

MFT301 Processing of Cereals,Pulses&OilSeeds

Teaching Scheme	ExaminationScheme
Lectures:3hrs./week Tutorials:1 hr./week Credits:4	InternalAssessment Marks[IAM]:30 [Class Test: 12, Teachers assessment:6,Attendance: 12] EndSemesterMarks[ESM]:70

Course Objective:

1.To create knowledge about the processing and quality evaluation of cereal grains.

Detailed Syllabus

Module1
Wheat Technology: Composition of grain and environmental effects on its processing quality, enzymes of wheat and their role in the manufacture of wheat products; principles of wheatmillinganditseffectoncompositionofflour,agingofflour,byproducts,chemicalimprovers-bleaching and maturing agents, property of dough and its rheology, manufactureofwheatproductsbread,biscuitsetc.;formulationofpremixesforbakeryproducts; pasta Goods and processed cereal foods for infants.
Module2
Rice Technology: Composition, type of proteins, starch content, amylose and amylopectin fractions; presence and effect of lipases; distribution of vitamins; minerals, and proteins inricegrainanditsrelationtomilling;ricemillingoperationsanditseffectonnutritivevalue; cooking quality; byproducts of rice milling and their utilization; processed and prepared mixes based on rice.
Module3
Legumes:Composition,anti-nutritionalfactors,processingmethods,methodsof cooking.
Module 4
CornTechnology:Composition,processingofcornformanufactureofcorngrits,mealandflour;man ufactureofcornflakes,corn syrup,cornstarch,cornsteepliquor,cornoiland canned corn.CompositionandProcessingofmilletslikebarley,sorghum.Oatsetc.
Module 5

Oilseeds:Composition,processingofoilseedsasproteinconcentrations,propertiesanduses ofoilseedsmeals,technologyvegetableproteinisolates;Barriercompoundsintheutilizationofoil seed proteins.Lowcost proteinfoods from oilseeds.

Suggested Readings

1. Hosney, R.S. (1994). Principles of Cereal Science and Technology. 2nd Ed. AACC.
2. Chakrabarty, M.M. (2003). Chemistry and Technology of Oils and Fats. Prentice Hall.
3. Dendy, D.A.V., & Dobraszczyk, B.J. (2001). Cereal and Cereal Products. Aspen.
4. Hamilton, R.J., & Bhati, A. (1980). Fats and Oils - Chemistry and Technology. App. Sci. Publ.
5. Kay, D.E. (1979). Food Legumes. Tropical Products Institute.

COURSE OUTCOMES

After completing the course, students will be able to:

1. Student will acquire the understanding of the technology for Wheat Milling & Wheat based Food Products.
2. Student will acquire the understanding of the technology for Rice Milling & Rice based other Food Products.
3. Student will acquire the understanding of working of equipments related to Legumes Processing along with equipments.
4. Student will be able to understand technology for Milling of Corn & Corn based other Food Products along with equipments.
5. Student will be able to understand technology for Oil Seed Processing & Oil Extraction from various sources along with equipments.

