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IFarming
CAMPUS VIRTUAL
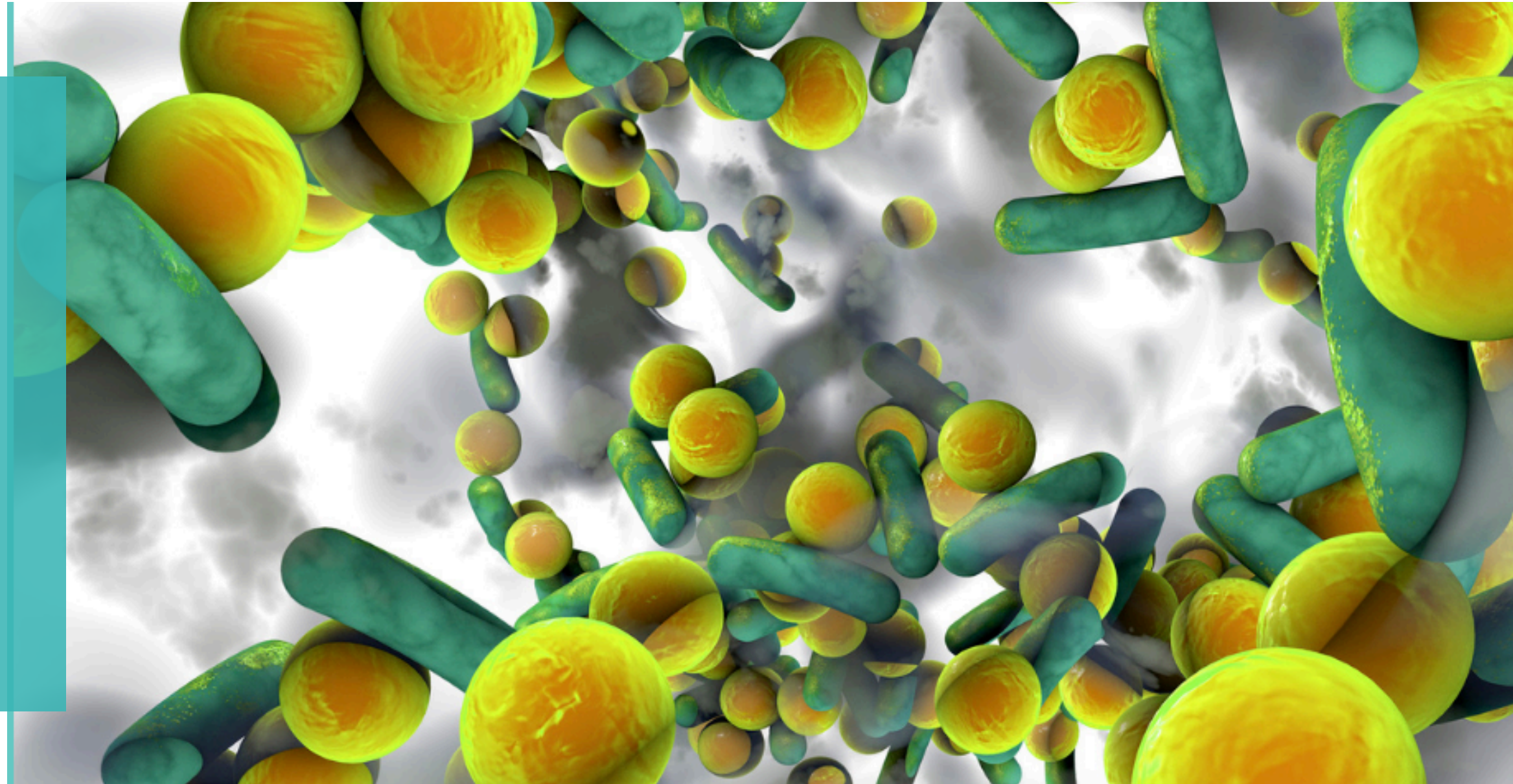
Admission**2024**

Program
**Fish Applied
Nutrition 3.0**

using Flipped Learning Method

Certification:

UNIVERSIDAD
CATÓLICA DE
TEMUCO

LABORATORIO DE NUTRICIÓN Y
FISIOLOGÍA DE PECES

EDUCACIÓN
CONTINUA
CURSOS
DIPLOMADOS
POSTÍTULOS

Discover the mysteries of fish nutrition with a fresh perspective.

