

NATIONAL SUGAR INSTITUTE

MINISTRY OF CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION
DEPARTMENT OF FOOD & PUBLIC DISTRIBUTION
Government of India

KANPUR



ACADEMIC BULLETIN 2018

For

**DIPLOMA IN SUGARCANE PRODUCTIVITY AND MATURITY MANAGEMENT
(DSPMM)**

DIPLOMA IN SUGARCANE PRODUCTIVITY AND MATURITY MANAGEMENT

ACADEMIC CALENDAR

1.	Admission	July-2018
2.	Theory & Practical Classes	July-2018 to December- 2018, April-2019
3.	Events organized by Games & Sports, Cultural, Scientific Society	August/ September-2018
4.	Educational Tour	1 to 15 January - 2019
5.	In plant Factory Training in Experimental Sugar Factory (E.S.F.) at the Institute.	16 January-2019 to 15 March-2019
6.	Examination	May- 2019
7.	Campus Interview through placement cell	As per the demand and Convenience of the industry.

Note: 1. The working of the Institute is from Monday to Friday i.e. five days in a week.

2. The Institute also observed holidays for Central Government Offices in Kanpur.

1. RULES FOR ATTENDANCE AND LEAVE

1.1 A student is required to put in a minimum of 75 percent attendance during each session in each subject. Non-compliance of this rule will render him liable to be debarred from appearing at the Diploma Examination.

1.2 Ordinarily, leave for 15 days in admissible to a student is an academic year.

1.3 Application of leave for absence must be handed over at the Education Section on the prescribed form.

1.4 Application for leave must be counter signed by the Hostel Warden or the approved guardian.

1.5 Application for Sick leave must be accompanied by a certificate from the Medical Officer of the Hostel.

1.6 Absence without leave by a student drawing a scholarship may result in the cancellation or reduction of his scholarship.

2. **RAGGING** : *Ragging is strictly prohibited vide directions of Hon'ble Supreme Court in SLP No2495 of 2006 dated 16.05.2007 and in Civil Appeal No 887 of 2009, dated 08.05.2009. Any student found guilty of ragging and /or abetting ragging is liable to be punished.*

3. EDUCATIONAL TOUR

Students are required to proceed on educational tour to sugar factories, in order to acquaint themselves with their working and thus add to their knowledge. The educational tour is an essential part of the Course Programme and every student must participate in the tour. No exemption from Educational Tour shall be given. Students not proceeding on Educational Tour shall be detained in the same class. **Failures are required to repeat the educational tour also.**

4. SCHEME OF EXAMINATIONS

4.1 The examinations are held at the appropriate time as per Institute's calendar. Class tests may also be held during the middle of the session. Marks obtained at these tests and examinations as well as the marks assigned for class work and lecture notes of each student will be recorded for his class marks in each term.

4.2 Classification of Results:

It is necessary to pass in each subject separately in Theory and Practical. The minimum pass marks in theory 35% and 50% in Practical. The candidate would be declared to have passed a particular course in case he secures a minimum of 50% marks in aggregate.

The division to students at the end of examinations are given according to the following standards:-

First Division	75% and above
Second Division	60% and above
Third Division	50% and above

4.3 Supplementary Examination

- 4.3.1 If a candidate fails in maximum of any two subjects at the First/Second/Final year examination but secures 50% marks in aggregate, he will be allowed to appear in the supplementary examination for these two subjects.
- 4.3.2 A candidate allowed to appear in the supplementary examination would be provisionally promoted to the next higher class and in case he fails in the supplementary examination also, he would be reverted to the lower class on declaration of supplementary examination results.
- 4.3.3 The student who passes in the said examination of any course in supplementary examination will be declared as “PASSED” and no division will be awarded to him.

4.4 Re-admission of Failed Students

If a candidate fails in Final Examinations (including supplementary examination). He/she will be permitted to take the re-admission again in the following year, provided he/she attends the Institute as a regular student in the same class in which he/she had failed. If a student fails three times in a particular class he will be not re-admitted in that class in the Institute. If after failing in the class once a candidate does not take re-admission in the same class in the immediate next session his/her case will not be considered in future for re-admission.

