
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	3	-	-	-	-	1	-	-	-	-	-	-
CO2	1	-	-	2	-	-	-	-	1	-	-	-	-	-	-
CO3	-	2	-	-	1	-	-	-	-	2	-	-	-	-	-
CO4	2	-	1	-	-	-	-	2	-	-	-	-	_	-	-
CO5	1	-	-	2	-	-	-	2	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Thermodynamics and Kinetic Th	neory of Gases											
Course Code	BSPH0201[T]	PH0201[T]											
Course Outcomes & Bloom's Level	CO1- To remember the basic law Gases(BL1-Remember) CO2- Understand the basic cond Gases(BL2-Understand) CO3- To apply the concepts of T different system(BL3-Apply) CO4- To Analyze the laws of The Analyze) CO5- To evaluate the laws of the Evaluate)	cepts of Thermodyn hermodynamics an ermodynamics and	amics and Kinetic theory of d Kinetic theory of Gases to Kinetic theory of Gases (BL4-										
Course Elements	Skill Development X Entrepreneurship ✓ Employability X Professional Ethics X Gender X Human Values X Environment X												

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	2	2	1	-	-	-	-	-	-	-	-
CO2	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	1	3	-	2	2	-	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Statistical physics												
Course Code	BSPH0202[T]												
Course Outcomes & Bloom's Level	CO2- Understand the basic con CO3- To apply the concepts of S CO4- To Analyze the laws of Sta	To remember the basic laws of Statistical Physics(BL1-Remember) Understand the basic concepts of Statistical Physics(BL2-Understand) To apply the concepts of Statistical Physics to different system.(BL3-Apply) To Analyze the laws of Statistical Physics(BL4-Analyze) To evaluate the laws of Statistical Physics(BL5-Evaluate)											
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)										

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	2	2	1	-	-	-	-	-	-	-	-
CO2	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-
CO3	1	3	-	2	2	-	-	-	-	-	-	-	-	-	-
CO4	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	1	-	-	3	-	2	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	_	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	SEC-2		
Course Code	SEC0201		
Course Outcomes & Bloom's Level	a sense of modern Indian his understanding of making of I understanding of salient feat	story and culture ndia as a natior ures of modern	rould be intellectually well equipped to have e . 2. The students will have an a . 3.The students will have an India . 4.It will help students to developing a good and concerned Indian citizen
Course Elements	Skill Development X Entrepreneurship X Employability X Professional Ethics X Gender X Human Values ✓ Environment X	SDG (Goals)	SDG4(Quality education) SDG5(Gender equality) SDG11(Sustainable cities and economies) SDG15(Life on land)

