



Department of Biotechnology		LP: BY22111
B.E/B.Tech/M.E/M.Tech : Biotechnology		Rev. No: 00
Regulation: 2022		Date:
PG Specialisation : NA		09/11/2022
Sub. Code / Sub. Name : BY22111 - Recombinant DNA Technology Laboratory		

Session No*	List of Experiments
CYCLE-I	
1	Isolation of plasmid DNA for the vector construction
2	Restriction digestion and ligation and quality checking on the Agarose gel
3	Transformation of ligated DNA by Chemical Transformation and Electroporation of Bacteria
4	Verification of cloning by colony PCR and patching the positive colonies
5	Plasmid isolation from PCR-positive colonies
CYCLE-II	
7	Confirmation of cloning by restriction digestion
8	DNA cycle sequencing
9	Purification of cycle sequencing reaction product and automated DNA sequencing
9	Sequence editing and BLAST analysis to identify the gene
10	Site-directed mutagenesis
Content beyond syllabus (if any): -	



* Session Duration: 150 minutes



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REFERENCE BOOKS AND WEBSITES:

1. Michael, R. G., Sambrook. J., "Molecular Cloning - A Laboratory Manual", 4th edition, Cold Spring Harbour Laboratory Press, 2012.
2. Frederick. M., Ausubel., Brent R., Kingston. R. E., Moore D.D., Seidman J. G., John A. Smith and Kevin Struhl, "Current Protocols in Molecular Biology", John Wiley & Son, Inc., 2003.
3. <http://blast.ncbi.nlm.nih.gov/Blast.cgi>

	Prepared by	Approved by
Signature		
Name	Mr. Aswin Jeno J G	Prof. E. Nakkeeran
Designation	Assistant Professor	HoD
Date	09/11/2022	09/11/2022
Remarks*: This lesson plan will be followed in the subsequent years.		

* If the same lab plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD