

## **Food Microbiology 3(2-1)**

### **Theory**

Food microbiology: introduction and scope. Morphological, cultural and physiological characteristics: molds, yeasts and yeast like fungi, bacteria. Important microbial genera in foods: bacteria, moulds, yeasts, viruses - general, morphological, cultural and physiological characteristics. Factors affecting the growth and survival of microorganisms in food: intrinsic, extrinsic and implicit. Contamination and spoilage of perishable, semi perishable and stable foods: sources, transmission, microorganisms. Food microbiology and public health: food-borne infections: intoxications. Microbiological risk assessment. Microbiology in food sanitation: food sanitizers and pathogen reduction - a case study.

### **Practical**

Isolation, identification and characterization of micro organisms: morphology, biochemical. Enumeration of microorganisms in food and water samples (total count, viable count, MPN). Examination of foods for pathogenic organisms (*Escherichia coli*, Coliform, *Salmonella* and *Listeria monocytogenes*).

### **Recommended Books**

1. Frazier, W.C. and Westhoff, D.C. 2008. Food microbiology. McGraw Hill Book Co., New York, USA.
2. Adams, M.R. and Moss, M.O. 2006. Food microbiology. The Royal Society of Chemistry, Cambridge, UK.
3. Yousef, A. E. and Carlstrom, C. 2003. Food microbiology: a laboratory manual. John Wiley and Sons, New Jersey, USA.
4. Brown, M. and Stringer, M. 2002. Microbiological risk assessment in food processing. Woodhead Publishing Ltd. Cambridge, UK.
5. Spencer, J.F.T. and Ragout de Spencer, A.L. 2001. Food microbiology protocols. Humana Press, New Jersey, USA.

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