The "**Fish Applied Nutrition 3.0**" program, developed by IFarming, gives you a special learning opportunity that mixes theoretical and practical knowledge using the **Flipped Learning Method**. Flipped Learning, also known as "Flipped Classroom". This methodology is a teaching technique where students learn materials (videos, readings, etc.) before class and during class engage in interactive and detailed tasks with teachers, encouraging more involvement and better understanding.
This program will give you the tools and information needed to enhance your abilities in fish nutrition, which can greatly help in the sustainable growth of aquaculture.

What will you discover in this program?

- You'll explore the features and roles of macronutrients, micronutrients, and other essential nutritional elements for farmed fish.
- Understanding how fish digest, absorb, and metabolize nutrients in their digestive system involves grasping the intricate processes of digestion, absorption, and metabolism.
- Learn more about bioavailability, bioaccessibility, and bioenergetics in fish nutrition to gain advanced knowledge about these important concepts.
- You will enhance your knowledge of the basic principles of creating extruded fish diets.
- Nutritional assessment: You will learn to think critically to assess the nutritional value of diets in experimental trials and field studies.

What is included in our program?

- Two courses with instructors who are experts and love teaching about fish nutrition.
- A 13-week adventure: A complete journey that will help you become an expert in the important ideas and abilities in this field of aquaculture.

Come and be part of the "Applied Nutrition for Fish 3.0" program to improve your professional skills.

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Educational achievements

After finishing the Fish Applied Nutrition program, you will have gained the following skills and knowledge:

- You'll grasp the context and structure of worldwide fish farming, along with the challenges linked to fish nutrition in this field.

- **You'll learn about different nutrients, raw materials, and additives in fish nutrition, and how they can help or harm fish health.**

- You'll learn how to recognize and explain various laboratory techniques used to analyze the nutritional content of raw materials, so you can choose and assess ingredients wisely.

- You'll learn about the parts of the fish digestive system and what they do, so you can understand how fish digest food and absorb nutrients.

- You'll learn about formulating fish compound feeds, mastering how to use tools to make balanced recipes tailored to fish's nutritional requirements.

- You'll discover the fundamental standards for assessing and comprehending the productive parameters, blending the theoretical and practical knowledge gained in the Fish Applied Nutrition program. This will help you make better decisions and create solutions more effectively.

- You will learn about the basics to conduct a nutritional assessment through experiments and field studies.

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Focused on:

Our ongoing learning program is specially created for professionals in aquaculture-related fields, including:

- Medicine veterinary.
- Aquaculture technology.
- Agronomy.
- Marine biology.
- Biochemistry.
- Animal care and farm worker.
- Aquaculture production technician.
- Any other field connected to fish farming.

Application´s requirement

To join the Applied Fish Nutrition 3.0 program, you need to meet this requirement:

- **Obtain a university or technical degree from a professional institute or technical training center for careers in aquaculture.**

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Flipped learning approach

Out of class

In class

- Students can watch and read educational content like videos and readings, get to know important ideas and words, and jot down notes and questions to talk about in class.

- During class, students engage in various activities with teachers such as content review, discussions, and answering questions to deepen their learning.

- Students are exploring core content and concepts, working together and individually, and taking part in assessments to check their understanding.

You can access

Classes

Our lectures are led by top experts, and you can watch them 24/7 via our learning platform, IFarming Virtual Campus.

Engaging education

During every lecture of the program, you can join in, share your thoughts, and ask questions to your classmates and teachers.

Resource materials

This program offers you helpful materials chosen and prepared by our teachers to make learning easier for you.

Ongoing evaluation

The lesson plan involves assessing the knowledge you gained in the program using tests and group and individual assignments.

