

Krushival Shikshan Prasarak Mandal's

# Rajarambapu College of Sugar Technology, Islampur

Sanctioned by Government of Maharashtra  
Affiliated to Shivaji University, Kolhapur



Empowerment through...  
Science & Technology

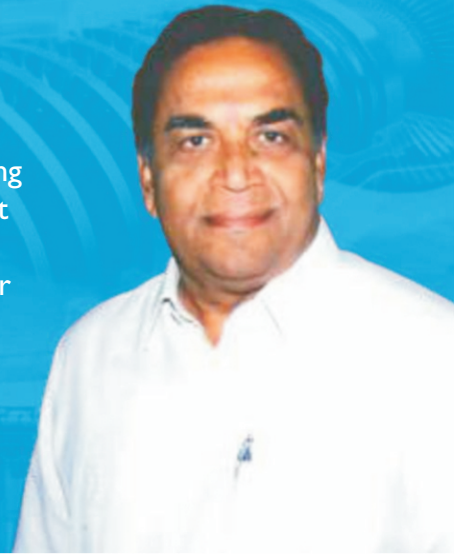


## Leadership

Mr. Babasaheb Dattajirao Pawar (M.Sc.Agri.) Total 55 yrs experience in sugar and allied industries of which 25 yrs as Managing Directors. He is a Chairman of Rajarambapu College of Sugar technology, He is Member of Governing Council of Deccan Sugar Technology Association (DSTA), He is Ex. Technical Vice president of Deccan Sugar Technologists, Pune., He is Ex. Managing Director of Vishwasrao Naik Sahakari Sakhar Karkhana Ltd., Chikhali. He is a founder chairman of number of organization working in education, agriculture, health care sector

## Awards

Various awards from The International Association Of Lions Clubs.  
Best Managing Director by Vasantdada Sugar Institute Pune.  
Over all Performance Award by Bhartiya Sugar.



Rajarambapu College of Sugar Technology follows a philosophy of "Knowledge is a Power". Today in this 21st Century, the Sugar industry is one of the pioneer industries amongst all industrial worlds in India. Especially the state of Maharashtra is highest Sugarcane cultivating and crushing state of India. The Sugar industry has absorbed many technologist, expert technicians, and allied institution and supporting industrial units on large scale. Hence it is called as a Architect of Indian Village Economy.

But till this time, there is a lack of separate educational course providing the skilled expertise knowledge to step into the shoes of "Sugar Technologist" Considering the development taking place in the Indian Sugar industry.

With the intention of , establishing the expert skilled Manpower required for sugar and allied industry, through constant innovative research education and development, this college is established vide sanction by Government of Maharashtra & affiliated to Shivaji University, Kolhapur in the town Islampur, where this college is situated, is on of the border of Sangli & Kolhapur District in western part of Maharashtra ,Where there is wide range of Sugar Factories.

We at Rajarambapu College of Sugar Technology provide the amenities to encourage the students to meet the challenges in their own strides. The structure of courses, availability of huge in Plant Training, Laboratory facility, Library facilities will help the students in developing the confidence power with knowledge in real life work environment.

The college has good infra -structural set up, competent and student caring facilities, advisors and academicians with highly expert know ledge in different aspects of Sugar Techno logist. We the management team, wishes you the success and invites every students to experiment with the hidden talent amongst them and to prove that they are the BEST.....!!!!

**- Mr. Babasaheb Pawar**  
Chairman

***Your Success is our reward...!!***



# Make Your Success Sweeter...

**Vision** : Leading edge Technology for the sugar and allied industries.

**Mission** : To emerge as one of the most preferred institute, always providing high technical knowledge of sugar and allied industry by adopting highest standard of professionalism and excellence on the sound footing of basic technical and managerial skill, research capabilities to lead and to use technology for the progress of sugar and allied industries.

