

Course Matrix – B.Sc. Biotechnology (SEP) (Autonomous)

BSc Biotechnology - Semester I			
Course Code	Title of the course	Category of courses	Credits
24KANL1.1/24HINL1.1/24SAN1.1	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
Lang 2	Gen English	L2	4
24BITT101	A1- Biotechnology- Cell Biology & Genetics	Major A1	3
	B1- Microbiology- General Microbiology	Major B1	3
	C1- Chemistry	Major C1	3
24BITP101	AP1- Biotechnology- Cell Biology & Genetics	Major AP1 Practical	2
	BP1- Microbiology- General Microbiology	Major BP1 Practical	2
	CP1- Chemistry	Major CP1 Practical	2
Compulsory Elective	Constitutional Values-1	Compulsory I theory	2
	Total		25

Course Outcomes– B.Sc. Genetics (SEP) (Autonomous)

Semester I			
Course Code	Title of the course	Category of courses	Credits
24KANL1.1/24HINL1.1/24SAN1.1	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
Lang 2	Gen English	L2	4
24UGGT-T101	A1- Genetics- Cell Biology	Major A1	3
	B1- Microbiology- General Microbiology	Major B1	3
	C1-Bio- Chemistry	Major C1	3
24UGGT-P101	AP1- Genetics- Cell Biology	Major AP1 Practical	2
	BP1- Microbiology- General	Major BP1 Practical	2

	Microbiology		
	CP1- Bio-Chemistry	Major CP1 Practical	2
Compulsory Elective	Constitutional Values-1	Compulsory I theory	2
	Total		25

Course Matrix – B.Sc. Biotechnology (NEP)

Biotechnology/Microbiology - Semester III (NEP)			
Course Code	Title of the course	Category of courses	Credits
KANL-3/HINL-3/SANL-3	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
BTC:301, DCS - 3T	A1- Biotechnology- Biomolecules	Major A1	4
MBL-103, DSC - 3T	B1- Microbiology- Microbial Diversity	Major B1	4
BTC:301 DSC-3P	AP1- Biotechnology- Biomolecules	Major AP1 Practical	2
MBL-103, DSC-4P	BP1- Microbiology- Microbial Diversity	Major BP1 Practical	2
Compulsory Paper	Artificial intelligence	Compulsory Paper	2
Open Elective	Nutrition and Health	Open Elective	2
	Total		24

Biotechnology/Chemistry - III Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
KANL-3/HINL-3/SANL-3	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
BTC:301, DCS - 3T	A1- Biotechnology- Biomolecules	Major A1	4
DSC-3	C1- Chemistry - Analytical and Organic Chemistry-II	Major C1	4
BTC:301 DSC-3P	AP1- Biotechnology- Biomolecules	Major AP1 Practical	2

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DSC-3	CP1- Chemistry - Analytical and Organic Chemistry-II	Major CP1 Practical	2
Compulsory Paper	Artificial intelligence	Compulsory Paper	2
Open Elective	Nutrition and Health	Open Elective	2
Total			24

Biotechnology/Microbiology - IV Semester (NEP)

Course Code	Title of the course	Category of courses	Credits
KANL-4/HINL-4/SANL-4	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
BTC:104 DCS -4T	A1- Biotechnology- Molecular Biology	Major A1	4
MBL:104, DSC -4T	B1- Microbiology- Microbial Enzymology and Metabolism	Major B1	4
BTC:104 DSC-4P	AP1- Biotechnology- Molecular Biology	Major AP1 Practical	2
MBL:104, DSC-4P	BP1- Microbiology- Microbial Enzymology and Metabolism	Major BP1 Practical	2
Compulsory Elective	Indian Constitution	Compulsory theory	2
Open Elective	Intellectual Property Rights	Open Elective	2
Total			24

Biotechnology/Chemistry - IV Semester (NEP)