COs	PO1	PO2	PO3	PO4	PO5	P06	PO7	P08	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	•	-	-	•	•	•	-	-	-	-	•		-	-
CO2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO3	-	•	-	-	•	•	•	-	-	-	-	-	-	-	-
CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Environmental Studies		
Course Code	BSFC0201[T]		
	understand how the earth of Remember) CO2- At the end of the coulonalyze environmental pro (BL2-Understand) CO3- Ability to distinguish Apply)	works and how irse, it is expect blems as well a between variou lls for to comm	nt the scientific background needed to we, as human beings, fit into that. (BL1- eted that students will be able to identify and as the risks associated with these problems. The scientific background needed to identify and item to identify
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment ✓	SDG (Goals)	SDG3(Good health and well-being) SDG5(Gender equality) SDG6(Clean water and sanitation) SDG7(Affordable and clean energy) SDG9(Industry Innovation and Infrastructure) SDG11(Sustainable cities and economies) SDG12(Responsible consuption and production) SDG13(Climate action) SDG14(Life below water) SDG15(Life on land)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO3	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-
CO4	1	-	-	-	-	-	-	-	-	-	-	-	-	2	3
CO5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	English-I		
Course Code	AEC0201[T]		
& Bloom's Level	CO1- Determine interpersonal signary (BL1-Remember) CO2- Elaborate creativity and late CO3- Examine attitudes, emotion behavior (BL3-Apply) CO4- Justify approaches to conficos- Evaluate goal setting, mar	teral thinking(BL2-l nal intelligence and lict resolution.(BL4	Understand) I understand its influence on -Analyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values ✓ Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	P08	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	2	2	-	-	-	2	-	-	1	-	1
CO2	2	2	1	2	2	2	-	-	-	2	-	_	1	-	3
CO3	2	1	1	-	1	-	-	-	-	2	-	-	3	2	3
CO4	3	2	-	2	1	-	-	-	-	2	-	-	2	3	3
CO5	3	2	-	2	1	-	-	-	-	2	-	-	2	2	3
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	NCC (optional)		
Course Code	NCC0201[T]		
	CO1- Develop the qualities CO2- Imbibe leadership qu CO3- Be motivated to serve CO4- Contribute in environ CO5- Keep abreast of curre CO6- Effectively contribute	alities. () e the nation by jo mental awarenes ent affairs & geno	pining Armed forces. () ss and conservation activities() eral awareness.()
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values ✓ Environment ✓	SDG (Goals)	SDG3(Good health and well-being) SDG4(Quality education) SDG6(Clean water and sanitation) SDG13(Climate action) SDG15(Life on land)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	_	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Inorganic Chemistry		
Course Code	BSCH0301[T]		
Course Outcomes & Bloom's Level	reduction, Complexes , Lanthanid CO2- To understand Properties and compounds, Acids and Bases , No	es, Actinides(BL1- nd uses of Transition on aqueous solven nents, Complexes, onding ,Magnetic P	on elements, Coordination ts Lanthanides, Actinides (BL2-Lanthanides, Actinides in the Properties of Transition elements,
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	P08	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	1	1	-	-	-	-	-	-	-	-	-	2	2	1
CO2	3	3	1	-	-	-	-	-	-	-	-	-	3	2	2
CO3	3	3	1	-	-	-	-	-	-	-	-	-	2	2	1
CO4	2	3	1	-	-	-	-	-	-	-	-	-	1	2	2
CO5	3	2	-	-	-	-	-	-	-	-	-	-	1	1	2
CO6	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Vector Analysis & Linear Algebra		
Course Code	BSMA0301[T]		
	CO1- CO1: To get insight of funda transformations.and basic concept CO2- CO2: To understand various examples.(BL2-Understand) CO3- CO3: To apply the concepts Gauss theorem, stock theorem, con many branches of Physics, Engapply) CO4- CO4To analyze the concept and other concept of vector analyse CO5- CO5: To evaluate gradient, sector of matrix (BL5-Evaluate)	(BL1-Remember) The real life problems through The real life pr	
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	2	2	-	1	-	-	-	-	-	-	-
CO2	3	3	1	3	3	2	-	-	-	-	-	-	-	-	-
CO3	3	2	-	1	3	-	-	-	-	-	-	-	-	-	-
CO4	3	2	-	2	-	-	-	-	-	-	-	-	-	-	-
CO5	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-
CO6	_	_	-	_	_	_	_	_	-	-	-	_	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Optics		
Course Code	BSPH0301[T]		
Course Outcomes & Bloom's Level	CO1- To remember the basic la CO2- Understand the basic con CO3- To apply the concepts of CO4- To Analyze the laws of OCO5- To evaluate the laws of O	cepts of Optics(BL2 Optics to different sy otics(BL4-Analyze)	2-Understand) ystem. (BL3-Apply)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	2	1	-	-	-	-	-	-	-	-	-	-
CO2	2	1	3	2	-	-	-	-	-	-	-	-	-	-	-
CO3	2	1	3	2	2	-	-	-	-	-	-	-	-	-	-
CO4	1	2	3	2	2	-	-	-	-	-	-	-	-	-	-
CO5	2	1	3	2	2	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	_	-	-	-	-	-	-	_	-	_