## Principal

- 35 years of teaching experience
- Published 14 research papers in reputed International/National journals.
- Received NCC Director General (DG) Commendation Award 2018 from D. G. NCC, New Dehli.
- Received 'Best ANO' Award in 2015 from Group Commander, Kolhapur Group.
- Member of Academic Council of Dhananjayrao Gadgil College of Commerce, Satara from 2019 - 2021.
- Member of the board of Studies in Statistics, Shivaji University, Kolhapur during 2010-2015 and 2018-2021.
- Member of the board of Studies in Statistics as well as board of Studies in NCC, of Dhananjayrao Gadgil College of Commerce, Satara during 2016 - 2021.
- Life Member of Indian Society for Probability and Statistics (ISPS).
- Secretary of Shivaji University Statistics Teachers' Association during 2003 – 2012.
- Published three books of Statistics.



**Dr.A.N.Basugade** M.Sc.,Ph.D.

## Technical Director

Mr.V.R. Kaledhonkar (FSTA), ANSI (Sugar), Technical Director, Rajarambapu College of Sugar Technology. He has worked in various sugar factories for 40 years as Deputy Chief Chemist, Chief Chemist, Quality Control Officer & General Manager. He is a Fellow Member of Sugar Technologists Association, New Delhi. He has received several awards. He is Life Member of Deccan Sugar Technologists Association, Pune. He has published several Technical Papers in various seminars of DSTA/STA. At present he is also working as PRMC (project review monitor committee) member for project pre-clarification of molasses to enhance alcoholic production sponsored by Principle Scientific Advisor to Government of India.



**" He is Awarded by DSTA Pune, in 2016 with " Lifetime Achievement Award. "**

## INTRODUCTION

Science and Technology plays an important role achieving national development. It is well accepted fact that while teaching conventional courses of pure sciences; the graduates must get training in technology oriented courses.

Therefore Government of Maharashtra by order no NGC/2010/247/10/MS- 4 & Shivaji University, Kolhapur has Permitted to start job oriented course B.Sc. in sugar tech. India is Leading County in Sugar Production in World & Maharashtra Tops in Sugar Production in India. This potential made Shivaji University as an ideal place to Start various Courses related to Sugar & Allied Industries.

This Course includes important aspects related to, the method of Sugar manufacturing, Sugar Engineering, Process control system, Chemical control, Chemical Engineering.

## EMPHASIS ON

- Training the Students for advanced methods of Sugar production processes.
- Training the personal for production of sugar and allied products
- Training the personal to start small scale sugar based industries.
- Training the personal for water processing and pollution control.
- Training the personal for Alcohol & Ethenol production Industries.

## HIGHLIGHTS

- Well equipped laboratory.
- Qualified and experienced teaching staff.
- Internet facility
- Rich E –library facility
- National & International journals
- Eco-Friendly Campus
- Institute is Tie -Up// MOU signed with different sugar Industry, Distillery Industry
- Digital Classroom.
- Online Teaching.
- Industry Expert Lecture
- Scholarship
- Stipendary Facility

## ASSOCIATE MEMBER

Sugar Technology Association of Indian  
Deccan Sugar Technology , Pune

## Industrial in plant Training & Research Project

Inplant training, enables them to acquire more practical knowledge of factory working. The project reports are submitted before sixth semester examination. The reports submitted by the student will be assessed by experts from the industry during the viva voce examination.

## Biotechnology & Production Department

- Biotechnology production department with its expert team develops the premium quality Biofertilizers & Bio pesticides which is perfect blend of higher CFU
- Wide Variety of Products develop by above department.



## B. Sc. Sugar Technology < Part - I

### Sem – I

Applied Chemistry – I  
(Sugar chemistry)  
Applied Chemistry – I  
(Bio chemistry)  
Applied Physics-I  
(Properties of Material & Thermodynamics)  
Applied Physics-I  
(Optics & Crystallography)  
Applied Math's-I  
(Algebra & Geometry)  
Applied Math's-I (Differential Integration & calculus)  
Sugarcane Agriculture– I  
(Sugar cane Agronomy)  
Sugarcane Agriculture– I  
(Sugar cane Pathology)  
English – I

