PROFESSIONAL TRAINING PROGRAMS







CEPD PROFESSIONAL TRAINING

i3L' Professional Training Programs (PTP) are designed to increase knowledge and skills of professionals who aspire to be among top performers in their organizations. PTP involves a various approach to learn, integrating small or large group discussion, case study, role playing, project and strategy simulation to provide new insights and give you opportunities to apply the concepts, theories or models that you learn.

A team of faculty and experts, from diverse life sciences disciplines, provide in-depth knowledge in core life sciences areas including Biotechnology, Bioinformatics, Biomedicine, Food Science, Food Technology, Bioentrepreneurship and Pharmacy. Class sessions are designed to capture the years of experience in the fields. Meanwhile, learning groups provide opportunities for exploring critical issues and collaboration promote spirited friendship that leads to deep and lasting relationship.





TESTIMONIAL

My first impression of i3L is that I feel as if I were studying abroad. i3L has highly competent faculty and staff who are helpful and open to questions and ideas as well as equipped laboratory facilities. I have been enjoying my experience so far as a participant of the biomanufacturing training program (BTP). The BTP has a well designed curriculum as the program is sectioned to simulate the conditions in the work place which is very helpful. As I have a background in chemical engineering, I am excited to be a part of a in the biomedicinal industry as I feel that this is a fast growing industry worldwide. My goal is to make a positive impact locally and globally from the knowledge and experience I have gained to help create better lives.

> Caesario Nugroho Sutiyoso Biomanufacturing Training Program Master of Science in Chemical Engineering, Arizona State University

SHORT COURSES

FoodTechnology

- > Emphasis on laboratory experience.
- > Extensive industry network.
- Focus on cutting edge technologies in food processing.







Technology of fruits and vegetables

| Duration: 28 hours

| Course start: Jan - Aug 2017

Course Description

Fee: IDR 7.000.000

The scientific principles involved in the various methods of fruit and vegetable harvesting, pre-processing and processing techniques are discussed in this course. Learn on the methods of raw material handling, storage and preparation prior to processing and preservation of fruits and vegetables. Review several productions of fermented food products from vegetables. To understand the post-harvest changes in fruits and vegetables related to quality starting from the farm to the market. The application and use of emerging technology in fruits and vegetables are discussed in this course.

DELIVERY METHOD



50% Lecture 20% Discussion / Group Activity 30% Hands-on activity

COURSE CONTENT



50% Fundamentals and Concepts 30% Industry Application 20% Emerging Technologies

Technology of muscle-based foods

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Jan – Aug 2017

Course Description

Fundamentals of meat science in meat inspection, carcass evaluation, fabrication, fresh meat, processed meat and product preservation on beef, lamb, poultry, and seafood. Physical, chemical, physiological and microbiological properties of meat as related to composition and quality. To understand fundamentals of processing techniques (such as smoking, freezing, canning, and irradiation), product quality assurance and food safety programs in meat, poultry, and seafood industries. The current market and future trend of meat products and technology are also covered.

DELIVERY METHOD



50% Lecture 20% Discussion / Group Activity 30% Hands-on activity

COURSE CONTENT



50% Fundamentals and Concepts 30% Industry Application 20% Emerging Technologies

Cereal Technology

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Sept 2017 – Jan 2018

DELIVERY METHOD



30% Lecture 20% Discussion / Group Activity 50% Hands-on activity

COURSE CONTENT



30% Fundamentals and Concepts50% Industry Application20% Emerging Technologies

Course Description

Emphasis of this course is placed on the transformation of cereals into value-added products. The structure, composition and utilization of rice, wheat and other cereal grains for the production of starches, flours, milling by-products, and cereal-based human food products; cereal processing technologies such as dry and wet milling, baking, extrusion cooking, breakfast cereals and noodle and pasta manufacturing. Chemical and physicochemical characteristics of different type cereals related to the cereal processing will be discussed.



Milk and Dairy Technology

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Sept 2017 - Jan 2018

Course Description

This course is intended to introduce the students to the technology of milk products including condensed and dehydrated milk products, filled milk, ice-cream, cheese, cultured milks and butter. Milk processing operations [clarification, homogenization, pasteurization and sterilization] and dairy waste management and processing are also discussed. The course gives an overview of the important factors for dairy product quality from milk production to final products such as drinking milk, milk powder, yoghurt and cheese. The teaching focuses on understanding the basic chemistry and physics of milk and the factors affecting milk production, milk composition and dairy product quality.

Confectionery Technology

Fee: IDR 7.000.000

| Duration: 28 hours

30%

DELIVERY METHOD



30% Lecture 20% Discussion / Group Activity 50% Hands-on activity

COURSE CONTENT



40% Fundamentals and Concepts 40% Industry Application 20% Emerging Technologies

| Course start: Sept 2017 – Jan 2018

Course Description

This course covers the science and technology related to the making of confectionery products such as candies or sweets, chewing-gum, and chocolates. This course is designed to give students to understand the influence of main ingredients and processing parameters on the quality of the finished product. The properties of related products will be explored in terms of their formulation and the unit operations and equipment used in the confectionery factory. Practical methods on the development of confectionery product will be given to students as parts of learning process and understanding of the importance between proportions of raw materials and the quality and texture of the final product.

