

## **Food Chemistry 3(3-0)**

### **Theory**

Water: types, properties, structure, water activity, effect on shelf life of food. Carbohydrates: classification, structure, physical and chemical properties, caramelization, Maillard reaction, dietary fiber. Lipids: classification, structure, fatty acids, properties, rancidity, emulsifiers. Proteins: classification, structure, amino acids, chemical, physical and functional properties. Mineral elements: introduction, chemical and functional properties. Vitamins: classification, properties, structure, stability. Colours and pigments: functions, properties, stability. Flavours: characteristics – taste and other saporous substances, aromatic compounds. Enzymes: nature, functions, classification.

### **Books Recommended**

1. Damodaran, S., Parkin, K.L. and Fennema, O.R. 2008. Fennema's food chemistry. CRC Press, Taylor & Francis Group, Boca Raton, Florida, USA.
2. DeMan, J.M. 2007. Principles of food chemistry. Springer Verlag, Heidelberg, Germany.
3. Belitz, H.D, Grosch, W. and Schieberle, P. 2004. Food chemistry. Springer Verlag, Heidelberg, Germany.

**Website: [www.foodscienceuniverse.com](http://www.foodscienceuniverse.com)**