### Sem – II

Applied Chemistry – II  
(Organic chemistry)  
Applied Chemistry – II  
(Physical chemistry)  
Applied Physics-II (Basic Instrumentation)  
Applied Physics-II  
(Sugar Instrumentation)  
Applied Math's-II  
(Descriptive statistics)  
Applied Math's-II (Probability Theory)  
Sugar manufacturing– I  
(Clarification)  
Sugar Manufacturing– I  
(Evaporation)  
English – II

## B. Sc. Sugar Technology < Part - II

### Sem – III

Sugar Engineering-(Mill House)  
Sugar Engineering- (Boiler & Turbine)  
Sugar manufacturing: II (crystallization)  
Sugar Manufacturing: II (Centrifugal)  
Equipment Design- (Clarification)  
Equipment Design- (Evaporation & Crystallization)  
Environmental Studies (Theory)

### Sem – IV

Chemical Engineering- (Heat & Moment Transfer)  
Chemical Engineering-(Unit Operation)  
Capacity Calculation- (Clarification)  
Capacity Calculation- (Evaporation & Crystallization )  
Chemical Control- (Mill House)  
Chemical Control- (Boiling House)  
Environmental Studies (Project)

## B. Sc. Sugar Technology < Part - III

### Sem – V

Process Instrumentation & Control: I  
Process Instrumentation & Control : II  
Advanced Sugar Technology  
Advanced Sugar Engineering  
English – III

### Sem – VI

Allied Sugar Manufacturing  
Allied Co Product  
English – IV  
**Elective :**  
Alcohol Technology : I & II  
Water Management in Cogen : I & II,  
Business Management and  
Marketing : I & II

### Eligibility :

Direct admission  
10+2 Science (Both A & B Group), D. Pharmacy, MCVC,(10+2)Vocational Courses,  
Diploma in (Mechanical, Electrical, Sugar Tech),

**In take capacity :** 50

### Job Opportunity :

Sugar, Alcohol, Ethanol & Allied industries, Government Services, Industrial Research, Agriculture & Agro based industries and Much More.....

## M. Sc. Sugar Technology

### Sem – I

Sugar cane Agriculture  
Sugar Processing – clarification & evaporation  
Sugar engineering – Milling  
Chemical Control

### Sem – III

Equipment's Capacity Calculation  
Sugar Processing – Crystallization  
Chemical Engineering –  
(Heat & Momentum transfer)

### Elective

- A) Bio-Chemical Engineering
- B) Electronic and Instrumentation Engineering
- C) Alcohol Technology

### Eligibility :

B.Sc. (Sugar Technology)  
B.Tech. (Food/Chemical Technology)

**In take capacity :** 50.

### Job Opportunity :

Sugar, Alcohol, Ethanol & allied industries, Government Services, Industrial Research, Agriculture & Agro based industries and Much More.....

### Sem – II

Sugar Chemistry  
Sugar Processing – Crystallization & finishing  
Sugar Engineering – Steam & Power Generation  
Equipment Design & Drawing

### Sem – IV

Sugar Processing – Finishing  
Allied Sugar Manufacturing  
Chemical Engineering – Unit Operation

### Elective

- A) Business Management & Marketing
- B) Water Management & Zero Discharge
- C) Pollution Prevention & control

B. Sc. (Physics/Chemistry/Math's)

B.E. (Sugar Engineering)

## M. Sc. Alcohol Technology

### Sem – I

Alcohol Technology - I  
Microbiology  
Bio-Chemistry  
Applied Chemistry

### Sem – III

Fermentation Technology - III  
Alcohol Technology-III  
Industrial Microbiology

### Elective

Sugar Technology  
Industrial Waste Treatment & Environmental  
Management Instrumentation & Automation  
in distillery

### Eligibility :

B.Sc. (Sugar Technology)  
B.Sc. ( Chemistry / Biochemistry / Microbiology /  
Biotech / Biotech(Entire) / Zoology Botany / Wine /  
Agricultural / Agricultural Biotechnology / Food Technology)

**In take capacity :** 50.

### Job Opportunity :

Alcohol, Ethanol & allied industries, Government Services, Industrial Research, Agriculture & Agro based industries and Much More.....

