

PROFESSIONAL TRAINING PROGRAMS



**Food
Science**



i3L



CENTER FOR EXECUTIVE & PROFESSIONAL DEVELOPMENT

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.



**Bio
Entrepreneurship**



**Bio
Informatics**



**Bio
Medicine**



**Bio
Technology**



**Food
Science**



**Food
Technology**



TESTIMONIAL

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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 biomedical 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.

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*Caesario Nugroho Sutyoso
Biomanufacturing Training Program
Master of Science in Chemical Engineering, Arizona State University*

SHORT COURSES

FoodScience

- › 2,000,000 km² of laboratory space.
- › Functional foods: eat, live and prosper.
- › The 1st in Indonesia to meet industry demand.



**Food
Science**



Animal Food Science

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Jan - Aug 2017

Course Description

The course consists of two parts; Dairy Science and Meat Science. The dairy science focuses on the biological, chemical, physical, and microbiological aspects of milk itself, and on the processing aspects of the transformation of milk into its various consumer products, including beverages, fermented products, concentrated and dried products, butter and ice cream. The meat science focuses on the refinement of cattle, pigs, sheep, poultry and fish into various food products, and the quality properties of meat and fish with respect to structural, chemical and biochemical composition and properties. The course also describes impact of animal food products on human health.

DELIVERY METHOD



■ 50% Lecture
■ 50% Discussion / Group Activity

COURSE CONTENT



■ 60% Fundamentals and Concepts
■ 40% Industry Application



Plant Food Science

Fee: IDR 11.000.000

| Duration: 28 hours

| Course start: Jan - Aug 2017

Course Description

The course provides insight into the whole plant food production chain with emphasis on morphology, biochemistry and biophysics relevant to functional and nutritional characteristics. Factors of variation in plant foods composition and its effect on product quality are considered as well methods to reduce these variations. Cereal chemical composition is covered from the perspective of the molecular level events that are important in processing. Factors important in maintaining the postharvest quality of fruits and vegetables are described. The health benefits of grains and fruits and vegetables are also covered. Finally, the course covers basics of cereal technologies and technology of fruit and vegetables.

DELIVERY METHOD



■ 50% Lecture
■ 50% Discussion / Group Activity

COURSE CONTENT



■ 70% Fundamentals and Concepts
■ 30% Industry Application



Food Additives

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Sept 2017 - Jan 2018

Course Description

The course presents the principles and discusses various aspects of food additive utilization. The course covers four major functional classes of food additives. This includes the additives which are used to improve quality of foods in term of organoleptic and texture properties, safety and nutritional value. It also discusses advantages and disadvantages of food additives and health applications. Legislative processes as well as methods of safety evaluation are covered. The course also discusses the role of modern technology in producing food additives. The students are trained on how to use analytical techniques to study food additives.

DELIVERY METHOD



■ 40% Lecture
■ 60% Discussion / Group Activity

COURSE CONTENT



■ 50% Fundamentals and Concepts
■ 50% Industry Application



Food Safety and Toxicology

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Sept 2017 - Jan 2018

Course Description

The course provides knowledge on the basic principles and practice of food safety. First, it covers biological and physical hazards in food, and outlines best practices for prevention and control. The principles of HACCP are explained. The course also provides information on the concepts of hazard prediction and risk assessment and management. Second, it provides a general review of toxicology related to food and the human food chain. The concepts of dose-response relationships, absorption, distribution, metabolism and elimination of toxicants are covered in this part. In the course, the students are expected to critically review scientific and popular publication. Communication of food safety information is considered in the course.

DELIVERY METHOD



- 50% Lecture
- 50% Discussion / Group Activity

COURSE CONTENT



- 70% Fundamentals and Concepts
- 30% Industry Application



Functional Foods and Nutraceutical

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Sept 2017 - Jan 2018

Course Description

The course provides knowledge on definitions and concepts pertaining to functional foods and nutraceuticals. Chemical structures and properties of functional ingredients are discussed. The course outlines a broad view of the role and use of carbohydrates, lipids and proteins in functional foods and nutraceuticals, particularly on antioxidants, prebiotics and probiotics. Moreover, the course reviews the potential health benefits of functional foods and nutraceuticals, especially with respect to chronic diseases. The course also considers the attitude of consumers in the relation to functional food, the safety and efficacy of individual functional and nutraceutical products, and the regulatory issues that influence their development in global markets.

