

Title of the Course: BIostatISTICS [P]

Course Code: MIC-507

Number of Credits: 1, Practical

Contact hours: 30

Effective from Academic Year: 2022-23

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| Prerequisites | Basic ability to handle numbers and calculation. | |
| Objective: | The paper develops concepts about types of data observed in biological experiments, its handling and processing. It develops concepts of hypothesis and formulation of experiments. It gives understanding of various statistical operations needed to process the biological data. | |
| Content: | | (30) |
| 1. | Excel spreadsheet and data analysis | |
| 2. | Linear equation analysis (regression analysis). | |
| 3. | Normal distribution. | |
| 4. | Hypothesis testing (T Test, Z test) | |
| 5. | Application of other software (graphpad / systat) for statistical analysis | |
| Pedagogy: | Experiments in the laboratory, data collection and processing. | |
| References/ Readings | Arora, P. N. and Malhan, P. K., Biostatistics, Himalaya Publishing House. (2020) | |
| | Cochran, WG and Snedecor, GW Statistical Methods. Iowa State University Press. (1989) | |
| | Danilina, N.I., Dubrovskaya, N.S. Kvasha, O.P. and Smirnov, G.L., Computational Mathematics, Mir Publishers. (1988) | |
| | Kothari, C. R., Quantitative Techniques, Vikas Publishing House. (2013) | |
| | Surya, R. K., Biostatistics, Himalaya Publishing House. (2018) | |
| Course outcomes | <ul style="list-style-type: none">◆ Collect and process the biological data.◆ Classify and analyse the biological data.◆ Choose the statistical tool for biological experiments.◆ Develop the hypothesis and experimental plan. | |