### Sem – II

Alcohol Technology-II  
Applied Microbiology  
Industrial Fermentation-I  
Applied Process Instrumentation

### Sem – IV

Alcohol & Beverages Production from grain & other Sources  
Production of ENA, Ethanol & IMFL  
Chemical Engineering ( Heat & Momentum transfer )

### Elective

General Engineering  
Pollution Prevention & Control  
Business Management & Marketing

B.Tech. ( Food / Biotech / Chemical Technology )

B.E. (Chemical Engineering / Biotech )



## Other Achievements

- 2013 -2<sup>nd</sup> prize 'Drama' District level youth festival Shivaji University, Kolhapur  
2015 -1<sup>st</sup> prize 'Mime' District level youth festival Shivaji University, Kolhapur  
2015 -3<sup>rd</sup> prize 'Mime' Central youth festival Shivaji University, Kolhapur  
2016 -3<sup>rd</sup> prize 'Mime' District level youth festival Shivaji University, Kolhapur  
2016 -3<sup>rd</sup> prize 'Boxing Competition', Zonal, Shivaji University, Kolhapur  
2018 -2<sup>nd</sup> prize 'Drama' District level youth festival Shivaji University, Kolhapur  
2018 -1<sup>st</sup> prize 'Poster Presentation' Workshop KBP College, Islampur.  
2015 -Best Paper Presentation Award from Rajendra Mahavidyalaya, Khandala.

## Faculty

### V.R.Kaledhonkar (Technical Director)

B.Sc.ANSI(Sugar Tech)

#### Sugar Technology

- |   |                        |
|---|------------------------|
| 1. S.V. Kulkarni<br>B.Sc.ANSI(Sugar)        | Assistant<br>Professor |
| 2. Mr. R. M. Pawar<br>M.Sc. (SugarTech.)    | Assistant<br>Professor |
| 3. Smt. S.S.Arekar<br>DSM, B.Sc(SugarTech.) | Technical<br>Assistant |

#### Alcohol Technology

- |                                 |                        |
|---------------------------------|------------------------|
| 1. Mr. M. L. Kadm<br>DIFT (VSI) | Assistant<br>Professor |
| 2. Smt. S. S. Sarnobat<br>M.Sc. | Assistant<br>Professor |
| 3. Dr. S. G.Patil<br>M.Sc.Ph.D. | Assistant<br>Professor |

#### Sugar Engineering

- |  |                        |
|--|------------------------|
| 1. Mr.A.V. Magadum<br>ME                   | Assistant<br>Professor |
| 2. Mr. B. N. Patil<br>DME (Sugar)          | Assistant<br>Professor |
| 3. Mr. N. R. Savekar<br>B.Tech +Sugar Eng. | Assistant<br>Professor |
| 4. Mr.V. P. Bhaskar<br>ME.(Chem.Eng.)      | Assistant<br>Professor |

#### Science Subjects

- |                               |                        |
|-------------------------------|------------------------|
| 1.Smt.N.M.Patil<br>M.Sc.      | Assistant<br>Professor |
| 2. Smt.K.A.Sande<br>M.Sc.     | Assistant<br>Professor |
| 3. Smt. J.M. Mahadik<br>M.Sc. | Assistant<br>Professor |
| 4. Mr.A.M.Ghadge<br>M.Sc.     | Assistant<br>Professor |

#### Physical Director

Mr.A.B.Mujawar  
M.Ph.Ed.(SET/NET)

#### Librarian

Mr.S.K.Gaikwad  
M.Lib. & I.Sc.

