

# 650.463 Food Process Engineering

F : Project

## Project Scope

A major product of the New Zealand dairy industry is butter (milk fat), which is often viewed as a product with a moderate retail value. The market for milk fat is in decline, so that its prospects as a major export item are poor.

Your task as a group is to identify potential uses or applications of this feedstock, either for home consumption or export. As a group you will then have to select one option to study in more detail. You will be expected to report on the following

1. New ways of using milk fat/butter
2. Likely markets for the product(s)
3. Microbiological issues in the preparation, manufacture, distribution and shelf-life of the product
4. A chosen manufacturing route or process flowsheet
5. Indication of sales/manufacturing costs.
6. Any particular challenges involved in the manufacturing process, or requiring specific R&D input.

This is a group project activity and will involve working in groups of 3. At least one of the group will be a B.Tech student, and at least one a B.Eng. student.

**Report Submission - noon Tuesday June 6 @ C&M office.  
Zero marks for late reports.**

Each group member must submit their own report. We understand that duplication of information is likely to occur, but plagiarism of text is not acceptable and will result in a zero mark.

The minimum report length is 8 pages : the maximum report length is 10 pages. Reports must be legible and contain an executive summary, an introduction, conclusions, your name, group identifier and the names of the other group members.

There will be a prize for the best report submitted.

## Presentations

There are two presentation sessions, which mean that each group will have 10 minutes in total to present the results of their project. There is no limit on the number of speakers, just the number of OHP slides, at 5.

Marks will be allocated for presentation style as well as content, with marks being awarded by students and teaching staff.

There will be a prize for the best presentation in each session.

## Calendar

Note that this features significant changes from that given out in the Course Introduction.

M	May 15	T10	ABR <i>et al.</i>	<i>F - Project Seminar (1) - Introduction, Background and Grouping</i>
Tu	May 16	L37	ABR	E1 Dairy Processing
Tu	May 16	T11	DiW <i>et al.</i>	<i>F - Project Seminar (2) Project Description and Mechanisms</i>
W	May 17	L38	ABR	E2 Advanced Dairy Processing
Th	May 18	T12	ABR <i>et al.</i>	<i>F - Project Seminar (3) – Group Meetings</i>
M	May 22	L39	XDC	G Professional Communication & Job Application: Summary of the Labs
Tu	May 23	L40	DiW	E3 Sensors and Instrumentation
Tu	May 23	T13	DiW <i>et al.</i>	<i>F - Project Seminar (4) – Group Meetings</i>
W	May 24	L41	DiW	E3 Sensors and Instrumentation
Th	May 25	L42	DiW <i>et al.</i>	<i>F - Project Seminar (5) – Group Meetings</i>
M	May 29	T14	DiW <i>et al.</i>	<i>F - Project Seminar (6) - Presentations and Reports</i>
Tu	May 30	L43	MMF	E4 Microwaves
Tu	May 30	L44	DiW	<b>COURSE REVIEW and Exam Structure</b>
W	May 31	T15	Project	<i>F - Project Presentations Groups A-E</i>
Th	June 1	T16	Project	<i>F - Project Presentations Groups F-J</i>
<b>Tu</b>	<b>June 6</b>	☹	<b>Project</b>	<b>PROJECT SUBMISSION - noon</b>
<b>F</b>	<b>June 23</b>	☹	-	<b>EXAMINATION - am</b>

**Note** XDC, DiW and ABR will **not** be available for consultations outside the above Project Seminar times : they are playing the part of ‘consultants’. In practice, a company will only have a certain amount available for paying consultancy fees. It would cost too much to have consultants do the whole project – which would also run the risk of the IPR generated leaving your company.

**Examination Date : Friday June 23 – am.**

XDC/ABR/DiW  
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