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**Guru Nanak Dev University**  
**Amritsar**

# Placement Brochure



Department of  
Food Science and Technology



## Placement Brochure

### Dean Academic Affairs

I am pleased to write that Guru Nanak Dev University has a glorious history of over 46 years. In this short-span of time, the University has scaled new heights in academics, sports and cultural activities. Carefully nurtured by illustrious administrators, the University has carved a perfect niche for itself on the academic map of India and is a true Mecca for students from rural, urban and border areas. This University is known for excellent infrastructure in terms of buildings, state of the art labs for research and teaching. A crystal clear and transparent admission process attracts meritorious students to this University. A regular upgradation of the syllabi is the hallmark giving a sense of pride and satisfaction. The University is fortunate to have an eminent scientist Prof. A.S. Brar as its Vice-Chancellor who has brought innovations to elevate the academic and research standards to the highest peaks in the educational scenario.

Prof. (Dr.) Paramjit Singh Judge



# MESSAGE

## Department of Food Science & Technology







## Placement Brochure

### Guru Nanak Dev University

Guru Nanak Dev University was established on 24th November, 1969 to commemorate the 500th birth century of Guru Nanak Dev Ji. It is multi-faceted University spread over an area of 500 acres. Ever since its foundation the endeavour of the university has always been to meet the objectives enshrined in the Guru Nanak Dev University Act 1969, which emphasized that the new University would make provision for imparting education and promoting research in the humanities, learned professions, sciences, especially of applied nature and technology.

The UGC conferred this University with status of "University with Potential for Excellence" in 2012. The National Assessment and Accreditation Council (NAAC), Bangalore in November 2014 reaccredited the university in 3rd cycle with CGPA of 3.51 out of 4 point scale at "A" grade, the highest in the region. Earlier, it had been accredited at A grade level in 2000 and then reaccredited in 2007 with CGPA of 3.50/4.00. The University has risen to 16th rank in the top 50 universities of the country, as per recent survey conducted by a widely acclaimed news magazine 'India Today' and has achieved 11th Position, out of the 500 universities, in science publications.

More than twenty thousand students, an overwhelming majority of them being women, are enrolled in various Departments at University Campus and Constituent Colleges. On-line admission, On-line counselling, introduction of Credit Based Continuous Grading Evaluation System etc are a few hallmarks of the university. All the results have been computerized and OMR (Optical Magnetic Recognition) system is being used to bring in more efficiency and transparency. It is the first University in the region to have computerized its examination and registration system.

In the field of culture and sports also, the achievements of the university are noteworthy. The university has been national Champion for 9 times and the winner of the North-Zone-Inter-Varsity Cultural Championship for 13 times. The winning of the coveted Maulana Abul Kalam Azad Trophy, the highest sports award for a university in the country, for a record number of 22 times, speaks volumes about its supremacy in the field of sports.

Over the years, the University has built up an excellent academic infrastructure in the form of well stocked computerized library, state of the art laboratories, Academic Staff College, All India Services Training Centre, Advanced Instrumentation Centre, Computer Centre, 24 hours Internet Facility, Placement Department, etc. The landscape of University has been planned and laid in such an environmental friendly manner that it not only has a vast panorama of trees and flowering plants but has also a large variety of feathered fauna. The green spread throughout the campus has mingled unobtrusively with its modern architecture.



## Department of Food Science & Technology

### Department of Food Science and Technology

The Department of Food Science and Technology was established in the year 1994 and has marked its presence with its high research endeavours and technical edge. The M.Sc. (Food Tech.) programme was started in 1994 and after its success was followed by B. Tech. (Food Tech.) programme in 1995. The Department of Sugar & Alcohol has also been merged in this department w.e.f. 1.04.2011. The Department is well known all over for its top notch Food Technologists who thrive for challenges in food technology. The department is not only home for food technologists but indeed it is a home for upcoming entrepreneurs which will take the food industry to new level.

The department has established Food Industry Service Centre (FISC) and also runs Sugar Industry Service Centre (SISC) which provides R&D as well as analysis services to the local food industry of Punjab along with the routine tests which can be of use to common man for his satisfaction and information, at nominal charges. The department proudly owns various instruments which give the students first hand experiences of the industry. The department offers following courses-

- B.Tech in Food Technology
- M.Sc. in Food Technology
- Ph.D. in Food Technology

Each of these particular courses is specially designed in accordance with the recent industrial techniques and they are revised & upgraded from time to time. B.Tech. Food Science and Technology students are selected on the basis of JEE & M.Sc. students are selected on the basis of Merit List of the test that is conducted by the department itself. The department also stays in touch with local and international agencies for any recent development in the field of food science.