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Learn from any place

With our learning method and IFarming Campus Virtual platform, you can study from anywhere you like.

Our program "Fish Applied Nutrition" consists of two courses. Each module includes a set of synchronous and asynchronous classes with a teacher, as well as activities and learning resources that can be accessed asynchronously.

Synchronous classes mean that students and the teacher engage in learning together using online tools in real-time, where everyone needs to be connected at the same time. This allows for live interaction and encourages working together.

Studying online asynchronously means students can access materials and finish tasks online whenever and wherever they want, without needing to interact in real-time or synchronize with others. This method offers flexibility and lets students learn at their own speed.

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Educational tasks

The professors create the following learning activities to help you understand specific content better and make progress in your professional training:

- Online lectures.
- Evaluations.
- Individual and collaborative projects.

Educational materials

This program concentrates on choosing, adjusting, and organizing the learning resources intended for distance learning:

- Video lessons.
- Professor-prepared summaries.
- Must-read and additional reading material.

Learning materials will be accessible 24/7 on our learning platform, IFarming Virtual Campus.

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Benefits of our platform

Our IFarming Virtual Campus platform provides various tools and features to enhance the online learning experience. One of its benefits is the option to include multimedia content like images, videos, and presentations, which can help maintain student engagement and participation during the program.

Moreover, our learning platform provides discussion forums and instant messaging to encourage interaction and debate among students, fostering collaboration and the exchange of ideas. It also enables the effective conduct of assessment activities and tasks like quizzes, assignments, and exams, simplifying the tracking of students' progress and evaluation of their performance.

Technical needs

Reliable link

Having a reliable internet connection is crucial for making the most of our ongoing education program and learning platform, especially when taking your assessments.

Browser suggestions

For the best user experience, we recommend using the browsers below:

- Chrome.
- Firefox.
- Apple Safari.
- Edge.

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Ways to communicate

- For any questions about your studies, feel free to post them on the 'Academic Queries' Forum, and you'll get answers within 24 hours.
- Feedback for asynchronous tasks may take around 72 hours.
- To get in touch with Coordination, you can visit the 'Technical or Administrative Consultations' Forum or send an email to contact@ifarming.ai. You'll get a reply within 24 hours.
- Keep up to date with program updates by checking the 'Notices' Forum and receiving email alerts.

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Evaluation and approval criteria

You will take part in assessments given during the program, and you will work on group and individual projects.

To get approval for every course, you need to fulfill two basic criteria:

1. Achieving an attendance rate of 80% or more in all planned classes.
2. A final grade that is 60% or higher of the highest possible score.

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An esteemed staff

Every professor at the IFarming Campus Virtual platform excels in their own specialty, bringing extensive experience in the business and academic world. This ensures that the taught content is current and mirrors the latest trends in their fields.

89% of our professors hold doctorates, master's degrees, and specialties. They received training at top academic institutions in Chile and overseas, giving them a broad and worldwide view of fish nutrition.

Our professros use a teaching approach that focuses on building a strong knowledge foundation. They use real-life cases from around the world to help students develop good decision-making skills in fish nutrition. This way, students can tackle tough situations with confidence.

Meet them

Alejandro Capdeville

Founder of BelCap - International Advisor
Graduated in Chemical and Pharmaceutical
Sciences
University of Valparaíso, Chile

Alejandro Capdeville Steffens, who graduated as a Pharmaceutical Chemist from the University of Valparaíso, is a specialist with over 35 years of experience in different areas. His expertise includes formulating and developing raw materials for aquaculture, producing aquaculture feeds, quality control, applied research, product registration, and teaching as a director of internships and undergraduate thesis at various universities.

As the owner partner of Bel-Cap SpA, he has used his expertise to offer guidance on the creation and enhancement processes of aquaculture raw materials. He has played a key role in adding value to different food factories and suppliers of ingredients and additives in the field.

