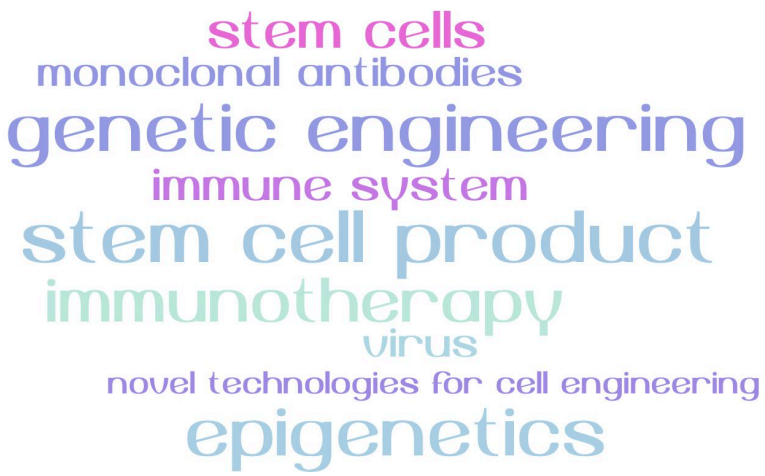
BN4403 CELLULAR BIOENGINEERING

WHAT IS THIS COURSE ABOUT?.

Cellular Bioengineering is a discipline that deals with the manipulation of cells on a single cell level. In bioproduction technology this can be done by changing culture conditions, introducing genes or adding drugs. In order to manipulate cells knowledge is required of gene regulation, protein synthesis and post-translational processing as well as external conditions governing cell behaviour. This module covers at an intermediate to advanced level bioengineering aspects of cell structure and function in the context of cell biology and clinical aspects. The clinical aspects include gene regulation, stem cells, virus mechanisms, immune systems and immune therapy. This course is intended to support the prime objective of integrating engineering with biomedicine while also providing a clinical context. This course will be taught by Dr. Cheow Lih Feng (bieclf@nus.edu.sg) and A/P Toh Wei Seong (dentohws@nus.edu.sg)



WHY YOU SHOULD CONSIDER THIS COURSE

This course is suitable for those who are interested in explore how to tinker with cells to make useful everyday products and to create new drugs and therapies for diseases. A broad range of updated topics focusing on cutting edge molecular and cellular tools will be covered. This course will be very useful for students considering a career in tissue engineering, pharmaceutical industry, biotechnology and research. A final group project will allow students to explore a contemporary topic by integrating all the aspects taught in the course.

NUS National University of Singapore
College of Design and Engineering
Department of Biomedical Engineering