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Oscillations of Waves		
Course Code	BSPH0302[T]		
Course Outcomes & Bloom's Level	CO1- To remember the basic la CO2- Understand the basic con CO3- To apply the concepts of CO4- To Analyze the laws of WaCO5- To evaluate the laws of W	cepts of Wave and Wave and Oscillations ave and Oscillations	Oscillations(BL2-Understand) ons to different system. (BL3-Apply) o(BL4-Analyze)
Course Elements	Skill Development X Entrepreneurship X Employability Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	1	2	3	2	-	-	-	-	-	-	-	-	-	_
CO2	3	3	2	1	1	-	-	-	-	-	-	-	-	-	-
CO3	3	2	1	2	2	-	-	-	-	-	-	-	-	-	-
CO4	2	2	3	2	1	-	-	-	-	-	-	-	-	-	-
CO5	1	1	3	1	1	-	-	-	-	-	-	-	-	-	-
CO6	-	_	-	-	-	_	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Organic Chemistry		
Course Code	BSCH0401[T]		
Course Outcomes & Bloom's Level	CO2- To understand the Understand) CO3- To apply the vario CO4- To recognize med	e concept of ad us reagents in hanism of oxid	tion reactions(BL1-Remember) dition and elimination reactions (BL2- the organic synthesis(BL3-Apply) ation reaction.(BL4-Analyze) hemical reactions. (BL5-Evaluate)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education) SDG9(Industry Innovation and Infrastructure)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	3	-	-	-	-	-	-	3	2	3	3	3
CO2	3	2	2	2	-	-	-	-	-	-	2	2	2	2	2
CO3	3	2	2	1	-	-	-	-	-	-	1	2	2	2	1
CO4	3	3	1	1	-	-	-	-	-	-	1	2	1	1	1
CO5	3	2	1	1	-	-	-	-	-	-	1	1	1	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Advance Calculus and Differentia	l equations								
Course Code	BSMA0401[T]									
Course Outcomes & Bloom's Level	CO1- To remember basic concept of Real Analysis ,Partial Differentiationwhich used in various problems of sciences. (BL1-Remember) CO2- To understand and identify the Convergence of sequences various test for convergence of sequences , limit ,continuity and differentiability of function partial differentiation, Envelops , maxima and minima , Double and Triple Integral volume and surface of solids.also(BL2-Understand) CO3- To apply the concept of limit continuity and differentiability partial differentiation Taylors theorem , LaGrange's method , double and triple integrals to solve various problems of physical and allied sciences(BL3-Apply) CO4- To analyze and draw connection among the ideas of LaGrange's theorem and Beta Gama function , volume and surface and there properties to solve various problems of physical and allied sciences also Analyze behavior of the solution of the well-defined problems of differentiation (BL4-Analyze) CO5- To evaluate Double and Triple integral , Partial differentiation , Convergence of series also identifying and provide the various applications related to them also (BL5-Evaluate)									
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)							

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	-	-	-	2	2	-	2	-	-	-	-	1	-	1
CO2	3	3	1	3	3	2	-	1	-	1	-	-	2	-	2
CO3	3	2	-	1	3	-	-	-	-	-	-	-	1	3	2
CO4	3	2	-	2	-	-	-	-	-	-	-	-	-	3	1
CO5	2	1	-	1	-	-	-	-	-	-	-	-	-	2	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Electricity and Magnetism		
Course Code	BSPH0401{T]		
Course Outcomes & Bloom's Level		cepts of Electricity a Electricity and Magr ectricity and Magnet	and Magnetism(BL2-Understand) netism to different system. (BL3- tism(BL4-Analyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	2	2	-	2	-	-	-	-	-	-	-	-
CO2	2	3	2	2	2	-	-	-	-	-	-	-	-	-	-
CO3	2	2	2	3	1	-	1	-	-	-	-	-	-	-	-
CO4	1	1	3	2	3	-	-	-	-	-	-	-	-	-	-
CO5	3	2	1	1	1	-	3	-	-	-	-	-	_	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Electromgnetic Theory		
Course Code	BSPH0404[T]		
Course Outcomes & Bloom's Level	CO1- To remember the basic la CO2- Understand the basic con CO3- To apply the concepts of CO4- To Analyze the laws of EleCO5- To evaluate the laws of EleCO5-	cepts of Electromace Electrodynamics to ectromagnetic theor	gnetic theory(BL2-Understand) different system. (BL3-Apply) ry(BL4-Analyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	1	3	1	1	-	-	-	-	-	-	-	-	-	_
CO2	1	2	2	2	2	-	-	-	-	-	-	-	-	-	_
CO3	2	3	1	2	2	-	-	-	-	-	-	-	-	-	_
CO4	3	2	2	3	1	-	-	-	-	-	-	-	-	-	_
CO5	1	1	1	1	2	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Physical Chemistry	ysical Chemistry										
Course Code	BSCH0501[T]											
	CO1- To remember Knowledge of Photochemistry(BL1-Remember CO2- To understand Mechanism Photochemistry(BL2-Understan CO3- To Apply the concept in the CO4- To Analyze the Physical PoCO5- To Evaluate the results and	r) of Quantum Mech d) e different application ope ties of compou	anics, Spectroscopy, on(BL3-Apply) nds(BL4-Analyze)									
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)									