Food Packaging

| Duration: 28 hours

| Course start: Feb - Aug 2018

Course Description

Fee: IDR 7.000.000

This course introduces students to the theory and application of a range of process control techniques applied to food systems. Special emphasis is put into fundamental research in the area of sensors as the main interface between the control system and the process. The course Illustrate the application of viability approach to control food processes. Applying of fuzzy concepts in food industry is also studied. The course contains variable real-world examples on food process control that make the information easily accessible. The course demonstrates how statistical analysis is implemented in food process control. The importance of effective food control systems to protect the health of consumers is also discussed. Finally, the course gives an overview on the future development in process control areas.

DELIVERY METHOD



50% Lecture 30% Discussion / Group Activity 20% Hands-on activity

COURSE CONTENT



50% Fundamentals and Concepts 30% Industry Application 20% Emerging Technologies

DELIVERY METHOD



50% Lecture 10% Discussion / Group Activity 20% Hands-on activity

COURSE CONTENT



60% Fundamentals and Concepts 30% Industry Application 10% Emerging Technologies





Beverage Technology

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Feb – Aug 2018

Course Description

This course is intended to introduce the students to the processing and technology of non-alcoholic beverages. The physical, microbiological, and chemical properties of both raw materials and finished beverage products are covered. A different type of beverage processing method relates to the emerging packaging technology. The basic concept of aseptic and non-aseptic beverages processing are discussed. Emphasize on the basic concept quality assurance and quality control applicable to the beverage industry. Beverage types which are discussed in this course Include mineral water, fruit juices, soft drinks, tea & coffee, cocoa, functional drinks, and others.

DELIVERY METHOD



30% Lecture 20% Discussion / Group Activity 30% Hands-on activity 20% Study Case

COURSE CONTENT



50% Fundamentals and Concepts 30% Industry Application 20% Emerging Technologies



Fermentation-Based Technology

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Sept 2018 – Jan 2019

Course Description

This course is designed to teach students fermentation technology. Topics to be covered include definition and importance of fermentation, Principles/biochemistry of Fermentation. Fermented foods including traditionally fermented foods of importance in the world such as aerobic and anaerobic fermentation, alcoholic fermentation resulting in the production of bread, beer, wine and vinegar; an acid fermentation for the production of cheese, butter, yoghurt etc, related fermentation processes in food processing and preservation. Also covers application of fermentation in waste utilization.

DELIVERY METHOD



COURSE CONTENT



50% Fundamentals and Concepts 30% Industry Application 20% Emerging Technologies

Product Development & Marketing

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Sept 2018 – Jan 2019

Course Description

The course aims to give the students insights into interactive processes in food product development, e.g. the role of modern technology in food product development, consumers in product development, potential innovation strategy for the various stages in the food system, innovation strategies and their risks in different companies. Students will work in teams to design and develop a new food product. Product development methods using stages and gates which is commonly used in the food industry will be discussed and simulated in this course. The management of product roadmap, pipe lines, and product portfolios in related to the product development process will be discussed.

DELIVERY METHOD



30% Lecture 30% Discussion / Group Activity 40% Emerging Technologies

COURSE CONTENT



30% Fundamentals and Concepts 30% Industry Application 40% Emerging Technologies



OUR RESEARCH & INDUSTRY ENGAGEMENTS

USAID PEER Project with UC DAVIS.

Conversion of waste to biofuels or liquid chemicals using microbes







Mapping of Marine Biodiversity with Kalbe

Establishing a national reference database of Indonesia marine biodiversity

Eureka Evervdav

Waste to Value-added Product with BMJ

Conversion of pulp waste to viscose, biobricks, fertilizer, biopellet, etc.

Biomanufacturing Training Program

BTP is a tailored program designed to cultivate advanced skills and knowledge related to the biotechnology, biomanufacturing and pharmaceutical industries. Among our customers are institutions and enterprises of different sizes from these industries that are looking to enter the area of bio-based manufacturing.

Management Development Program

Management Development Program (MDP) is designed to meet the needs of industry for continuous talent development.

Power Talk

We invite leaders from industry, government, academia, and community every month to share their expertise and wisdom to our students and stakeholders.



• **O**UR **F**ACILITIES



THEATRE CLASSROOM



I3L SCIENCE CAMP FOR ELEMENTARY, JUNIOR HIGH, & SENIOR HIGH SCHOOL







i3L-ALS: PORCINE DNA DETECTION



LEARNING RESOURCE CENTER





**Institut Bio Scientia Internasional Indonesia | Keputusan Menteri Pendidikan dan Kebudayaan Republik Indonesia No. 207/E/0/2013, May 22nd, 2013