More info

Adrián Hernández

Associate Professor
Catholic University of Temuco, Chile
PhD in Aquatic Biosciences
Tokyo University of Marine Sciences and Technology,
Japan

Dr. Adrián Hernández earned his Aquatic Biosciences PhD from the University of Marine Sciences and Technologies in Tokyo, Japan in 2005. Currently, he is an associate professor in the Department of Agricultural and Aquaculture Sciences at the University Catholic of Temuco, Chile. His main focus is on aquaculture, fish nutrition, and the formulation and production of feeds for animal nutrition. Dr. Hernández collaborates with national and international groups and institutions on various projects and experiments funded by public and private sources. He also serves on the editorial boards of Aquaculture and Aquaculture Nutrition magazines.

More info

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Carlos Hein

Product Manager - Grower Feeds
Skretting
Fisheries Engineer
The Pontifical Catholic University of Valparaíso,
Chile

Carlos Hein graduated as a Fisheries Engineer from the Pontifical Catholic University of Valparaíso and holds an MBA from the Universidad del Desarrollo. With over 20 years of experience in the salmon industry, Professor Hein has played key roles in research, fish production, nutrition, and food in top companies. His work has been crucial in advancing nutritional and feeding strategies nationally and internationally through leading projects. Currently, he serves as a product manager for grower feeds at Skretting Chile.

Professor Hein is well-known for his vast experience in salmon production and feeding, covering everything from spawning to harvest in both fresh and marine settings. His education, professional background, and leadership skills firmly establish him as a prominent figure in the salmon sector.

More info

Cristián Cornejo

Chief Operations Officer
Inarctica
Industrial Civil Engineer
The Catholic University of the Most Holy
Conception, Chile

Cristián Cornejo graduated as a Civil Industrial Engineer from the Catholic University of the Most Holy Conception. He has over 8 years of experience helping companies nationally and internationally. His work centers on producing extruded foods for aquaculture and pets, and creating solutions to enhance efficiency in food manufacturing. Nowadays, he is the a Chief Operations Officer at Inarctica.

More info

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Jocelyn Ruiz

Researcher
Catholic University of Temuco, Chile
PhD in Agricultural Sciences
Catholic University of Temuco

Dr. Joceline Ruiz Calful is an Aquaculture Engineer, holds a degree in Aquaculture Sciences, and a PhD in Agricultural Sciences from the Catholic University of Temuco, Chile. She works as a researcher in the Fish Nutrition and Physiology Laboratory at the Catholic University of Temuco. Her research focuses on fish nutrition, particularly on incorporating new alternative ingredients, mainly lipid sources, to develop sustainable aquaculture feeds while ensuring the health and nutritional quality of farmed fish.

More info

Jorge Pino

Senior Researcher
Cargill Aqua Nutrition
PhD in Natural Resource Sciences
University of La Frontera, Chile

Dr. Jorge Pino is a Food Engineer, holding an MSc and PhD in Natural Resource Sciences from the University of La Frontera, Chile. He has over 16 years of experience working at Cargill Aqua Nutrition (formerly EWOS) focusing on developing and researching nutritional solutions for aquaculture, particularly in immunology and salmonid health. He has contributed to develop functional feeds to decrease salmon louse infestation and has played a crucial role in developing and introducing digital solutions like SalmoNIR.

More info

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Marta Bou

Researcher
Nofima, Norway
PhD in Animal and Aquaculture Sciences
Norwegian University of Life Sciences, Norway

Dr. Marta Bou Mira holds a Marine Sciences degree from the University of Vigo, Spain, and two MSc in Aquaculture; one from the University of Las Palmas de Gran Canaria and the other from the University of Barcelona. She also obtained a PhD in Animal and Aquaculture Sciences from the Norwegian University of Life Sciences, Norway. Since 2013, she has been working at Nofima in the nutrition and food technology department, focusing on lipid nutrition in fish, particularly salmonids. One area she finds fascinating is researching the minimum requirements of essential fatty acids EPA and DHA and their impact on the health and productivity of salmonids.

