

Advanced Bioorganic Chemistry

School of Chemistry

College of Engineering and Physical Sciences

Details

Code 10860

Level of study Third/Final year

Credit value 10

Semester 1

Module description

This lecture course is divided into two parts. The first part of the course covers the biosynthesis of fatty acids. The second part of the course covers the biosynthesis of polyketides. The course is taught from a problem-solving viewpoint, and students will become familiar with the elucidation of biosynthetic pathways using a combination of isotopic labelling and NMR data. There is a significant component of student-centred learning: students are expected to do additional reading and the course will be examined by continuous assessment (one essay for JSS component).

The course outlines the way in which terpenes, steroids, carotenoids (these three are collectively referred to as mevalonates or isoprenoids), shikimates and mixed metabolites are formed in nature. The use/purpose of these products by plants and insects will also be presented.

Although what is given under "lectures" below describes the material covered in the course, not all of it will be covered *in detail* in the lectures. It will be necessary for students to fill in the details in some areas: students will be told when they need to do this, and references to books will be given.

This part of the course is concerned with the structure function and kinetics of enzymes. It builds on the material developed in the 2nd year bio-organic elective (module CHM2S6) and includes computer-based workshops to explore protein structure.