RECOMMENDED MODIFICATIONS TO THE SYLLBUS

In the Board of Studies Meeting that was held on 10.7.04, the matter of modifications to the syllabus of the B.Pharm course was discussed and the following recommendations in various subjects are made.

1.1 A. Biology

The entire syllabus is reorganized as follows :

1. Living and Non Living organisms and their differences. Plant and animal differences; cell structure, cell inclusions. Mitosis in animals and meiosis in animals
2. Classification of plant kingdom and salient features of different groups only. Structure and life history of Bacteria and yeast
3. Taxonomic families : Solanaceae, Liaceae, Annonaceae and Umbelliferae
4. Root (tap root and fibrous roots and their functions only)
   Stem, leaf (vegetative morphology), Flower, Inflorascence (reproductive morphology), anatomical structures of root, stem (monocot and dicot)
   Root and Fruit (types of fruit)
   Seed formation; Pollination (different types of pollinating agents) and types of pollination methods.
5. Classification of animal kingdom; invertebrates, vertebrates and their salient features only. Structure and physiology of Amoeba, Paramecium, Earthworm, Cockroach, (locomotion, digestive, excretory and reproductive systems only)
6. Comparative account of vertebrate series of animals with special reference to nervous, cardiac, vascular systems. Different types of tissues in animals and plants
7. Parasitology : Introduction, Entamoeba, Trypnasoma, Plasmodium and Ascaris (structure and life history only)

1.4 Physical Pharmacy – I

It is recommended that a Chapter on **Photochemistry** be included

Chapter-10 – **Photochemistry** : Consequences of light absorption, Jablenski diagram, Lambert – Beer Law and Quantum Efficiency

Introduction of new subject **Environmental Studies** as **1.8** in I B.PHARM

As per the Acharya Nagarjuna University guidelines (lr.No. ANU/Acad(3)/Env.Sc/2004-05 Dated 16/7/04), it is recommended to include in I B.Pharm an additional subject of Environmental Studies as 1.8

1.8 Environmental Studies : The syllabus same as the one communicated in the above cited letter be adopted.

1.6 Pharmaceutical Analysis – I :

It is recommended that Chapter-9 be deleted because the polarimetry and refractometry topics are covered in the subject Physical Pharmacy – I.

In place of the deleted chapter, the following chapter is recommended to be included

Chapter – 9 – Good Laboratory Practices : Introduction to good laboratory practices. Importance of GLP in the Analysis of Pharmaceuticals.

2.4 Pharmaceutical Engineering

It is recommended that in Chapter-5 the following topics be included

" Mechanical, Chemical, Electrical, Fire and Dust hazards. Industrial Dermatitis, Accident Records etc."

2.7 Applied Biochemistry and Clinical Pathology

It is recommended that a Chapter on " Nucleic Acids and Protein Synthesis be included as Chapter - 10

Chapter- 10 : **Biosynthesis of Nucleic Acids**: Brief introduction of genetic organization of the mammalian genome, alteration and rearrangement of genetic material. Biosynthesis of DNA and its replication. Mutation – physical and chemical mutagenesis/ carcinogenesis, DNA repair mechanisms and Biosynthesis of RNA.

Genetic Code and Protein Synthesis: Genetic Code, components of protein synthesis and Inhibition of protein synthesis. Brief account of genetic engineering and polymerase chain reactions.

2.8 Forensic Pharmacy :

It is recommended that **" Prevention of Cruelty to Animals Act 1960 "** be included as part of Chapter -6

3.4 Pharmaceutical Biotechnology :

It is recommended that Chapter – 6 be renamed and expanded to include more topics.

Chapter -6 **Microbial Transformations and Enzyme Immobilisation :** Introduction, types of reactions mediated by microorganisms, design of biotransformation processes, selection of organisms, biotransformation process and its improvements with special reference to steroids.

Techniques of enzyme immobilization, factors affecting enzyme kinetics. Study of enzymes such as penicillinase, streptokinase, and amylase. Immobilization of bacterial cells.

3.5 Pharmacognosy – I

It is recommended that Lipids of Chapter-4 be shifted to 4.4 Pharmacognosy – II of 4^{th} year.

4.2 Pharmaceutics- III (Biopharmaceutics , Pharmacokinetics and Novel Drug Delivery Systems) :

It is recommended that concepts of Non – linear Pharmacokinetics be included in the Pharmacokinetics portion.

" Non-linear Pharmacokinetics with special reference to one compartment model after IV drug administration, Michaeles- Menten equation. Detection of non linearity (Saturation Mechanism)