More info

Pablo Ibieta

Senior Scientist
TekBios Ltda.
PhD in Natural Sciences
Heidelberg University, Germany

Dr. Pablo Ibieta is a biochemist from the University of Concepción and holds a doctorate in Natural Sciences from the University of Heidelberg, Germany. With over 17 years of experience in applied research and development of aquaculture projects focusing on nutrition, final product quality, fish health, and well-being. Dr. Ibieta is experienced in designing and evaluating strategies, feeds, and management at both experimental and commercial levels. He also contributes to providing guidance on nutrition, animal welfare, challenges with pathogens, and strategies to reduce antibiotic use in salmon farming. Dr. Ibieta is passionate about creating scientific knowledge and applying it to promote more sustainable aquaculture.

More info

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Patricio Dantagnan

Full Professor
Catholic University of Temuco, Chile
PhD in Marine Sciences
University of Las Palmas de Gran Canaria, Spain

Dr. Patricio Dantagnan is an Aquaculture Engineer, Marine Biologist, and Marine Sciences Doctor from the University of Las Palmas de Gran Canaria, Spain. He works as a professor at the Department of Agricultural and Aquaculture Sciences at the Catholic University of Temuco and leads the Fish Nutrition and Physiology Laboratory (www.acuícola.uct.cl/nutricion), which he established. His research primarily involves lipids and fatty acids' nutrition and their interactions with other nutrients. He collaborates with Chilean and international researchers, universities, and research centers in the industry to assess ingredients, supplements, and additives in fish diets.
Furthermore, Dr. Dantagnan teaches in the Doctorate program in Agricultural Sciences at the Catholic University of Temuco and is a guest professor in the Doctorate program in Aquaculture at the consortium comprising the University of Chile, Universidad Católica del Norte, and the Pontifical Catholic University of Valparaíso. He also teaches in the Doctorate program in Aquaculture at the Austral University of Chile.

More info

Paula Arriagada

Global Technical Manager
Corbion, the Netherlands
MSc in Food Science
McGill University, Canada

Paula Arriagada Strodthoff is a Food Engineer from the Austral University of Chile and holds a Master of Science degree in food science from McGill University, Canada. With over 24 years of experience in nutrition and animal production, including poultry farming, she specializes in developing and researching nutritional solutions for aquaculture. Paula is well-versed in formulating, analyzing, and evaluating nutritional concepts for farmed fish, both in experimental and commercial settings. She served as a technical sales manager for Corbion, providing global technical sales support for algae-based omega 3. Professor Paula is passionate about nutrition and dedicated to enhancing the sustainability of the aquaculture industry.

More info

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Stephen Gunther

Director of Consulting and Applied Sciences
Wittaya Aqua
MSc in Animal Science
University of Guelph in Canada

Professor Stephen Gunther has a Master of Science in Animal Science from the University of Guelph and over 19 years of experience in leading national and international companies. His expertise lies in aquaculture nutrition, nutritional strategies, food quality and safety, food plant audits, and research and development.

More info

Program Director

Felipe Reveco

Founder & International Advisor
IFarming, Chile
PhD in Animal Nutrition
Norwegian University of Life Sciences, Norway

Dr. Felipe Reveco Urzúa earned a PhD in Animal Nutrition from the Norwegian University of Life Sciences in Norway. He also holds a Master of Science in Poultry and Animal Science from the University of Saskatchewan in Canada, and a degree in Veterinary Medicine from the University of Chile.

For the last 13 years, it has been concentrating on the salmon sector, especially in Canada and Norway. Collaborating with top companies in the industry from both the private sector and academia, sharing expertise in strategy, production, nutrition, health, and research. The founder of IFarming, a project aimed at assisting aquaculture in maximizing its resources, benefiting producers, suppliers, and new entrants in the field.

More info

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Companies who have put their trust in us:

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Subject I:
Curriculum

Meet him

Course I study plan.