# Certificate Courses

## 1. Certificate Course in Sugar Engineering (CCSE)

### Core courses

1. Extraction of Juice(milling)
2. Generation of Steam (Boiler)
3. Generation of Power.(Power Turbine)
4. In-plant Training
  - a) Project
  - b) Seminar
  - c) Viva

**Duration** : 1 year (6 months Theory +6 months Inplant training)

**Eligibility** : Diploma in mechanical/production/electrical/instrumentation Engineering.

**Objective** : To provide the Training to the Engineering. Regarding the sugar industry working.

**Opportunity** : Sugar and allied industry...

## 2. Certificate Course in Distillery Plant Operator (CCDPO)

### Core courses

1. Fermentation technology
2. Alcohol technology
3. General engineering
4. In plant training
  - a) Project
  - b) Seminar
  - c) Viva

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : 12th Science

**Objective** : To provide the theory and practical knowledge, How, distillery plant operation Performed.

**Opportunity** : Distillery unit...

## 3. Certificate Course in Turbine Operator (CCTO)

### Core courses

1. PLC (Programmable Logic Control)and DCS (Distributed Control System)
2. PLC/DCS Systems in Milling and Boiler of Sugar Industry
3. PLC/DCS Systems in Boiling House of Sugar
4. In plant training
  - a) Project
  - b) Seminar
  - c) Viva

**Duration** : 1 year (6 months theory +6 months In plant training)

**Eligibility** : 12th Science

**Objective** : To provide the training to the Operators. regarding the DCS System in sugar industry.

**Opportunity** : Sugar and allied industry...

## 4. Certificate course in DCS operator (CCDCSO)

### Core courses

1. Turbine Theory
2. Turbine Design
3. Turbine & Boiler Operation
4. In plant training
  - a) Project
  - b) Seminar
  - c) Viva

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : 12th Science

**Objective** : To provide the training to the engineering. section relate to turbine section.

**Opportunity** : Sugar and allied industry...



# Certificate Courses

## 5. Certificate Course in Analytical Chemist for Sugar Lab (CCACS)

### Core courses

1. Sugar Manufacturing Process
2. Chemical Control
3. Laboratory Quality Plan
4. In plant training
  - a) Practical's
  - b) Project
  - c) Viva

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : B.Sc with Physics/Chemistry/Math's/Sugar technology

**Objective** : To provide the training to the analytical work of sugar industry laboratory.

**Opportunity** : Sugar and allied industry...

## 6. Certificate Course in Analytical Chemist for Co-Gen Lab

### Core courses

1. Sugar engineering.(Steam and Power)
2. Boiler feed water treatment for industrial boilers and power plant
3. Laboratory Quality Plan and Preparation of Lab Chemicals
4. In plant training
  - a) Practical's
  - b) Project
  - c) Viva

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : B. Sc with Physics/chemistry/Math's/Sugar technology

**Objective** : To provide the Training to the analytical work regarding the boiler water and treatments.

**Opportunity** : Sugar and allied industry...

## 7. Certificate Course in Analytical Chemist for ETP lab

### Core courses

1. Sugar Manufacturing Process
2. Water and waste Water treatment
3. Laboratory Quality Plan and Preparation of Lab Chemicals
4. In plant training
  - a) Practical's
  - b) Project
  - c) Viva

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : B.Sc with Physics/chemistry/Biology/ Microbiology/ environment/Sugar technology.

**Objective** : To provide the training to the analytical and operational work of effluent treatment plant of sugar distillery unit.

**Opportunity** : Sugar and allied industry...

## 8. Certificate Course in Manufacturing Assistant (CCMA)

### Core courses

1. Introduction of sugar manufacturing
2. Clarification of juices & amp; Evaporation
3. Maintenance of juice section
4. Juice lab Analysis
5. Juice supervision In plant training

