

SHRI GURU RAM RAI UNIVERSITY

Patel Nagar, Dehradun, Uttarakhand

(Estd. by Govt. of Uttarakhand, vide Shri Guru Ram Rai University Act no. 03 of 2017)

COURSE SYLLABUS

Effective from Academic Session 2022-23

For Value Added Course Programme

On

**“Novel Techniques of Fruits and
Vegetables Processing”**

Course Code: VCSAS007



Approved By:

BOARD OF STUDIES

SCHOOL OF AGRICULTURAL SCIENCES

SHRI GURU RAM RAI UNIVERSITY PATHRIBAGH DEHRADUN- 248001

VALUE ADDED COURSE (VAC)

NOVEL TECHNIQUES OF FRUITS AND VEGETABLES PROCESSING

Course code: VCASAS007

Duration:30 Hrs

Name of Coordinator	Office Address	Office Number	Email. ID
Dr. Suneeta Singh	SAS, Pathribagh Campus, SGRRU	6388957716	Suneetasingh@sgru.ac.in drsuneetaksaxena@gmail.com

Course Objectives:

1. To impart the basic knowledge about importance and scope of fruits and vegetables processing.
2. To develop understanding of role of preservatives, color, flavors, salt and sugar.
3. It will enable students to develop the art of preparation of various processed products.
4. It will emphasize skill of small entrepreneurship and enable to start small enterprise.

Eligibility for registration in the course

Any student of SGRR University can be registered in value added course in “Novel Techniques of Fruits and Vegetables Processing”

Examination and Evaluation

As per university norms

SYLLABUS

Module I (Total Topics-08 and Hrs.8)

History, importance and scope of preservation of fruits and vegetables, Principles of preservation, Methods of preservation-Physical, Chemical, Fermentation, other methods.

Module II (Total Topics-08 and Hrs.8)

Role of preservatives, fruit color, flavors, chemicals, salt, sugar and vinegar. Study of containers for packaging of preserved products- Tin cans, Glass containers, plastic and polythene pouches and their advantages and disadvantages.

Module III (Total Topics-10 and Hrs.8)

Canning of fruits and Vegetables, Drying and Dehydration of fruits and Vegetables Preparation of Juice from Fruits and Vegetables, Squash & cordial. Sensory or organoleptic evaluation of processed products.

Module IV (Total Topics-12 and Hrs.6)

Preparation of Jam, Jelly and marmalade, Preparation of unfermented fruit beverages, juice Ready to serve (RTS), nectar, Fruit juice powder, fruit juice concentrate. Preparation of preserve and candy from Fruits and Vegetables. Preparation of tomato products - Tomato juice, Tomato puree and paste , Tomato sauce and ketchup , Tomato chutney , Tomato soup , Tomato chilli sauce.

Course outcomes (CO) :**On successful completion of course the student will be able to:**

CO 1: To aware with the history, importance and principles of preservation.

CO 2: To learn the prospects and scope of fruit and vegetable processing sector.

CO 3: To develop skill of various processing methods.

CO 4: To aware with develop procedure of various fruits and vegetable products.

CO 5: To acquaint with organoleptic evaluation of processed products.

CO 6: To understand technologies of fruit and vegetable processing and its role in providing better quality produce to the consumer .

Suggested Readings:

- Battacharjee, S. K. and De, L. C. 2005. Post Harvest Technology of Flowers and Ornamentals Plants. Ponteer Publisher, Jaipur, India.
- Bhutani RC. 2003. *Fruit and Vegetable Preservation*. Biotech Books
- Fellows, P. J. 1998. Food Processing Technology: Principles and Practices. Ellis Horwood.
- Hulme, A.C. 1970. Food Science & Technology- A Series of Monograph: The Biochemistry of Fruits and their Products (Vol. 1). Academic Press London & New York.
- Jacob, J. P. 2008. A Handbook on Post Harvest Management of Fruits and Vegetables. Daya Publishing House, Delhi.
- Kitinoja, L. and Kader, A. A. 2003. Small-Scale Postharvest Handling practice: A Manual for Horticulture Crops (4th ed.). US Davis, PHT Research and information Center.
- Mitra, S. K. 1997. Post Harvest Physiology and Storage of Tropical and Sub-tropical Fruits. CAB International.
- Ranganna, S. 2017. Handbook of Analysis and Quality Control for Fruit and Vegetable Products (2nd Edt.). McGraw Hill Education.
- Saraswathy, S. 2008. Post harvest Management of Horticultural Crops. Agribios (India).
- Shanmugavelu, K. G., Kumar, N. and Peter, K.V. 2002. Production Technology of Spices and Plantation Crops. Agrobios (India).

- Sharma, N. and Mashkoo, A. M. 1998. Post Harvest Diseases of Horticultural Perishables. International Book Distributing Co., Lucknow.
- Srivastava, R.P. and Sanjeev, K. 2017. Fruit and Vegetable Preservation: Principles and Practices. CBS Publishers & Distributors.
- Stanley, J. K. 1998. Post Harvest Physiology of Perishable Plant Products. CBS, New Delhi.
- Thomposon, A. K. 1996. Post Harvest Technology of Fruits and Vegetables. Blackwell Science.
- Verma, L. R. and Joshi, V. K. 2000. Post Harvest Technology of Fruits and Vegetables (Vol. I & II). Indus Publishing Co., New Delhi

SHRI GURU RAM RAI UNIVERSITY

(Estd. By Govt. of Uttarakhand, vide Shri Guru Ram Rai University Act No. 03 of 2017 Act No. 03 of July 2017)

Value Added Course

APPLICATION FORM

Name of the course : **“Novel Techniques of Fruits and Vegetables Processing”**

Name of School : School of Agricultural Sciences

Name of Department : Department of Horticulture

Name of the Student :

Enrollment No. :

Name of Enrolled school :

Class :

Year/Sem :

Community :

Address :

Contact No. :

Email ID :

DECLARATION

I.....Son or Daughter/Of.....

would like to enroll in..... the Value

Added Course. I will abide by the rules and regulations of the College.

Date:

Signature of the Candidate

School of Agricultural Sciences

Department of Horticulture