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
1	1. **Course introduction**	0	Introducing the program and course I.	• Greetings. • Description of the program. • Introducing professors. • LMS Overview. • Student showcase.	Felipe Reveco	24-09-24	1
		1	An examination of worldwide aquaculture	• Worldwide aquaculture. • Levels of food production. • Aquaculture nutrition challenges.	Felipe Reveco	Asynchronous	1.5
	2. **Nutrients**	2	Investigating proteins and amino acids.	• Proteins and amino acids: definition, structure, function, and classification.	Felipe Reveco	Asynchronous	1.5
		3	Fundamentals of lipids	• Definition, structure, function, and classification of lipids.	Patricio Dantagnan	Asynchronous	1
		4	Comprehending carbohydrates: structure and metabolic impact	• Description, classification, determination, digestion, absorption, metabolism, and dietary intake.	Felipe Reveco	Asynchronous	1.5
		5	Vitamins	• Description, structure, classifications, and functions of vitamins.	Jorge Pino	Asynchronous	1
		6	Minerals	• Introduction. • Macro and micro minerals. • Inorganic and organic minerals. • Interactions. • Toxicity and the environment.	Pablo Ibieta	Asynchronous	1
		7	Live session for reviewing the content of Module 1 and 2.		Pablo Ibieta Patricio Dantagnan Felipe Reveco	03-10-24	2
			Assessment No. 1			04-10-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course I study plan.

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
1	3. **Intestinal anatomy and nutrient digestion**	10	Intestinal immunity	• Description and organization of the intestinal immune system in fish	Felipe Reveco	Asynchronous	1
		11	Anatomy and structure of the digestive system	• Digestive system overview. • Anatomy. • Histology, histochemistry, and immunohistochemistry. • Morphometric analysis of the intestinal mucosa.	Felipe Reveco	Asynchronous	2
		12	Addressing protein and lipid digestion	• Protein and lipid digestion.	Felipe Reveco	Asynchronous	3
		13	Live session for reviewing the content of Module 3.		Felipe Reveco	10-10-24	2
			Assessment No. 2			11-10-24	2
	4. **Determining the nutritional value of raw materials**	14	Basic concepts associated with the digestive use of nutrients	• Nutritional value of ingredients. • Impact of feed structure on digestion, nutrient release, and bioactive compound delivery. • Nutritional elements. • Original ingredient structure and nutrient digestion compared to food processing.	Adrián Hernández	Asynchronous	1
		15	Methods for determining bio-availability and bio-accessibility	• *In vitro* and *in vivo* methodologies. • Bio-availability. • Bio-accessibility. • Evaluation of the nutritional impact of the components. • Direct approach. • Indirect approach.	Adrián Hernández	Asynchronous	1

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course I study plan.

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
1	4. **Determining the nutritional value of raw materials**	16	Aquaculture feed production	• Biotic and abiotic elements. • Nutritious diet. • Requirements and Nutritional Value. • Fundamental aspects to consider when formulating and preparing feed. • Nutritional modeling. • Manufacturing procedures. • Feed categories. • Process of energy transformation.	Adrián Hernández	Asynchronous	1
		17	Understanding fish feed manufacturing	• Explanation of how feed is made for fish farming species.	Cristián Cornejo	Asynchronous	1.5
		18	Proximate analysis	• Introduction. • Methods for determining the percentages of moisture, fat, fiber, ash, soluble carbohydrates, and protein in feed and ingredients. • Additional analyses: energy, phosphorus, and more.	Jocelyn Ruiz	Asynchronous	1.5
		19	Live session for reviewing the content of Module 4.		Adrián Hernández Joceline Ruiz	24-10-24	2
			Assessment No. 3			25-10-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course I study plan.

