

Course Outline (Higher Education)

School: School of Health and Life Sciences

Course Title: DOWNSTREAM PROCESSING

Course ID: SCBRW5086

Credit Points: 15.00

Prerequisite(s): Nil

Co-requisite(s): Nil

Exclusion(s): (SF487)

ASCED Code: 030307

Description of the Course :

This course will present a broad overview of the downstream processes that occur after fermentation and the scientific principles behind them. It will include the theory and practice of processes such as: clarification, sedimentation and filtration; carbonation, principles and processes of biological stabilisation; and filtration.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks..

Program Level:

AQF Level of Program						
	5	6	7	8	9	10
Level						
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	✓	■	■
Advanced	■	■	■	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Compare and contrast the principles and processes of clarification - sedimentation, centrifugation, filtration.

Course Outline (Higher Education)

SCBRW5086 DOWNSTREAM PROCESSING

- K2.** Compare and contrast the principles and practises of biological stabilisation - flash pasteurisation, tunnel pasteurisation, sterile filtration.
- K3.** Describe methods of carbonation and calculate carbonation levels.
- K4.** Compare and contrast appropriate analyses and specifications to assess beer quality.

Skills:

- S1.** Analyse beer attributes.
- S2.** Effectively and efficiently access information relevant to brewing.

Application of knowledge and skills:

- A1.** Formulate and evaluate beer specification sheets.
- A2.** Critically evaluate scientific data.

Course Content:

This course will describe the downstream processes that occur after fermentation and the science behind them. It will include the processes of:

Topics may include:

- Flavour Maturation.
- Clarification.
- Sedimentation.
- Quality Adjustment and Control.
- Filtration.
- Non Biological Stabilisation.
- Biological Stabilisation.
- Carbonation.

Values:

- V1.** To develop a responsible attitude to the production and consumption of alcoholic beverages.
- V2.** To develop an awareness of the differences in cultural beliefs about alcoholic beverages.

Graduate Attributes:

FedUni graduate attributes statement. To have graduates with knowledge, skills and competence that enable them to stand out as critical, creative and enquiring learners who are capable, flexible and work ready, and responsible, ethical and engaged citizens.

Attribute	Brief Description	Focus
Knowledge, skills and competence	Skills to find and interpret information independently.	Medium
Critical, creative and enquiring learners	Independent learning.	High
Capable, flexible and work ready	The role of alcoholic beverages in society.	Low
Responsible, ethical and engaged citizens	Safety in the working environment.	Low

Learning Task and Assessment:

Course Outline (Higher Education)

SCBRW5086 DOWNSTREAM PROCESSING

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-K4, S1-S2, A2	Tutorial questions - short answers to technical questions covering all aspects of downstream processing.	Tutorial questions.	30-50%
S1-S2, A1-A2 and any of K1-K4	Case study - an assignment requiring analysis of beer specifications and / or development of appropriate data / protocols.	Assignment.	20-40%
K1-K4, A2	On-line multiple choice tests.	On-line tests.	20-30%

Adopted Reference Style:

Australian