**Duration** : 1 year (6 months theory +6 months in plant training)

**Eligibility** : 12 Science pass

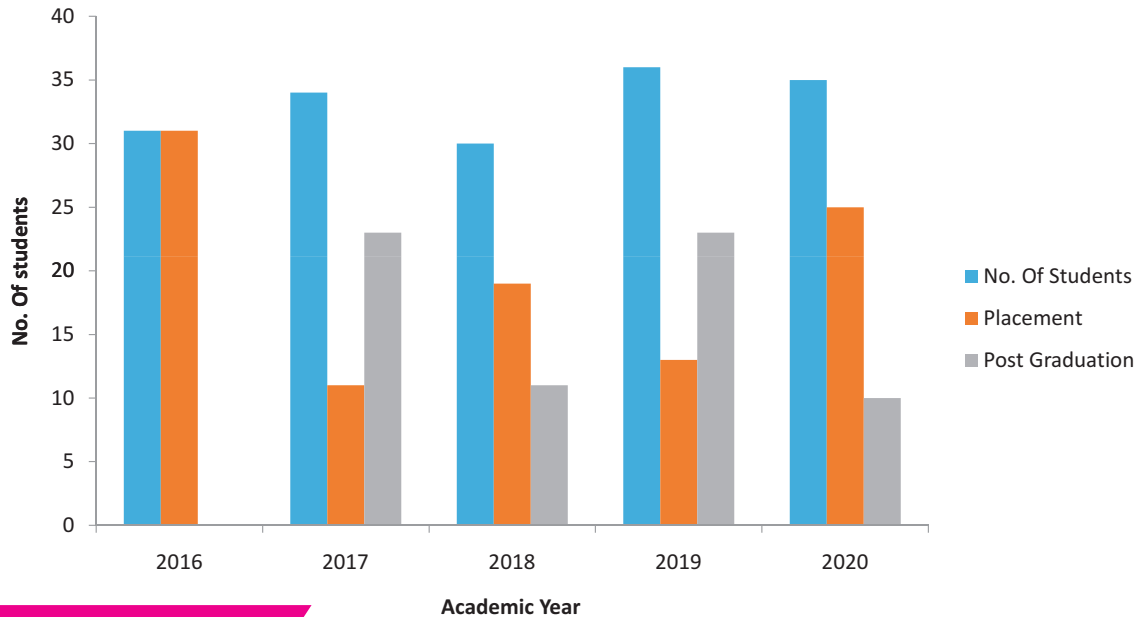
**Objective** : To check quality and supervise the boiling house section. for maintain the juice quality.

**Opportunity** : Sugar Industry-juice supervisor

# Training and Placement Department

- Hands on training in Sugar, Alcohol & Allied Industry.
- Direct placement in Sugar, Alcohol & Allied Industry.
- Student Training Internship
- GAT Programme

## Placement Graph



## Our Recruiters



## Our Pride



**Sangram Anil Patil**  
Distillery chemist  
Shreenath Mhaskoba  
S. K. LTD, Patethan



**Pandey Nadalal**  
Sr. Manager Process  
(United spirits Limited)  
a Diageo group company



**Niranjan patil**  
Junior mfg chemist  
Manali Sugar Ltd Malgan  
Tal.- sindagi Dist.- vijapur



**Somgonda Pargonda patil**  
Melkar TTibiofuels pvt  
LTD Gadhinglaj



**Suyog Sagar Upadhye**  
Yashraj ethanol  
Pvt Ltd Satara



## Facility & Specialites

**Well Equipped Laboratory for each course**

- 2) Practical In plant Training**
- 3) Qualified and well Experienced staff**
- 4) Computer & Internet facility**
- 5) Rich E-Library with access**
- 6) ECO-Friendly Campus**
- 7) Internet & Wi-Fi Facility**
- 8) Training & Placement Department**
- 9) Scholarship & Education Loan**
- 10) EBC Scholarship Facility available for Open Category Students**

## Industrial In-Plant Training

- \* Industrial Training after completion of each topic for Technical Subjects.**
- \* Also practical Knowledge question bank is provided after each topic to the Students.**



## ACTIVITIES

- **Rajarambapu College of Sugar Technology, Islampur.**
- **Krushival Skills Development Vocational Training Center, Islampur.**
- **New Junior College, Islampur. (Science & Commerce)**
- **Rajrambapu college of Sugar Technology ,Yashwantrao Chavan Maharashtra Open University, Study Center for B. Sc ( P/C/M)**
- **Biotechnology Production Department.**

### **Bio fertilizer like,**

Acetoshakti, Rizoshakti, Phosphrus Solubilize Bacteria ( PSB )  
Potash Solubilize Bacteria (KSB), Decomposer ,Azoshakti

### **Bio Pesticides like,**

Metashakti, Tricoderma, Bacillena Breuria.

## **Rajarambapu College of Sugar Technology.**

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