Course Code	Title of the course	Category of courses	Credits
KANL-4/HINL-4/SANL-4	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
BTC:104 DCS -4T	A1- Biotechnology- Molecular Biology	Major A1	4
DSC-4	C1- Chemistry - Inorganic and Physical Chemistry-II	Major C1	4

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BTC:104 DSC-4P	AP1- Biotechnology- Molecular Biology	Major AP1 Practical	2
DSC-4	CP1- Chemistry - Inorganic and Physical Chemistry-II	Major CP1 Practical	2
Compulsory Elective	Indian Constitution	Compulsory theory	2
Open Elective	Intellectual Property Rights	Open Elective	2
Total			24

Biotechnology/Microbiology - V Semester (NEP)

Course Code	Title of the course	Category of courses	Credits
DSC-A9 (T)	A1 – Biotechnology - Genetic Engineering	Major A1	4
DSC-A11 (T)	A2 – Biotechnology – Plant and Animal Biotechnology	Major A2	4
MBL 105-I; DSCT5-I	B1- Microbiology- Molecular Biology	Major B1	4
MBL 105-II; DSC T5-II	B2- Microbiology – Food Microbiology	Major B2	4
DSC–A10 (P)	AP1- Biotechnology- Genetic Engineering	Major AP1 Practical	2
DSC-A-12 (P)	AP2 - Biotechnology – Plant and Animal Biotechnology	Major AP2 Practical	2
MBL 105-I; DSC P5-I	BP1- Microbiology- Molecular Biology	Major BP1 Practical	2
MBL 105-II; DSC P5-II	BP2 - Microbiology - Food Microbiology	Major BP2 Practical	2
Compulsory Elective	Employability Skill Development	Compulsory I theory	3
Total			27

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Biotechnology/Chemistry - V Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
DSC-A9 (T)	A1 – Biotechnology - Genetic Engineering	Major A1	4
DSC-A11 (T)	A2 – Biotechnology – Plant and Animal Biotechnology	Major A2	4
DSC 5	C1- Chemistry – Inorganic Chemistry III & Organic Chemistry - III	Major C1	4
DSC 6	C2 –Chemistry – Physical Chemistry – III & Spectroscopy - I	Major C2	4
DSC–A10 (P)	AP1- Biotechnology- Genetic Engineering	Major AP1 Practical	2
DSC-A-12 (P)	AP2 - Biotechnology – Plant and Animal Biotechnology	Major AP2 Practical	2
DSC 5	CP1- Chemistry – Inorganic Chemistry	Major CP1 Practical	2
DSC 6	CP2- Chemistry – Organic Chemistry and Physical Chemistry	Major CP2 Practical	2
Compulsory Elective	Employability Skill Development	Compulsory I theory	3
	Total		27

Biotechnology/Microbiology - VI Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
DSC-A13 (T)	A1 – Biotechnology - Immunology	Major A1	4
DSC-A15 (T)	A2 – Biotechnology – Bioprocess and Environmental Biotechnology	Major A2	4
MBL106-I; DSC T6-I	B1- Microbiology- Immunology And Medical Microbiology	Major B1	4
MBL 106-II; DSC T6-II	B2- Microbiology – Microbial Genetic Engineering And Industrial Microbiology	Major B2	4
DSC–A14 (P)	AP1- Biotechnology- Immunology	Major AP1 Practical	2
DSC-A-16 (P)	AP2 - Biotechnology – Bioprocess and Environmental Biotechnology	Major AP2 Practical	2
MBL 106-I; DSC P6-I	BP1- Microbiology- Immunology And Medical Microbiology	Major BP1 Practical	2
MBL 106-II; DSC P6-II	BP2 - Microbiology - Microbial Genetic Engineering And Industrial Microbiology	Major BP2 Practical	2
	Internship		2
	Total		26

Biotechnology/Chemistry - VI Semester (NEP)