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	1	1	-	-	-	-	-	-	-	-	-	3	2	2
CO2	3	3	1	-	-	-	-	-	-	-	-	-	2	1	1
CO3	3	3	1	-	-	-	-	-	-	-	-	-	2	2	1
CO4	3	3	1	-	-	-	-	-	-	-	-	-	1	2	2
CO5	3	2	-	-	-	-	-	-	-	-	-	-	1	1	2
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Computer Oriented Statistical Me	ethods	
Course Code	BSMA0501[T]		
Course Outcomes & Bloom's Level	CO1- To remember the data collet (BL1-Remember) CO2- To analyze the relationship a simple correlation. (BL4-Analyze CO3- To apply the concept of san Apply) CO4- TO Understand the concept properties, difference between particular concept co5- To evaluate the correlation tendency(BL5-Evaluate)	between two varial ze) npling distribution o t of sampling distribution	bles using scatter plot and Interpret of a statistic and hypothesis(BL3- oution of a statistic and its tic(BL2-Understand)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	2	2	-	-	-	-	-	-	1	-	1
CO2	3	3	1	3	3	2	-	-	-	1	-	-	2	-	2
CO3	3	2	-	1	3	-	-	-	-	-	-	-	1	3	2
CO4	3	2	-	2	-	-	-	-	-	-	-	-	-	3	1
CO5	2	2	-	1	-	-	-	-	-	-	-	-	_	2	-
CO6	-	-	_	-	-	-	-	_	-	-	-	_	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Atomic and Nuclear Physics		
Course Code	BSPH0501[T]		
Course Outcomes & Bloom's Level	CO2- Understand the basic con	cepts of Atomic and Atomic and Nuclear omic and Nuclear P	
Course Elements	Skill Development ✓ Entrepreneurship X Employability X Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	2	2	-	-	-	-	-	-	-	-	-	-
CO2	2	-	3	2	-	-	-	-	-	-	-	-	-	-	-
CO3	1	3	3	-	-	-	-	-	-	-	-	-	-	-	-
CO4	3	-	2	-	2	-	-	-	-	-	-	-	-	-	-
CO5	1	2	-	3	-	-	-	-	-	-	-	-	_	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Elementry quantum mechanics		
Course Code	BSPH0502[T]		
Course Outcomes & Bloom's Level		concepts of Quantur Quantum Mechanic ulates of Quantum N	m Mechanics(BL2-Understand) s to different system. (BL3-Apply) Mechanics(BL4-Analyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	1	1	-	-	-	-	-	-	-	1	1	2
CO2	2	1	3	1	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	3	1	2	-	-	-	-	-	-	-	1	1	-
CO4	1	3	2	1	1	-	-	-	-	-	-	-	2	1	2
CO5	1	2	3	2	1	-	-	-	-	-	-	-	1	2	3
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Electronics		
Course Code	DSE1[T]		
