

COURSE SYLLABUS (EVSC 616)

(Prof. Pradyot Patnaik)

Lecture	Topics
1	Introduction to the Course ; absorption, distribution and excretion of toxicants
2	Biotransformation of toxicants, enzymetic reactions, Bioactivation
3	Toxic effects, target organs, mechanisms of action, molecular targets
4	Modifying factors of toxic effects, host factors, chemical interaction
5	Toxicology of the liver, hepatotoxicants, types of liver injury
6	Toxicology of the kidney, nephrotoxicants, testing procedures
7	Toxicology of the skin, dermatotoxicants
8	Carcinogenesis, mode of action, human carcinogens, classification of carcinogens
9	Teratogenesis, developmental toxicants and their effects, mode of action
10	<i>Mid-term Exam</i>
11	Toxicity of pesticides, organochlorine- , organophosphorus- , carbamate- , and chlorophenoxy pesticides and herbicides Miscellaneous toxicants of specific structural features: dioxins and related compounds; nerve gases
12	Toxicity of metals, certain common features and toxic effects, exposure risks
13	Food additives and contaminants
14	Occupational toxicology, exposure limits and monitoring
15	Environmental pollutants, air-, water-, and soil pollutants
16	Toxicologic evaluation, risks and safety assessment, mathematical models Course review and the review for the final exam

Final Examination

Textbook: *Lu's Basic Toxicology, 5th edition* by Frank C, Lu and Sam Kacew , published by Taylor & Francis

Grading: The mid-term and the final exam will carry a total of 100 points each. The attendance in the class, honesty and ethics that are important components in the learning process will be taken into consideration and may account 5% in grading.