

CERTIFICATE COURSES IN SUGARCANE AGRICULTURE

The South African Sugarcane Research Institute (SASRI) provides training in sugarcane agriculture. Two certificate courses are on offer – a three week Junior Certificate Course and a more extensive five week Senior Certificate Course. Both courses are conducted in English at the SASRI offices in Mt Edgecombe, Durban.

COURSE ATTENDANCE

The Junior Course is aimed at junior farm managers, supervisors, agriculture students, farm clerks and development officers while the Senior Course is attended by more experienced farm managers, farm owners, extension specialists and sugarcane researchers.

Approximately 50 learners are accepted for each course, which are held either once or twice a year, depending on demand.

Students come from South Africa as well as many sugar-producing countries in southern Africa, including Malawi, Mozambique, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

ENTRY REQUIREMENTS

The general entry requirement for the **Junior Certificate Course** is Std 10 (Grade 12), preferably from an agricultural school with at least two years on-farm experience.

A student who has a Std 8 (Grade 10) and relevant agricultural experience will be considered, depending on the outcome of an assessment and interview process. Since the course is delivered in English and all assessment is carried out in English, students must be able to read and write English.

The entry requirement for the **Senior Certificate Course** is an undergraduate degree or diploma, preferably in agriculture or the sciences. A student who has a matric (Grade 12) and has passed the Junior Certificate course with a Merit Pass (65% and above) will be entitled to enroll for the Senior Certificate course. Students who only have a Std 10 (Grade 12) certificate may be allowed access, following an assessment and interview.

COURSE STRUCTURE

Both certificate courses comprise both lectures and practicals. These are presented by specialists, most of whom are SASRI Researchers and Extension Specialists. Guest lectures covering a variety of topics of special interest are also given.

Students are assessed on the knowledge acquired through two hour tests. Certificates are awarded in three classes namely Honours (80% and above), Merit (65 – 79%) and Pass (50–64%). Students who fail more than three subjects will fail the course.



COURSE CONTENT

Senior Certificate Course subject areas:

MODULE	SUBJECTS	MODULE	SUBJECTS
Environmental management	Environmental awareness Sugarcane growing and the environment Environmental management theory SUSFARMS®	Diseases and Pests	Sugarcane diseases Seedcane production Insect pests Principles of pest control Nematodes and their control Biosecurity
Soils	Physical properties of soil Soil water relationships Soil biology Organic matter Soil chemistry, acidity and liming Plant nutrition, nutrient application and management Green manures Salinity and sodicity Soil quality assessment	Varieties	History Breeding Botany: structure, propagation and physiology of cane plants Agronomic characteristics Identification of varieties Choice of varieties
Weed control	Biology and control Herbicides and their application	Mechanisation	Principles Tractor performance and power transmission Costing and planning Application of chemicals (incl calibration)
Husbandry	Land preparation Planting Ratoon management Field drainage	Harvesting	Chemical ripening of sugarcane Cane quality Cane payments Estimating and manual cutting
Land use planning	Soil Conservation Pegging & construction of structures Drafting and Land Use Plan	Management	Farm management Financial management People Management
Irrigation	Principles Systems Control Design	Weed control	Biology and control Herbicides and their application

Junior Certificate Course subject areas:

MODULE	SUBJECTS
Botany	Structure & growth of the sugarcane plant
Varieties	Agronomics, Breeding, Identification, Choice
Husbandry	Land Preparation Planting Ratoon management Drainage
Pests and Diseases	Diseases - causes and control Insect pests Pests: principles of control Nematodes
Weed control	Classification Effects of weeds Weed control
Soils and Nutrition	Property of soils Soil water management Fertiliser, lime, gypsum and organic products Organic matter Plant nutrition and soil chemistry Soil & leaf sampling
Harvesting	Cane quality Cane estimates Harvesting management
Irrigation	Irrigation principles Management Irrigation systems
Mechanisation	Mechanisation costs Mechanical operations Maintenance Record keeping
Farm Planning	Introduction to farm planning Use of levels
Environmental Management	Environmental change Natural resources and sugarcane farming Environmental impacts, control and management Environmental law SUSFARMS®
Farm Management	Introduction to farm management Record keeping Balance sheet and income statement Worker involvement and management

COURSE FEES AND APPLICATION PROCEDURES

Course fees, application procedures and closing dates are indicated on separate application forms which can be downloaded from www.sugar.org.za/sasri or from the course coordinator, Mr Raj Balbador at educane@sugar.org.za or SASRI Knowledge Manager, Mrs Michelle Binedell michelle.binedell@sugar.org.za