PROFESSIONAL TRAINING PROGRAMS

Bio Medicine

i3L | cepd

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

"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

BioMedicine

- 100s biomedicine programs globally. 1st in Indonesia.
- Tackle global health concerns: Infectious Diseases and Cancer.
- From applied research to medical application.

Bio
Medicine

Natural Product and Medicinal Chemistry

Fee: IDR 14.000.000 | Duration: 28 hours+28 hours lab | Course start: Jan - Aug 2017

Course Description

This course focuses on the assessment of natural products as media for disease treatment. The term natural products are referred as both animal and plant products. This course will assess on the efficacy, clinical study, and mechanism of actions, methods of delivery and implementation of the natural products. It covers traditional medicines used by many parts of the world, mostly Eastern-type medicine. In the laboratory, students will learn to extract and identify active bio-compounds contributing to the therapeutic effects of the products. Furthermore, the assessment will be conducted to determine the efficacy of the products.

DELIVERY METHOD

- 30% Lecture
- 20% Discussion / Group Activity
- 50% Hands-on *In-silico* analysis

COURSE CONTENT

- 20% fundamental and concepts
- 80% industry application

Microbe and Host Interaction

Fee: IDR 11.000.000 | Duration: 42 hours | Course start: Jan - Aug 2017

Course Description

The relationship between microbes and human health has been well-known throughout biomedical history. Both beneficial and detrimental effects have also been documented. This course focuses on investigating activities of the microbes and their interactions with human host, as well as changes on the characteristics, metabolism and growing patterns of various microbes towards adaptation and defense against body immune system. The microbes covered in this course are mostly bacteria, parasites, and viruses with some focus on fungal infections. The laboratory work will characterize and analyze microbial activities using various laboratory techniques. The symbiosis and interaction with the environment and host-cells are also investigated.

DELIVERY METHOD

- 70% Lecture
- 30% Discussion / Group Activity

COURSE CONTENT

- 80% fundamental and concepts
- 20% industry application

Cell Signalling

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Aug 2017

Course Description

Proper bodily functions depends heavily on proper coordination and functions on myriad types of cells working in a human body. This course aims to introduce the major concepts of cell signaling pathways. Further studies will focus on their spatial and temporal control that determines how information is encoded and directed to precise sub-cellular locations. Also, the signaling pathways to regulate diverse cellular processes are discussed in relation to human health. From this, changes in the cell signaling system due to intervention such as overexpression/knockout and drug will also be highlighted during the course. The elucidation and process investigation will be done in the laboratory work.

DELIVERY METHOD

- 30% Lecture
- 20% Discussion / Group Activity
- 50% Hands-on *In-silico* analysis

COURSE CONTENT

- 60% fundamental and concepts
- 40% industry application

Endocrinology

Fee: IDR 11.000.000 | Duration: 42 hours | Course start: Jan - Aug 2017

Course Description

Human endocrine serves to regulate and safeguard the overall bodily functions and homeostasis. Any disruptions cause various detrimental effects in human health. This course discusses endocrine systems from both an anatomical and physiological view. This course covers synthesis, distribution and regulation of the entire human endocrine system in relation to normal or pathologic conditions, and such human endocrine disorders will also be elucidated. The students will study on various endocrine systems, such as pituitary, thyroid, adrenals, ovaries, testes, and pancreas. Furthermore, diseases caused by disorders of the endocrine systems will also be discussed.

DELIVERY METHOD

- 70% Lecture
- 30% Discussion / Group Activity

COURSE CONTENT

- 80% Fundamentals and Concepts
- 20% Industry Application

Molecular Oncology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Sept 2017 - Jan 2018

Course Description

In many instances, the emergence of cancer occurs at molecular level, such as DNA mutation, gene disregulation, and viruses. This course will focus on the elucidation of cancer cells growth and development in the molecular level. More specifically, it focuses on the molecular mechanism generation and growth of cancer starting from local tissues, lymph node infiltration up to the level of systemic invasion (metastasis). Finally, development of drug design based on the cancer mechanism of action is also discussed. In the laboratory, the students will learn to compare both normal and cancer cells with various analytical methods such as immunostaining, molecular analysis, genetic and epigenetic study etc.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Cancer Immunology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Sept 2017 - Jan 2018

Course Description

The course will focus on the role of immune system in relation to cancer development. The students will study on how the immune system in human body is able to suppress or induce cancers. In this course, various types of cancers in relation to the response of the immune systems will be studied and discussed. It also covers the principle of vaccine and antibody therapy that targets cancer as part of cancer immunotherapy. The laboratory works will study about basic culturing secondary cancer cells as fundamental model for analysis, transforming normal cells to become cancer cancer cells, which later continues on the interaction both cancer cells and immune cells as basis for vaccine and antibody strategy.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Medical Microbiology

Fee: IDR 20.000.000 | Duration: 42 hours+42 hours lab | Course start: Sept 2017 - Jan 2018

Course Description

This course focuses on the basis of medical manifestations of microbial pathogens, including bacteria, viruses, fungi and parasites, and the understanding of their biological characteristics, epidemiology, mechanisms and routes of transmission, pathogenesis and immunity, host response, control, and prevention. In this course, several strategies to combat different microbial pathogens are also discussed. This course acts as basis for more detailed pathogenic diseases in the later semester. In the laboratory settings, students will learn about basic harvesting, isolation and maintenance of different types of pathogens, assessment of various variables such as pathogenicity and susceptibility to drugs or treatments.