Course Outcomes & Bloom's Level	co1- To remember the different by waves, oscillation, basic of difference co2- To understand the continuity different amplifier circuit(BL2-Understand). To apply in designing the nest shaping and oscillation. (BL3-App co4- To analysis amplification by its conditions, differential and ope co5- To evaluate the operating procircuits, wave shaping circuit, class	ntial and operation y equation, pn junc lerstand) ew circuit for amplifuly) a circuit, wave sha rational amplifier(Boint of diode and tra	al amplifier(BL1-Remember) tion and operating point and ier using RC, OPAM, wave aping, basic oscillation circuit and BL4-Analyze) ansistor, gain in various amplifier
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	2	1	-	-	-	-	-	-	-	-	-	-
CO2	2	1	3	2	2	-	-	-	-	-	-	-	-	-	-
CO3	2	1	2	1	2	-	-	-	-	-	-	-	-	-	-
CO4	1	2	1	3	1	-	-	-	-	-	-	-	-	-	-
CO5	2	1	3	2	2	-	-	-	-	-	-	-	-	-	-
CO6	-	-	_	_	-	-	-	-	_	-	-	_	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Classical Mechanics		
Course Code	BSPH0601[T]		
Course Outcomes & Bloom's Level	CO1- To remember the various for Hamiltonian and Hamilton-Jacobi CO2- To understand the dynamic energy and momentum(BL2-Und CO3- To enable students to apply CO4- To analyze the applications research and trajectories of celes CO5- To evaluate understanding dynamical systems(BL5-Evaluate	(BL1-Remember) al system; and its r lerstand) r the various dynam of dynamical syste tial bodies(BL4-An of various formulat	relation to dynamical variables like nical systems.(BL3-Apply) em in various fields such as nalyze)
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	1	1	-	-	-	-	-	-	-	1	1	2
CO2	1	2	3	1	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	3	1	2	-	-	-	-	-	-	-	1	2	3
CO4	1	3	2	1	1	-	-	-	-	-	-	-	2	1	2
CO5	1	2	3	2	1	-	-	-	-	-	-	_	-	-	_
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Mathematical Physics	athematical Physics											
Course Code	BSPH0602[T]	PH0602[T]											
	CO1- To remember the various for and Laplace transformation, differ CO2- To understand the theorems Understand) CO3- To apply complex analysis, equation and tensor in Mechanics CO4- To build analysis capacity of Laplace transformation, differential CO5- To evaluate given physical prourier and Laplace transformation.	rential equation and sin linear algebra, Fourier and Laplace and others branch fusing linear algebral equation and tenproblems using line	tensor.(BL1-Remember) complex analysis and tensor(BL2- ee transformation, differential nes of physics.(BL3-Apply) ora, complex analysis, Fourier and sor(BL4-Analyze) ear algebra, complex analysis,										
Course Elements	Skill Development ✓ Entrepreneurship X Employability X Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)										

