BIOLOGICAL SCIENCES 432
CHEMICAL PESTICIDES AND
THE ENVIRONMENT
95-3

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PREREQUISITES: BICH 321 or 322 (or BICH 301 and 302 or BISC 301).

TOPICS TO BE COVERED

1. **INTRODUCTION** Pesticides: classification, historical aspects economic aspects, benefits/adverse effects, toxicological considerations.
2. **PESTICIDE FORMULATION AND APPLICATION TECHNOLOGY**
3. **ENVIRONMENTAL PROCESSING OF PESTICIDES** biotransformations
4. **INSECTICIDES** organochlorines, organophosphorus compounds, carbamates, pyrethroids and others will be examined in the context of chemistry, uses, interactions with living systems, toxicity, selectivity and resistance.
5. **FUNGICIDES** Inorganic fungicides and organic fungicides (both systemic and non-systemic) - chemistry, uses, modes of action selectivity and resistance.
6. **HERBICIDES** Foliar applied herbicides, translocated vs. contact herbicides and soil acting herbicides, - chemistry, uses, modes of action, selectivity and resistance.
7. **PESTICIDE RESIDUES** Profiles in some environmental compartments.
8. **PHYSIOCHEMICAL PROPERTIES OF PESTICIDES**
9. **MOVEMENT, FATE AND PERSISTENCE OF PESTICIDES IN ENVIRONMENTAL MEDIA**
10. **PESTICIDES AND GROUNDWATER**
11. **IMPACT OF PESTICIDES ON AQUATIC ORGANISMS**
12. **PESTICIDE LEGISLATION IN CANADA**

FINAL GRADING
Letter grade will be assigned from marks achieved in the following exams.
- MIDTERM EXAM (in Monday lecture period) 40% total
- FINAL EXAM 60% total

EACH EXAM WILL BE BASED ON LECTURES, TUTORIALS AND ASSIGNED READINGS.

NOTES
1) There is no textbook which adequately covers the full spectrum on topics. Detailed course notes will be made available.
2) As many of the topics are closely related they will not necessarily be covered in the order given.