DELIVERY METHOD



- 50% Lecture
- 50% Discussion / Group Activity

COURSE CONTENT



- 70% Fundamentals and Concepts
- 30% Industry Application



Sensory Evaluation

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Sept 2017 - Jan 2018

Course Description

This course is designed to give students a thorough overview of sensory evaluation. The course provides an overview of recent and more advanced sensory methods, techniques and data analysis tools. The course reviews discriminative, descriptive and affective sensory methodologies used to measure human perception and preference. Experimental sensory test designs and data analysis by univariate and multivariate methods are discussed. The course touches the applications and limitations of different data analyses. Students will also gain understanding in the principles of 'good sensory practice' and the complexity of the food product stimulus on any one of human senses.

DELIVERY METHOD



- 60% Lecture
- 40% Discussion / Group Activity

COURSE CONTENT



- 60% Fundamentals and Concepts
- 40% Industry Application



Nutrigenetics and Nutrigenomics

Fee: IDR 11.000.000

| Duration: 42 hours

| Course start: Feb – Aug 2018

Course Description

The course provides the basics of genetics, genomics and gene regulation in relation to diet. The principles of epigenetics in relation to nutrition are explained. High-throughput molecular biology technique including sequencing, genotyping, transcriptomics, proteomics and metabolomics and their applications are described. The course overviews common genetic polymorphisms along with their effects and interactions with diet and nutrients. The course uses on the relevant examples of complex diseases relating to nutrition such as obesity, diabetes, cardiovascular disease and several forms of cancer. The application of nutrigenomic technologies to the concept of personalized nutrition is also discussed.

DELIVERY METHOD



- 60% Lecture
- 40% Discussion / Group Activity

COURSE CONTENT



- 80% Fundamentals and Concepts
- 20% Industry Application



Nutrition and Diet Therapy

Fee: IDR 7.000.000

| Duration: 28 hours

| Course start: Sept 2017 – Jan 2018

Course Description

The course explores the food-based approach for the prevention and management of diseases and improve the quality of life. The role of nutrients in the maintenance of normal health in the life cycle is considered. The course describes the diet therapy in the following conditions: gastrointestinal disorders, disorders of the liver, gallbladder and pancreas, renal disease, diabetes mellitus, cardiovascular diseases, cancer and HIV infection. The course further focuses on the nutritional support in rehabilitation and disabling disease. The role of diet in weight management is also discussed. Additionally, the course explores historical and modern applications of the plants as medicines. The course also reviews recent scientific evidence on the therapeutic role of selected foods in various clinical conditions.

DELIVERY METHOD



- 60% Lecture
- 40% Discussion / Group Activity

COURSE CONTENT



- 70% Fundamentals and Concepts
- 30% Industry Application

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

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.

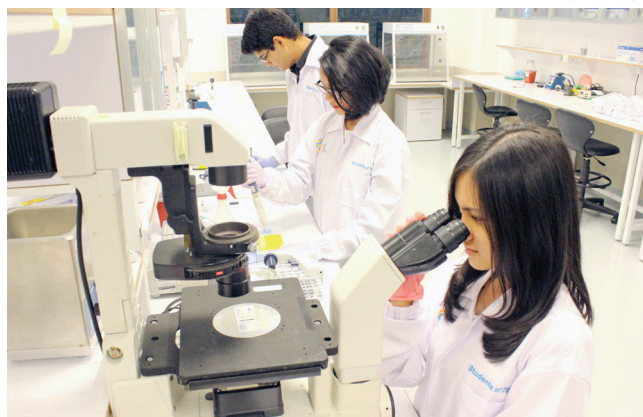


Business Family Forum

OUR FACILITIES



THEATRE CLASSROOM



i3L SCIENCE CAMP FOR ELEMENTARY, JUNIOR HIGH, & SENIOR HIGH SCHOOL



LABORATORY



i3L-ALS: PORCINE DNA DETECTION



LEARNING RESOURCE CENTER



OUR PARTNERS

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