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	1	-	-	-	-	-	-	-	-	1	1	2
CO2	1	2	3	1	-	-	-	-	-	-	-	-	1	2	1
CO3	1	2	3	1	-	-	-	-	-	-	-	-	1	1	-
CO4	1	3	2	1	-	-	-	-	-	-	-	-	2	1	2
CO5	1	2	3	2	-	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Condence Matter Physics								
Course Code	DSPH0601[P]								
Course Outcomes & Bloom's Level	CO1- To remember different crystal structure, symmetry elements, Bragg's Law, thermal and electronic properties of solid. (BL1-Remember) CO2- To understand the origin of specific heat, energy band gap, formation of semiconductor junction, formation of defects in crystal (BL2-Understand) CO3- To apply knowledge of crystal structure, electronic and thermal properties on a given compound (BL3-Apply) CO4- To analysis difference between specific heat, conductivity in semiconductors and density of states (BL4-Analyze) CO5- To evaluate the different formation crystal by nature, thermal and electrical conductivity, electronic properties of conductors and semiconductors (BL5-Evaluate)								
Course Elements	Skill Development X Entrepreneurship X Employability X Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)						

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	1	1	-	-	-	-	-	-	-	1	1	2
CO2	1	2	3	1	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	3	1	2	-	-	-	-	-	-	-	1	1	3
CO4	1	3	2	1	1	-	-	-	-	-	-	-	2	1	2
CO5	1	2	3	2	1	-	-	-	-	-	_	-	1	2	3
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Condence Matter Physics	Condence Matter Physics							
Course Code	DSPH0601[T]								
Course Outcomes & Bloom's Level	CO1- To remember different crystal structure, symmetry elements, Bragg's Law, thermal and electronic properties of solid(BL1-Remember) CO2- To understand the origin of specific heat, energy band gap, formation of semiconductor junction, formation of defects in crystal(BL2-Understand) CO3- To apply knowledge of crystal structure, electronic and thermal properties on a given compound(BL3-Apply) CO4- To analysis difference between specific heat, conductivity in semiconductors and density of states(BL4-Analyze) CO5- To evaluate the different formation crystal by nature, thermal and electrical conductivity, electronic properties of conductors and semiconductors((BL5-Evaluate)								
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)						

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	3	1	1	-	-	-	-	-	-	-	1	1	2
CO2	1	2	3	1	2	-	-	-	-	-	-	-	1	2	1
CO3	2	3	2	2	2	-	-	-	-	-	-	-	1	1	3
CO4	1	2	1	1	1	-	-	-	-	-	-	-	2	1	2
CO5	1	2	2	3	1	-	-	-	-	-	_	-	1	2	3
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Atomic and Molecular Physics	Atomic and Molecular Physics								
Course Code	DSPH0602[T]	SPH0602[T]								
Course Outcomes & Bloom's Level	CO2- To understand the mecha CO3- To apply selection rules, la CO4- To analyze the process of	O1- To Rember basics of atomic and molecular spectroscopy(BL1-Remember) O2- To understand the mechanisms of various spectroscop(BL2-Understand) O3- To apply selection rules, laws to understand the atoms and molecule(BL3-Apply O4- To analyze the process of molecule formation and luminescence(BL4-Analyze) O5- To evaluate and apply the concepts for laser applications(BL5-Evaluate)								
Course Elements	Skill Development ✓ Entrepreneurship X Employability ✓ Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)							

COs	PO1	PO2	PO3	PO4	PO5	PO6	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	1	1	2	2	-	-	-	-	-	-	-	-	-	-
CO2	2	2	3	3	1	-	-	-	-	-	-	-	-	-	-
CO3	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-
CO4	1	3	1	2	2	-	-	-	-	-	-	-	-	-	-
CO5	3	1	2	1	3	-	-	-	-	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Course mapping with relevance to the local, regional, national, and global developmental needs

Title of the Course	Nano-1	Nano-1								
Course Code	DSPH0603[T]									
	CO1- To Learn basics of nanotechnology, size effect, properties, significance(BL1-Remember) CO2- To understand the nucleation and growth of particles in homogeneous and neterogeneous route and characterization process(BL2-Understand) CO3- To apply synthesis characterization routes for nano particle growth(BL3-Apply) CO4- To analyze the process of growth and characterization and various factors influence the properties of Nanomaterials,(BL4-Analyze) CO5- To evaluate and optimize the procedures, and implementations to the new designs(BL5-Evaluate)									
Course Elements	Skill Development ✓ Entrepreneurship ✓ Employability X Professional Ethics X Gender X Human Values X Environment X	SDG (Goals)	SDG4(Quality education)							

COs	PO1	PO2	PO3	PO4	PO5	P06	P07	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	1	3	2	-	-	-	-	-	-	-	-	-	-
CO2	2	2	3	2	1	-	-	-	-	-	-	-	-	-	-
CO3	2	3	2	1	3	-	-	-	-	-	-	-	-	-	-
CO4	1	2	1	2	2	-	-	-	-	-	-	-	-	-	-
CO5	3	1	3	3	1	-	-	-	-	-	-	-	_	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-