## Placement Brochure

## Department of Food Science & Technology



### Faculty Profile

NAME	DESIGNATION	QUALIFICATION	AREA OF INTEREST
Dr. BALMEET SINGH GILL	PROFESSOR & HEAD	Ph.D., M.B.A	Cereal Technology, characterization an Modification of starches, Microbial Pigments, Quality Control and Management in Food Industry.
Dr. NARPINDER SINGH	PROFESSOR	Ph.D.	Cereal and Pulse Chemistry & Technology
Dr. DALBIR SINGH SOGI	PROFESSOR	Ph.D.	Food Waste Management, Pigments, Seed proteins
Dr. HARDEEP SINGH GUJRAL	PROFESSOR	Ph.D.	Grain Milling, Baking, Extrusion, granin quality, starch and protein modification using enzymes, food product development, food texture and rheology, barley and oat processing.
Dr. NAVDEEP SINGH SODHI	PROFESSOR	Ph.D.	Engineering properties of biological materials, characterization and modification of starches, post harvest & food process engineering.
Dr. RAJSUKHWINDER SINGH KALER	ASSOCIATE PROFESSOR	Ph.D.	Rheology, Clarification & Refining, Sugar Quality
Dr. MANINDER KAUR	ASSISTANT PROFESSOR	Ph.D.	Characterization of bio macromolecules, their modification and applications.
Dr. AMRITPAL KAUR	ASSISTANT PROFESSOR	Ph.D.	Potato Processing and Utilization.
Dr. BHAVNITA DHILLON	ASSISTANT PROFESSOR	Ph.D.	Microbial load detection & removal from fresh produce, Preparation of buckwheat cookies and whey based health drinks, Nutritional analysis of quick cooking brown rice.

### Course Framework

#### M.Sc. Food Technology

##### Semester I

- \* Principles of Food Processing & Preservation
- \* Technology of Cereals, Legumes & Oil Seeds Processing-I
- \* Technology of Fruits & Vegetables Processing-I
- \* Technology of Fluid Milk Processing-I
- \* Food Microbiology
- \* Basics of Food Engineering
- \* Food Chemistry

##### Semester II

- \* Technology of Cereals, Legumes, & Oil Seeds-II
- \* Technology of Fruits & Vegetables Processing-II
- \* Technology of Milk & Product Processing-II
- \* Technology of Egg & Poultry Processing
- \* Application of Enzymes in Food Industry
- \* Confectionery Technology
- \* Food Engineering Operations
- \* In-Plant Training

##### Semester III

- \* Technology of Malting & Brewing
- \* Packaging Technology
- \* Food Plant Layout & Management
- \* Technology of Fish & Meat Products Processing
- \* Food Process Engineering-I
- \* Interdisciplinary Course

##### Semester IV

- \* Quality Assurance in Food Industry & Sensory Evaluation
- \* Human Resources & Marketing Management
- \* Food Process Engineering-II
- \* Interdisciplinary Course
- \* Project Work







## Placement Brochure

## Department of Food Science & Technology



### Course Framework

#### B.Tech. Food Technology

##### Semester I

- \* Manufacturing Processes
- \* Grain Handling & Storage Technology
- \* Principles of Food Preservation
- \* Engineering Chemistry
- \* Communicative English - I
- \* Punjabi - I

##### Semester II

- \* Thermal Science
- \* Engineering Graphics & Drafting
- \* Food Chemistry
- \* Applied Maths
- \* Communicative English - II
- \* Punjabi - II

##### Semester III

- \* Basic Food Engineering
- \* Basic Microbiology
- \* Food Hygiene & Sanitation
- \* Industrial Microbiology
- \* Environmental Studies
- \* Basic Electrical & Electronics Engineering

##### Semester IV

- \* Mechanical Operations
- \* Cereal & Legume Technology
- \* Fruits & Vegetables Technology
- \* Sugar Manufacturing
- \* Fluid Flow & Heat Transfer

##### Semester V

- \* Dairy Technology
- \* Fish, Meat & Poultry Technology
- \* Fats & Oils Technology
- \* Mass Transfer

##### Semester VI

- \* Food Regulation & Quality Control
- \* Applications of Enzymes in Food Industry
- \* Biochemical Engineering
- \* Packaging Technology
- \* Human Resource Management

