

| LS532A Epigenetics 2 Credits | | |
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| Name of the Faculty : Prof. A.K. Sarkar*, Prof. S. Chakraborty and Prof. A.K. Nandi | | |
| Sr.No. | Topic | Faculty Name/ Contact Hours |
| 1. | Epigenetics- Concept and overview | AKS/3 |
| 2. | Small RNAs: Discovery, classification, and Biogenesis | AKS/2 |
| 3. | miRNA and ta-siRNA, regulation of plant development and/or physiology | AKS/2 |
| 4. | Long non-coding RNA | AKS/2 |
| 5. | Epigenetic regulation of Stem Cell reprogramming | AKS/2 |
| 6. | siRNA, regulation of plant development and/or disease | SC/2 |
| 7. | Circular RNA, biogenesis, and function | SC/2 |
| 8. | Epigenetics control of Immunity | SC/3 |
| 9. | Epigenetics and DNA repair | SC/2 |
| 10. | Epigenetic regulation of flowering | AKN/2 |
| 11. | Epigenetic regulation of plant responses to environment | AKN/2 |
| 12. | Dosage compensation | AKN/2 |
| 13. | Epigenetic regulation of Genome imprinting | AKN/2 |
| 14. | Epigenetics in transgenerational inheritance | AKN/2 |

Further Reading:

1. Epigenetics, Second Edition 2nd Edition by C. David Allis, Marie-Laure Caparros, Thomas Jenuwein, and Danny Reinberg
2. Epigenetics 1st Edition by Lyle Armstrong
3. Introducing Epigenetics: A Graphic Guide by Cath Ennis
4. Handbook of Epigenetics and Chromatin by Kylan Russell
5. Fundamentals of Chromatin: J.L. Workman and S. Abmayr (Eds.)