Course Code	Title of the course	Category of courses	Credits
DSC-A13 (T)	A1 – Biotechnology - Immunology	Major A1	4
DSC-A15 (T)	A2 – Biotechnology – Bioprocess and Environmental Biotechnology	Major A2	4
DSC 7	C1- Chemistry – Inorganic Chemistry – IV & Physical Chemistry - IV	Major C1	4
DSC 8	C2 –Chemistry – Organic Chemistry – IV & Spectroscopy - II	Major C2	4
DSC–A14 (P)	AP1- Biotechnology- Immunology	Major AP1 Practical	2
DSC-A-16 (P)	AP2 - Biotechnology – Bioprocess and Environmental Biotechnology	Major AP2 Practical	2
DSC 7	CP1- Chemistry – Physical Chemistry	Major CP1 Practical	2
DSC 8	CP2- Chemistry – Organic Chemistry	Major CP2 Practical	2
	Internship		2
	Total		26

Course Matrix – B.Sc. Genetics (NEP)

Genetics/Microbiology III Semester (NEP)

Course Code	Title of the course	Category of courses	Credits
KANL-3/HINL-3/SANL-3	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
DSCC5GENT3	A1- Genetics - Biomolecules and Molecular Genetics	Major A1	4
MBL-103, DSC - 3T	B1- Microbiology- Microbial Diversity	Major B1	4
DSCC5GENP3	AP1- Genetics - Biomolecules and Molecular Genetics	Major AP1 Practical	2
MBL-103, DSC-4P	BP1- Microbiology- Microbial Diversity	Major BP1 Practical	2
Compulsory Elective	Artificial intelligence	Compulsory I theory	2
Open Elective	Eugenics, Euphenics and Society	Open Elective	2
	Total		24

Genetics/Biochemistry III Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
KANL-3/HINL-3/SANL-3	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
DSCC5GENT3	A1- Genetics - Biomolecules and Molecular Genetics	Major A1	4
DCCB301	C1- Biochemistry – BioOrganic Chemistry	Major C1	4
DSCC5GENP3	AP1- Genetics - Biomolecules and Molecular Genetics	Major AP1 Practical	2
DCCB301	CP1- Biochemistry -BioOrganic Chemistry	Major CP1 Practical	2
Compulsory Elective	Artificial intelligence	Compulsory I theory	2
Open Elective	Eugenics, Euphenics and Society	Open Elective	2
Total			24

Genetics/Microbiology IV Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
KANL-4/HINL-4/SANL-4	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
DSCC5GENT4	A1- Genetics - Human Genetics and Genetic Counselling	Major A1	4
MBL-103, DSC - 3T	B1- Microbiology- Microbial Diversity	Major B1	4
DSCC5GENP4	AP1- Genetics - Human Genetics and Genetic Counselling	Major AP1 Practical	2
MBL-103, DSC-4P	BP1- Microbiology- Microbial Diversity	Major BP1 Practical	2
Compulsory Theory	Indian Constitution	Compulsory theory	2
Open Elective	Intellectual Property Rights	Open Elective	2
Total			24

Genetics/Biochemistry IV Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
KANL-4/HINL-4/SANL-4	Kannada/Hindi/ Sanskrit/ Additional Eng/Telugu/ Tamil/ Malayalam	L1	4
L2	Generic English	L2	4
DSCC5GENT4	A1- Genetics - Human Genetics and Genetic Counselling	Major A1	4
DCCB401	C1- Biochemistry - Analytical Biochemistry	Major C1	4
DSCC5GENP4	AP1- Genetics - Human Genetics and Genetic Counselling	Major AP1 Practical	2
DCCB401	CP1- Biochemistry – Analytical Biochemistry	Major CP1 Practical	2
Compulsory Elective	Indian Constitution	Compulsory theory	2
Open Elective	Intellectual Property Rights	Open Elective	2
Total			24

Genetics/Microbiology V Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
DSCC5GENT5	A1 – Genetics - Gene regulation and DNA Repair	Major A1	4
DSCC5GENT6	A2 – Genetics - Plant Cell And Tissue Culture Technology	Major A2	4
MBL 105-I; DSCT5-I	B1- Microbiology- Molecular Biology	Major B1	4
MBL 105-II; DSC T5-II	B2- Microbiology – Food Microbiology	Major B2	4
DSCC5GENP5	AP1- Genetics – Gene regulation and DNA Repair	Major AP1 Practical	2
DSCC5GENP6	AP2 - Genetics - Plant Cell And Tissue Culture Technology	Major AP2 Practical	2
MBL 105-I; DSC P5-I	BP1- Microbiology- Molecular Biology	Major BP1 Practical	2
MBL 105-II; DSC P5-II	BP2 - Microbiology - Food Microbiology	Major BP2 Practical	2
Compulsory Elective	Employability Skill Development	Compulsory theory	3
Total			27

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Genetics/Biochemistry V Semester			
(NEP)			
Course Code	Title of the course	Category of courses	Credits
DSCC5GENT5	A1 – Genetics - Gene regulation and DNA Repair	Major A1	4
DSCC5GENT6	A2 – Genetics - Plant Cell And Tissue Culture Technology	Major A2	4
DCCB501	C1- Biochemistry – Biochemistry of Macromolecules	Major C1	4
DCCB502	C2 -Biochemistry – Human Physiology & Enzymology	Major C2	4
DSCC5GENP5	AP1- Genetics – Gene regulation and DNA Repair	Major AP1 Practical	2
DSCC5GENP6	AP2 - Genetics - Plant Cell And Tissue Culture Technology	Major AP2 Practical	2
DSCB501	CP1- Biochemistry – Biochemistry of Macromolecules	Major CP1 Practical	2
DCCB502	CP2- Biochemistry – Human Physiology & Enzymology	Major CP2 Practical	2
Compulsory Elective	Employability Skill Development	Compulsory theory	3
Total			27

Genetics/Microbiology VI Semester			
(NEP)			
Course Code	Title of the course	Category of courses	Credits
DSCC5GENT7	A1 – Genetics - Genes and Development	Major A1	4
DSCC5GENT8	A2 – Genetics - Population and Evolutionary genetics	Major A2	4
MBL106-I; DSC T6-I	B1- Microbiology- Immunology And Medical Microbiology	Major B1	4
MBL 106-II; DSC T6-II	B2- Microbiology – Microbial Genetic Engineering And Industrial Microbiology	Major B2	4
DSCC5GENP7	AP1- Genetics - Genes and Development	Major AP1 Practical	2
DSCC5GENP8	AP2 - Genetics - Population and Evolutionary genetics	Major AP2 Practical	2
MBL 106-I; DSC P6-I	BP1- Microbiology- Immunology And Medical Microbiology	Major BP1 Practical	2
MBL 106-II; DSC P6-II	BP2 - Microbiology - Microbial Genetic Engineering And Industrial Microbiology	Major BP2 Practical	2

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	Internship		2
	Total		26

Genetics/Biochemistry VI Semester (NEP)			
Course Code	Title of the course	Category of courses	Credits
DSCC5GENT7	A1 – Genetics - Genes and Development	Major A1	4
DSCC5GENT8	A2 – Genetics - Population and Evolutionary genetics	Major A2	4
DSC	C1- Biochemistry – Bioenergetics & Metabolism	Major C1	4
DSC	C2 –Biochemistry – Molecular Biology & Immunology	Major C2	4
DSCC5GENP7	AP1- Genetics – Genes and Development	Major AP1 Practical	2
DSCC5GENP8	AP2 - Genetics - Population and Evolutionary genetics	Major AP2 Practical	2
DSC	CP1- Biochemistry – Bioenergetics & Metabolism	Major CP1 Practical	2
DSC	CP2- Biochemistry – Molecular Biology & Immunology	Major CP2 Practical	2
	Internship		2
	Total		27



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