##### Semester VII

- \* Food Processing Plant Layout & Design
- \* Food Process Engineering
- \* Confectionery Technology
- \* Spices & Flavour Technology

##### Semester VIII

- \* Research Project
- \* Industrial Training

### Course Framework

#### B.Tech. Sugar & Alcohol Technology

##### Semester I

- \* Computer Applications
- \* Manufacturing Processes
- \* Basic Electrical & Electronics Engg.
- \* Organic Chemistry
- \* Communicative English - I
- \* Punjabi - I

##### Semester II

- \* Physical Chemistry
- \* Chemical Engineering - I
- \* Sugar Cane Agriculture
- \* Communicative English - II
- \* Punjabi - II
- \* Applied Maths

##### Semester III

- \* Sugar Tech Manufacturing-I
- \* Sugar Tech Manufacturing-II
- \* Analytical Chemistry
- \* Chemical Engineering-II
- \* Environmental Studies

##### Semester IV

- \* Applied Stat. & Stat. Control
- \* Sugar Engineering-I
- \* Sugar Technology Manufacturing-III
- \* Sugar Technology (Chemical Control)
- \* Plant Utilities

##### Semester V

- \* Refinery (Raw Sugar Manufacturing & Refining)
- \* Sugar Industry By Products
- \* Process Control & Instrumentation
- \* Industrial Microbiology

##### Semester VI

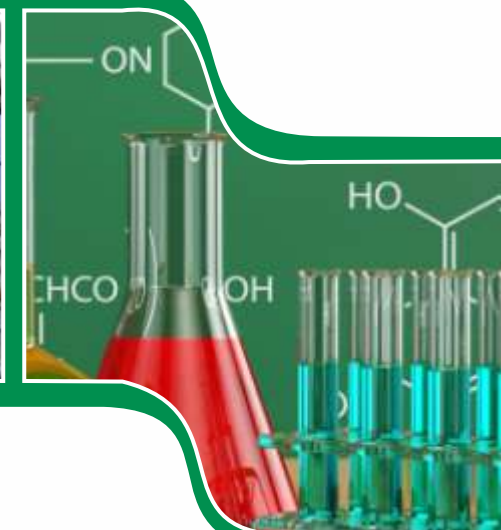
- \* Sugar Engineering-II
- \* Industrial Fermentation & Alcohol Technology
- \* Sugar Technology (Capacity)
- \* Business & Financial Management
- \* Industrial Biochemistry

##### Semester VII

- \* Environmental Pollution & Management
- \* Confectionery Technology
- \* Technology of Malting & Brewing

##### Semester VIII

- \* Research Project
- \* Industrial Training







## Placement Brochure

### Laboratories

#### Advanced Analytical Laboratory

It has sophisticated instruments like Instron Universal testing machine, UV / VIS Spectroscopy, Freeze dryer, Differential Scanning calorimeter (DSC), Rapid Visco-Analyzer (RVA), Spray dryer, Rheometer, GPC, Hunter Colour Lab, Water Activity Meter, Atomic Absorption, HPLC.



#### Cereal, Legumes & Oil Seed Technology Laboratory

The various equipments pertaining to this lab includes Farinograph, Viscoamylograph, Alveograph, Falling Number Apparatus. Besides these equipments the department also has other facilities for cereal and oil seeds processing such as Pasta Extruder, McGill Sheller/Polisher, Komat (Germany) Oil Expeller, Hammer Mill, Barbender Flour Mill, Reel Type Baking Oven, Fermenter with Refrigeration Unit, Mouldings and Sheeting Rolls Unit and Dough Mixer are also available.



## Department of Food Science & Technology



#### Meat Technology Laboratory

Meat Technology Laboratory is equipped with Meat Grinder, Hobart Universal Food Cutter, Hobart Mixer, Moulds, Sausage Stuffer, Smoking Unit, Electric Fryer, Grill Oven and Microwave Cooker.

#### Fruits & Vegetables Technology Laboratory

The Department is equipped with Steam Boiler, Canning line, Steam Kettles, Bottling line, Cabinet and Tray Driers, Pulpers, Brookfield Viscometer, etc.

#### Dairy Technology Laboratory

The department has a well-equipped dairy technology lab with facilities of handling platform and advanced milk testing procedures.