4.5 **Schedule of marks:** The schedule of marks for different subjects for the examination is as follows.

EXAMINATION IN MAY

SUBJECT	MAXIMUM MARKS
THEORY	
Sugarcane Agronomy	100
Post-Harvest Deterioration and Procurement of Sugarcane . . .	100
Sugarcane Varietal Distribution and Insect Pest Management . . .	100
Sugar Technology(theory)	100
PRACTICAL	
Sugarcane Analysis	100
SESSIONAL	
Inplant Factory Training (Factory Practice) - - -	50
Educational Tour	50
Class marks	50
GRAND TOTAL	650

SYLLABUS

DIPLOMA IN SUGARCANE PRODUCTIVITY AND MATURITY MANAGEMENT

SUBJECT : SUGARCANE AGRONOMY (THEORY)

CODE : SM/101

MAX. MARKS : 100

1. Sugar Producing Plants.
2. History, Origin and Distribution of Sugarcane, Major Sugarcane producing countries in the world. Area under sugarcane cultivation in different states in India.
3. Soils: Definition, weathering and soil formation, Composition and classification of Indian Soils.
4. Cultivation of Sugarcane, preparation of land, period of sowing, cane seed,
5. Methods of planting, irrigation, optimum conditions for germination, tillering and growth and maturity of the crop, water and weed management in Sugarcane Crop.
6. Nutrition of Sugarcane, Major (Macro) and Micronutrients and their deficiency symptoms and remedies.
7. Ratooning in sugarcane & its management Practices.
8. Sugar beet: Importance of sugar beet in sugar production in the world, brief idea on cultivation of sugar beet including time of sowing, fertilizers and irrigation and its comparison with sugarcane.

SUBJECT : POST-HARVEST DETERIORATION AND PROCUREMENT OF SUGARCANE (THEORY)

CODE : SM/102

MAX. MARKS : 100

- 1.Pre- harvest maturity survey of sugarcane
2. Methods of testing maturity in sugarcane
- 3.Methods of harvesting and transport of sugarcane.
- 4.Measures to control harvesting and transport in order to supply fresh and mature cane to sugar factory.
- 5.Procurement practices in different states
- 6.Sugarcane control Act, FRP and SAP

**SUBJECT : SUGARCANE VARIETAL DISTRIBUTION
AND INSECT PEST MANAGEMENT (THEORY)**

CODE : SM/103

MAX. MARKS : 100

1. Recommended varieties and their main characteristics suitable areas
2. Plant Protection Measures for Sugarcane
3. Major diseases and pest of Sugarcane and their management
4. Factors affecting sugar yield

SUBJECT : SUGAR TECHNOLOGY(THEORY)

CODE : SM/104

MAX. MARKS : 100

1. General idea about sugar factories, their capacities and type of sugars produced, Flow diagram of process of plantation white sugar, simple calculations for determining pol% cane, bagasse% cane, Java Ratio, DMF and Fibre% cane. General idea about the by-product of the sugar Industry and their utilization for value addition.
2. Apparent and true purity, refractometric and hydrometric brix, effect of dextran on sugar estimation and on processing, removal of dextran, colouring bodies present in sugar cane juice, determination of colour value of sugar cane juice (ICUMSA), effect of staling of cane on processing.

SUBJECT : SUGARCANE ANALYSIS (PRACTICAL)

CODE : SM/105

MAX. MARKS : 100

1. Determination of maturity of Sugarcane using cane puncturing needle and Hand Refractometer
2. Brix, Pol, Purity determination of Cane Juice.
3. Reducing sugar estimation.
4. Brix survey of sugarcane
5. Determination in Pol in Cane and Fiber percent in Cane.
6. Determination of Extraneous matter in Cane
7. Determination of pH & Titratable acidity in Cane Juice.
8. Determination of pH, EC, OC, Available N, P & K in soil
9. Determination of Dextran in Cane Juice (with the collaboration of Organic Chemistry)