DELIVERY METHOD

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

COURSE CONTENT

- 60% fundamental and concepts
- 40% industry application

Applied Diagnostics and Treatment of Infectious Diseases

Fee: IDR 20.000.000 | Duration: 42 hours+42 hours lab | Course start: Sept 2017 - Jan 2018

Course Description

Microorganism invasion inside human body exerts particular characteristics that allow analysis for early diagnosis that increase recovery and survivability. This course offers various methods on various diagnostics on detecting and diagnosing various infectious diseases manifestations. The course will discuss the employment of several strategies such as physical manifestations, microscopic imaging, blood and/or body fluid analysis, homeostatic changes observation and gene expressions. The scope of analysis also spans from the host to the infectious agents as basis of analysis. In the laboratory, students learn to assess and diagnose collected clinical samples.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Toxicology

Fee: IDR 20.000.000 | Duration: 42 hours+24 hours lab | Course start: Sept 2017 - Jan 2018

Course Description

Toxic substances, whether it comes metabolically and synthetically, are detrimental and thus require significant attentions. This course is the continuation of principles of pharmacology, where the drugs are assessed for the toxic actions and interactions in human system. It also introduces the various the chemical nature of injurious substances, their uptake and metabolism by non-target organisms, and their mode of toxic action will be studied in addition to the methods used in safety evaluations and risk assessment. The laboratory settings will be on the methods on assessing the toxicity of drug, the study of the toxic substances on various systems, and the antagonistic actions of antidotes.

DELIVERY METHOD

- 55% Lecture
- 10% Discussion / Group Activity
- 35% Hands-on Laboratory Experience

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Applied Hematology

Fee: IDR 15.000.000 | Duration: 42 hours+24 hours lab | Course start: Jan - Aug 2018

Course Description

Blood serves as central mean for the body to distribute various critical components such as nutrients, hormones and metabolites throughout the whole system. The course focuses more in depth on the characteristics of the cellular and liquid (plasma) elements of the blood in relation to maintaining homeostasis in body system. Furthermore, the production, circulation and regulations in the system in relation to diseases are also highlighted. In the laboratory setting, the introduction of basic techniques and instrumentation utilized in the hematology laboratory will be conducted. Furthermore, various methods of hematological analysis studies will also be studied in relation to human health and wellbeing with various laboratory analyses.

DELIVERY METHOD

- 55% Lecture
- 10% Discussion / Group Activity
- 35% Hands-on Laboratory Experience

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Solid Based Tumor Biology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Jan 2018

Course Description

This course highlights on the cancer in the form of solid tissues. Similar with blood-based tumor biology, solid tumor biology is the specialization course that continues from molecular oncology course. This course will put emphasis on the biogenesis, development of various tumors that invade human organs systems such as colon, breast, pancreatic, liver, brain, lung, etc, which continues clinical manifestation and effect on the human health and metastasis. Considering the heterogenicity and specificity of the cancers. Extensive study on different therapeutic strategies are also discusses, both in the face-to-face and laboratory sessions.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Blood Based Tumor Biology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Aug 2018

Course Description

This course focuses on the cancer that derived from blood. This course is the continuation of the molecular oncology with the specialization on the blood-derived tumors. This course will initially discuss on the carcinogenesis, biogenesis, proliferation and growth of the marrow stem-cell as production center of blood, which continues on the clinical manifestation and effect on the human health and metastasis of leukemia, lymphoma and myeloma as three main groups of blood-based tumor biology. The study mentioned above will also be investigated in the laboratory settings to improve the understanding of the blood-based tumor.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Canceromics

Fee: IDR 13.000.000 | Duration: 42 hours+14 hours lab | Course start: Jan - Aug 2018

Course Description

Cancer manifests in highly varied organizations that are different up to the personal level. The current therapeutic strategies attempt to target these variables. This course will employ multi-disciplinary methods, mainly with Bioinformatics and mathematical modeling as advanced tools to assist in diagnosing and treating cancers. More specifically, it focuses on the usage of transcriptomics, proteomics, lipidomics, and metabolomics in analyzing wide cases of cancer in both solid and blood based tumors. From there, the students employ these -omics approach to construct novel therapy on particular types of cancer, in which many of those require up to the personalized medicine level.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Parasitology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Jan 2018

Course Description

This course focuses on pathogenic parasites that causes human diseases, which spans from protozoan, fungal, helmith and ticks infection. It starts from the classifications, clinical manifestations, mechanism of actions, and different therapeutic strategies employed to target specific parasites. The laboratory works investigate the harvesting, isolating, culturing and growing of parasites, observation of parasite-host interaction and devising appropriate models for drug research.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Bacteriology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Aug 2018