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
1	5. **Raw materials**	19	Primary raw materials	• Traditional and alternative sources of proteins and lipids. • Antinutrients. • Origin. • Criteria for quality.	Alejandro Capdeville	Asynchronous	2.5
		20	Technological raw materials	• Identifies energy sources and crucial fatty acids. • Safety: Management of Unwanted Substance Residues. • Binders and coatings. • Oxidative stability and shelf life. • *In vitro* and *in vivo* digestibility.	Alejandro Capdeville	Asynchronous	1.5
			Submission of work done independently			4-11-24	

		21	Primary raw materials	• Alternative ingredients:
				  ○ Types.
				  ○ Nutritional content.
				  ○ Applications.
				  ○ Manufacturing process.
				  ○ Challenges and future prospects of single-cell ingredients.
					Jocelyn Ruiz	Asynchronous	1.5

		22	Functional additives	• Introduction. • Description, category, mechanism of operation.	Felipe Reveco	Asynchronous	1.5
		23	Live session for reviewing the content of Module 5.		Alejandro Capdeville Joceline Ruiz Felipe Reveco	5-11-24	2
			Assessment No. 4			8-11-24	2
			Group work delivery and presentation			12-11-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

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Second Course:
Curriculum

Meet him ›

Course II study schedule

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
2	1.1. **Fish nutrition and health**	0	Introduction to the course II	• Presentation and description of instructors and curriculum. • Student presentation.	Felipe Reveco	14-11-24	1
		1	Vitamins	• Importance and attributes. • Metabolism and Functions. • Deficiencies. • Vitamin sources.	Jorge Pino	Asynchronous	1
		2	Fish bioenergetics	• Definition and description of the concept of bioenergetics. • Energy flow and determination in fish.	Felipe Reveco	Asynchronous	1.5
		3	Minerals in aquaculture	• Imbalance. • Pathologies. • Oxidative stress and immune response.	Pablo Ibieta	Asynchronous	1.5
		6	Live session for reviewing the content of Module 1.1		Pablo Ibieta Felipe Reveco Jorge Pino	19-11-24	2
			Assessment No. 1			22-11-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course II study schedule

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
2	1.2. **Fish nutrition and health**	7	Nutrition and formulation concepts: proteins & amino acids, part 1	• Nutrition and formulation concepts: proteins and amino acids. • Metabolism of dietary amino acids. • Barrel theory. • Imbalanced amino acids. • Amino acid postprandial profile. • Amino acids with specific functions.	Felipe Reveco	Asynchronous	1.5
		8	Nutrition and formulation concepts: proteins & amino acids, part 2	• Digestible protein : digestible energy ratio.	Felipe Reveco	Asynchronous	1.5
		9	High-energy diets in salmon aquaculture	• High energy fish feeds and their connection to nutrients.	Patricio Dantagnan	Asynchronous	1
		10	Evaluation of the nutritional requirements of EPA and DHA in Atlantic salmon and their complexity	• Roles of fats. • Lipids in fish feed. • Species-specific requirement: ○ Important fatty acids. ○ Phospholipids. ○ Cholesterol. • Lipid needs. • Need to reassess nutritional needs. • Effects of EPA and DHA in detail. • Conclusions.	Marta Bou	Asynchronous	2
		11	Live session for reviewing the content of Module 1.2.		Marta, Bou Patricio Dantagnan Felipe Reveco	28-11-24	2
			Assessment No. 2			29-11-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course II study schedule

COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
2	2. **Formulating feeds**	12	Addressing Global Food Security	• Feeding 10 billion people in 2050: Strategies and Challenges • Strategic plan. • Diets for Planetary Health. • Sustainable food production methods. • Blue food items. • Conclusions.	Paula Arriagada	Asynchronous	1
		13	Challenges in balancing fatty acids in feeds for salmon.	• Fundamental principles. • Creating an oil blend. • Energy needs. • Requirements for EPA and DHA. • Balance n6 n3. • Marine ingredients calculation. • Real-life example.	Paula Arriagada	Asynchronous	1
		14	Precise formulation for fish feed	• Key concepts in fish feed formulation. • Introducing and using the AquaOp Feed formulation platform.	Stephen Gunther	Asynchronous	2
		15	Live session to go over important points in oilmix creation, along with other subjects.		Alejandro Capdeville	3-12-24	2
		16	Live session to go over important points in oilmix creation, along with other subjects.		Alejandro Capdeville	5-12-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Course II study schedule

