COURSE OUTLINE

WL-705 Wildlife Study Techniques-II: Management Aspects 3(2-1)

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THEORY

Study of environmental factors; 1) **Soil**: type, pH, Moisture, Organic Composition. 2) **Weather**: Temperature, Barometric Pressure, Precipitation, Wind speed and direction, Humidity. 3) **Water**: Availability, Chemistry, pH, contaminants, **Turbidity.** Introduction to field techniques for habitat analysis and evaluation, **Habitat improvement techniques,** estimating the numbers of wildlife populations (estimates, total counts, sample counts: the logic, models and arithmetic, indirect estimates of population size indices). **Specialized techniques;** audio instruments, visual instruments, radio-telemetry, **GIS** techniques and other activity recording instruments. **Radioisotopes** and their use in wildlife. **Experimental design** (fundamentals, applications, impact assessment). **Sampling strategies/techniques:** principles, basics and layout of sampling, inventory, surveillance and monitoring. **Instruments/equipments** for wildlife studies.

PRACTICAL

Practical application of radio-telemetry, field surveys of forest, rangelands, wetlands ecosystems for the study of environmental factors and wildlife populations for practical application of different wildlife techniques.

Lecture wise Teaching Schedule

Lecture #	Lecture Topic
1	Study of environmental factors; **Soil**: type, pH, Moisture, Organic Composition.
2	**Weather**: Temperature, Barometric Pressure, Precipitation, Wind speed and direction, Humidity.
3	**Water**: Availability, Chemistry, pH, contaminants, Turbidity.
4	Introduction to field techniques for habitat analysis and evaluation,
5	Habitat improvement techniques, estimating the numbers of wildlife populations
6	Estimates, total counts, sample counts: the logic, models and arithmetic
7	Indirect estimates of population size indices
8	Specialized techniques; audio instruments, visual instruments, radio-telemetry
9	GIS techniques and other activity recording instruments.
10	Radioisotopes and their use in wildlife.
11	Experimental design (Fundamentals, applications, impact

	assessment).
12	Sampling strategies/techniques……
13	Instruments/equipments for wildlife studies.
	Practical
	Assignments
	Exam

Books recommended

1) Bibby, C. J., Burgess, N.D. and Hill, D.A. 1992. Bird Census Techniques. Academic Press London.
2) Blower, J. G., L. M. Cock and J. A. Bishop. 1980. Estimating the size of animal populations. George Allen and Unwin Limited. London.
3) Cormack, R. M., G. P. Patil. and D. S. Robson. 1979. Sampling biological populations. International co- operative publishing House, Fairland, Maryland, USA.
4) Giles, R.H. Jr. 1989. Wildlife Management Techniques. Wildlife Society. Washington DC. USA.
5) Herts Kenward, R. E. 1987. Wildlife Radio-tagging. Equipment, Field Techniques and Data Analysis. Academic Press Limited. London.
6) Peterson, R.T. and Murie, O.J. 1992. A Field Guide to Animal Tracks. Houghton Miffin Field Guides publishers.
7) Schemnitz, S.D. 1980. Wildlife Management Techniques Manual. The Wildlife Society Washington, D.C.
8) Tanner, J.T. 1978. Guide to the Study of Animal Populations. The University of Tennessee Press, Knoxville.
9) White, G.C. and Garrott, R.A. 1990. Analysis of Wildlife Radio-Tracking Data. Academic Press Limited London.