Model for the design and implementation of training programmes to effectively prepare Food Technologists for the world of work: An holistic approach
Jessy Van Wyk

1. Department of Food Technology, Cape Peninsula University of Technology (CPUT), P. O. Box 1906, Bellville 7535, South Africa
*vanwykj@cup.ac.za

Designing and implementing a training programme that addresses the various facets that culminate in the attributes that are the hallmark of a well-skilled practitioner in the field of Food Science and Technology is no mean feat. The elements of such a training programme are: 1) A well-structured curriculum, with wide stakeholder input; 2) Definition of learning outcomes (LOs) based on the desired graduate attributes and alignment of the LOs to teaching practice (teaching tools, lesson plans). Addressing the various Food Science and Technology is a multi-faceted and, therefore a complex field of study. Training Food Technologists to produce with an all-round mastery of the requisite scientific knowledge and practical skills is an even greater challenge. To achieve this, a pilot-scale food processing training facility was designed and constructed with all the features required to practice all of the elements of an accredited food processing facility, including the important aspects of food safety. The attendant laboratories where training in terms of food analytical techniques occur, are operated on the basis of Good Laboratory Practice, which include systems ensuring good practice regarding sampling and sample handling, use of accredited methods and method validation, data handling and analysis and using appropriate statistical tools where relevant. The semi-commercial activities of the Agrifood Technology Station, attached to our department, further assist us to create the dynamic environment required to achieve maximum exposure of our students to a milieu that enables us to integrate concepts, as well as minutely simulate the “real world of work”, whilst still addressing the rigours of a training programme with defined learning outcomes. The aforementioned aspects of the training model are presented. For example, using a food production-based practical as a teaching tool, the students adhere to good practice regarding personal hygiene (e.g. handwashing, robing and disrobing). Students also need to apply relevant Food and Occupational Safety legislation, e.g. ensuring directional flow of production lines and making sure that regulatory ventilation standards are met. Management principles are integrated by role-play (some students are Production and Quality managers for the day). Quality control (QC) and assurance (QA) are embedded since the operating systems in the Plant mandate the correct completion of relevant QC/QA forms. This activity necessitates the application of analytical techniques, such as microbiological, chemical and sensory analyses.

KEYWORDS: knowledge, skills, food technology practitioners, food science and technology.