Course Description

As bacterial infection is among the most common infectious agents in human, this course covers on various aspects of pathogenic bacteria. This course covers bacterial classifications from the shape, colony/biofilm forming, invasive or endotoxic producing, etc and continues on clinical manifestations, mechanism of actions, and different antibiotic concept that targets specific bacteria. The laboratory works on making selective medium for particular types of bacteria, observation of bacteria-host interaction and the implementation and screening of antibiotics, and investigation of antibiotic resistance development.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Virology

Fee: IDR 22.000.000 | Duration: 42 hours+42 hours lab | Course start: Jan - Aug 2018

Course Description

This course covers on pathogenic viruses that manifest in myriad of diseases and death in human. The classification of the virus including the structure, envelope or non-envelope, genome organizations, host specificity will be discussed. Furthermore, entry mechanism, replication and progeny release process, clinical manifestations, mechanism of actions, and different antiviral strategies employed to target specific life-cycle of the viruses will be included in this course. The laboratory works includes the harvesting, culturing and growing of viruses, observation of virus-host interaction and devising appropriate models for antiviral development.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Functional Genomics and Proteomics

Fee: IDR 7.000.000 | Duration: 28 hours | Course start: Jan - Aug 2018

Course Description

Interactions between thousands of genes in an organism are manifested in many conditions in overall characteristics and pathologic conditions. This course employs the vast capability of genomics and proteomics for its implementation on analyzing diseases as critical parts in devising novel therapeutic strategies. This course studies global gene expression and protein profilings both healthy and diseased tissues that are responsible in the clinical manifestations. This course also introduces the concept of big-data analysis as part of the novel bioinformatic tools to provide great assistance in clinical research.

DELIVERY METHOD

- 70 % Lecture
- 30% Discussion / Group Activity

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

Clinical Oncology

Fee: IDR 11.000.000 | Duration: 42 hours | Course start: Sept 2018 - Jan 2019

Course Description

Clinical case studies on the oncology focuses on the implementation of the courses learnt in the tumor biology stream with the clinical settings. Students will be presented on various studies focusing on current trends, clinical and epidemiological data collected from various sources. From there, the discussion related to the causes, manifestation, epidemiological, drug discovery and patient management will be included in the study, in order to improve the knowledge and expertise in tumor biology field.

DELIVERY METHOD

- 50% Lecture
- 50% Discussion / Group Activity

COURSE CONTENT

- 40% Fundamentals and Concepts
- 60% Industry Application

Pathology of Infectious Diseases

Fee: IDR 11.000.000 | Duration: 42 hours | Course start: Sept 2018 - Jan 2019

Course Description

After the students gain sufficient knowledge about infectious diseases, they will be showcased with cases where their in-depth analysis will be required to answer some problems, questions or devising new strategies to better understand pathology, diagnose and to develop treatment strategies to cure of the diseases. The cases provided will be specific the current trend of infectious diseases in Indonesia and worldwide. This course requires sufficient knowledge that have been studied in the previous courses. In this course, clinical samples and data with different settings will be collected and later analyzed.

DELIVERY METHOD

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

COURSE CONTENT

- 60% Fundamentals and Concepts
- 40% Industry Application

From Bench to Bedside

Fee: IDR 11.000.000 | Duration: 42 hours | Course start: Sept - Dec 2018

Course Description

Interactions between thousands of genes in an organism are manifested in many conditions in overall characteristics and pathologic conditions. This course employs the vast capability of genomics and proteomics for its implementation on analyzing diseases as critical parts in devising novel therapeutic strategies. This course studies global gene expression and protein profilings both healthy and diseased tissues that are responsible in the clinical manifestations. This course also introduces the concept of big-data analysis as part of the novel bioinformatic tools to provide great assistance in clinical research.

DELIVERY METHOD

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

COURSE CONTENT

- 40% Fundamentals and Concepts
- 60% 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.

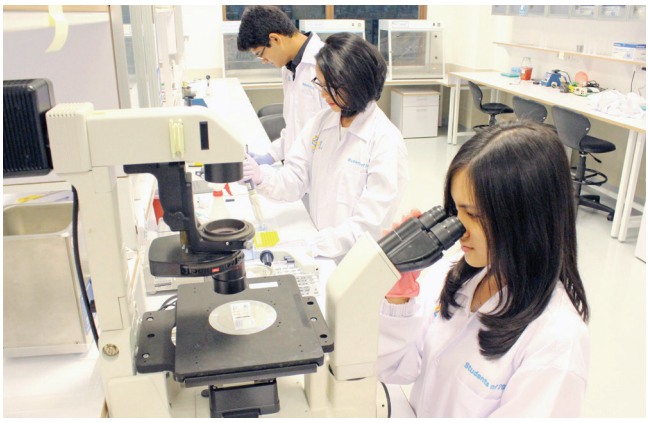
Power Talk

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

i3L Indonesia International Institute for Life Sciences

OUR PARTNERS

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