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COURSE	MODULE	CLASS NUMBER	COURSE NAME	CONTENT	PROFESSOR(S)	DATE	NUMBER OF HOURS
2	3. **Monitoring and assessing the nutritional status of fish.**	16	Production parameters	• Key Concepts and Definitions: • Assess growth. • Ratio of weight to length. • Efficient Feeding. • Feeding frequency. • Nutrition and growth tracking: • Comparison between anticipated and achieved outcomes. • Examples and instances.	Carlos Hein	Asynchronous	2
		17	Experimental and field assessment	• Nutritional assessment at experimental and field levels. • Experimental and field design. • Statistical Methods: • Sample size, statistical power, type of analysis, and considerations. • Evaluation and discussion of results obtained from experimental trials and field evaluations. • Statistical significance versus significance of results.	Pablo Ibieta	Asynchronous	2
		18	Live session for reviewing the content of Module 3.		Pablo Ibieta Carlos Hein	12-12-24	2
			Assessment No. 3			13-12-24	2
			Group work delivery and presentation			19-12-24	2

Study schedules might change, either in their organization or in the instructors, because of unexpected events or force majeure.

Collaborators:

Value and discounts

Tuition fees for companies*

- Total program cost:
  - CLP $1.300.000 + VAT (USD $1372).

Tuition fees for students**

- Total program cost:
  - CLP $1.300.000 (USD $1372).

Tariff discount

- **5% early registration discount***.**
- 10% of Farming Campus Virtual alumni***.
- 10% of graduate students are enrolled in educational institutions****.

Chilean payment methods

- Bank transfer.

Global payment methods

- Payment by bank transfer.
- Procurement request.
- PayPal*****.

(*) Prices listed in US dollars are for informational purposes and do not incorporate VAT. The ultimate amount in USD is determined based on the daily exchange rate.

(**) Dollar prices are for reference purposes only. The ultimate dollar amount is determined based on the daily exchange rate.

(***) Discounts are non-transferable and non-cumulative, expiring on August 31, 2024, with the exception of the discount for IFarming Campus Virtual alumni.

(****) Discounts are non-transferable and non-cumulative. Postgraduate students are required to submit current registration to contact@ifarming.ai to avail the discounts.

(*****) A 5% discount is available for IFarming Campus Virtual alumni and graduate students when paying tuition with PayPal. To make payments with PayPal, please contact us.

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General details

Modality

- **Flipping Learning Method.**
- Online and live classes.
- Spanish Linguistics.

Dates*

- Start date: **September 24, 2024**.
- End date: December 19, 2024.

Schedule*

- Classes are scheduled for Tuesdays and/or Thursdays from 6:00 p.m. to 8:15 p.m., with potential variations for courses taught by instructors in time zones different from GMT-4, like AM sessions.

Addressee

- Graduates from educational programs related to aquaculture.

Workload

	Course I	Course II	Program
Synchronous hours:	36.5	33	69.5
Asynchronous hours:	70	66	136

Evaluation & support material

- Controls available.
- Reading materials.
- Video of classes.

Tuition fees for companies**

- Total program cost: CLP $1.300.000 plus VAT.
- **5% early registration discount**, inquire about additional discounts.

Tuition fees for students**

- Total program cost: CLP $1.300.000.
- **5% early registration discount**, inquire about additional discounts.

Approval certificate

- Achieve an 80% attendance rate with a final average of 60%.
- **Certificate issued by the Catholic University of Temuco.**

(*) The program needs a minimum enrollment to commence. The registration deadline is set for September 15, 2024.
(**) The study plans may undergo modifications, both in their planning and in the teaching staff.
(***) Prior to enrolling, please remember to review the Terms and Conditions of the program found at www.ifarming.ai.

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Learn from the best!

Alejandro Capdeville

Adrián Hernández

Carlos Hein

Cristián Cornejo

Felipe Reveco

Jocelyn Ruiz

Jorge Pino

Marta Bou

Pablo Ibieta

Patricio Dantagnan

Paula Arriagada

Stephen Gunther

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