#### Food Engineering Laboratory

The Laboratory is well-equipped with facilities of Texture Analyser, Dynamic Rheometer, Spray Drier, Freeze Drier, Evaporator, Milling Equipment and Single Screw Extruder.

#### Microbiology Laboratory

The department has microbiology lab equipped with Laminar Flow Apparatus, Incubator, Autoclave, Fermentor, Olympus Microscope, etc. for carrying out microbiological tests and analysis.





## Placement Brochure

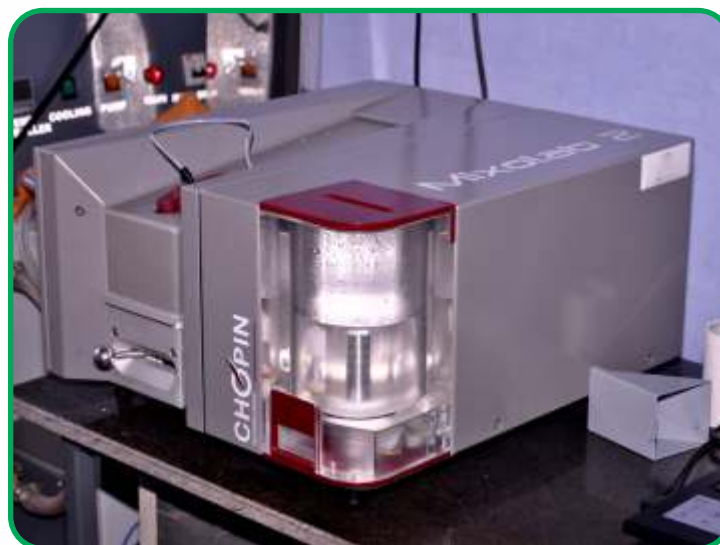
### Sugar Engineering Laboratory

This includes various instruments and machines like 3 Roller Mill, Ball Mill, Rapi Pol Extractor, Weighing Machine, Preparatory Index Measurement etc. Students are also taught about drawing & design features of various sugar & alcohol industry unit operations.



### Confectionery Laboratory

Students are given hands on experience in making products like fondants, hard boiled candy, caramels, toffee, pulled sugar, chocolate, etc.



## Department of Food Science & Technology



### Instrumentation Laboratory

The laboratory is equipped with Polarimeter, Saccharimeter, pH meters, Turbidometer, Refractometer, Conductivity meters, Spectrophotometer, Flame Photometer and other state of art machinery. In this laboratory instruments are used for the study of pol, brix, turbidity, pH, ash measurement and for the determination of color and concentrations of other components present in the sugarcane juice and ethanol.

### Sophisticated Instrument Laboratory

The equipments of this lab are used to get instant pol, brix, rheology, moisture determination in sugar/alcohol, sugar crystal size and angle determination etc. This lab is equipped with HPLC, Abbemat, Sucromat, Sucroscan, UV VIS Spectrophotometer, Brook Field Rheometer, Karl Fischer Titrator, NIR Spectrometer, Digital Polarimeter, Stereo Microscope, Digital Camera with pro plus software, etc.







## Placement Brochure

### Alcohol Technology Laboratory

Various experiments related to the alcohol industry like microbiology, biochemistry, fermentation are performed in this laboratory. This lab is equipped with Incubator, Laminar Flow, Fermentor, Sterilization Autoclave, Gas Chromatograph, Isocratic HPLC etc. & other state of art machinery.



## Department of Food Science & Technology



### Our Invitation



A world class University that does cutting-edge research, with superb facilities, inspiring teachers and absorbing courses that attracts the most eminent companies- there are plenty of good reasons for considering Guru Nanak Dev University for placements.

### Our Recruiters

- |                        |                                    |
|------------------------|------------------------------------|
| • Vadilal              | • Shree Renuka Sugars Ltd.         |
| • Adani Wilmar Limited | • Uttam Sugars, Ghaziabad          |
| • ITC Limited          | • United Breweries, Ludhiana       |
| • Nestle               | • Rana Sugar Works, Beas           |
| • Pepsico              | • Grover Wines, Bangalore          |
| • Coca Cola            | • SAB Millers, Guwahati            |
| • Cremica              | • Spray Engg. Devices Ltd., Mohali |
| • Dabur                | • SR Fine Chemical Ltd, Delhi      |
| • Markfed              | • DIFTEC, Delhi                    |
| • Verka                | • ISGEC, Delhi                     |
| • Parle                | • Mohan Maekens, Delhi             |