



IPB University  
— Bogor Indonesia —

# ACADEMIC GUIDEBOOK

INTERNATIONAL CLASS  
FOOD TECHNOLOGY  
UNDERGRADUATE PROGRAM

**Department of Food Science & Technology**  
**Faculty of Agricultural Engineering & Technology**  
**IPB University**

# INTRODUCTION

Food Technology Program (FTP) at the Department of Food Science and Technology, Faculty of Agricultural Engineering and Technology, IPB University is an undergraduate education program that focuses itself to produce graduates who have competences in processing food materials into safe, quality and healthy food products at industrial scale.



Since it was opened in 1964, FTP-IPB has been nurturing graduates that are capable to work in various positions or fields in the national and international food industries, government agencies or as successful food entrepreneurs.

FTSP-IPB is considered to be the best and the oldest study program in the field of agricultural-based food processing, receiving "A" level by the National Accreditation Body of Higher Education (BAN-PT). FTP-IPB is also internationally accredited by the American Institute of Food Technologists (IFT) since 2010 and the International Union of Food Science and Technology (IUFoST) since 2013. FTSP-IPB has the distinction of being the first food technology study program outside of North America that is recognized by IFT with the status of "developed" in managing the education. With such national and international recognition, FTP-IPB becomes a highly desirable study program by high school students, and consequently results in a high level of competitiveness ratio for the entrance. Additionally, FTSP-IPB adopts international standard curricula with learning outcomes that meet IFT Education Standard.

Starting in the academic year 2018/2019, International Program of Food Technology Program will be opened, and can be enrolled by foreign and Indonesian students. This international class is specifically designed to cater strong needs on food technologists with solid international perspectives. For young and prospective food technologists, you are most welcome to register!

Within this book, prospective students can get the information regarding the International program related to the academic atmosphere/curriculum, regulations, ethics of as well as other information related to the university itself.

## VISION

To become a **leading higher education institution** with **international quality** and as a **trend setter** in the development of food science and technology.

## MISSION

1. Performing a high quality higher education to produce competent and international quality graduates in the field of food science and technology
2. Conducting creative food-related researches based on tropical food resources which support the educational process and development of food science and technology
3. Delivering community services that contribute to the competitiveness and profitability of the food industry and to the well being of the public



# HISTORY

It was started with "**Agricultural Processing Technology**"

Changed to "**Food Science and Technology**"

Approved by **International Union of Food Science and Technology (IUfoST)**

Re-approved by **International Union of Food Science and Technology (IUfoST)**

Changed to "**Food Technology and Human Nutrition**"

Approved by **Institute of Food Technologists (IFT) - USA**

Re-approved by **Institute of Food Technologists (IFT) - USA**

**International Program of Undergraduate Food Technology**

# THE CAMPUS

IPB University is located in Dramaga, Bogor, West Java, Indonesia. It is surrounded by cities that makes easy to access the location and go out of town. IPB Campus has a good environment and plenty of transportation system choices that can support the ideal surrounding for academic and non-academic activities.



# FACILITIES

## Teaching and Research Laboratories

Students have access to teaching and research Laboratories in the Department of Food Science and Technology and SEAFast Center, including food chemistry laboratory, food microbiology laboratory, food biochemistry and human nutrition laboratory, food processing and engineering laboratory, and sensory evaluation laboratory.

Food Processing Pilot plants are also available to provide students with practical work in a larger scale food processing. The pilot plants are equipped with processing machinery and equipment that are regularly utilized for integrated food processing laboratory course, which is designed to mimic a miniaturized yet complete food industry model.

## Research Facilities

The laboratories provide sophisticated equipment for analysis, such as GC, GCMS, HPLC, AAS, DNA sequencer, Electrophoresis, Ultra filtration, Polarization, Microscopes, Rancimat, Rheometer, PCR, Pulsed NMR,,

## Libraries and Information Center

Libraries and Information Center is mainly supported by the IPB Central Library. The libraries provide information and variety of literatures in the food science and technology as well as agricultural technology and other relevant subjects etc.



# INTERNATIONAL PROGRAM OF FOOD TECHNOLOGY

## OBJECTIVES

International undergraduate program of food technology (IUP-FT) is designed specifically to cater strong need on food technologists with solid international perspective.

## GRADUATE COMPETENCIES

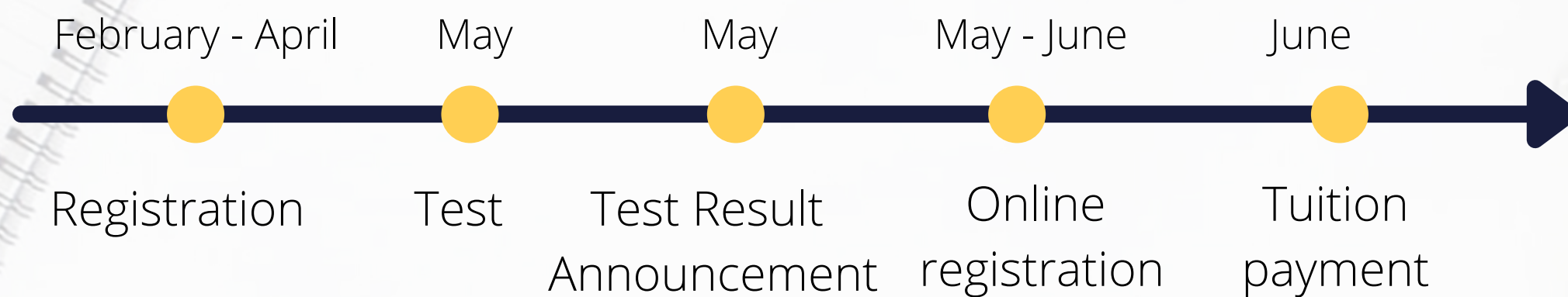
Graduate competence will meet IFT minimum **core competences** of food science undergraduate program and fulfil the Indonesian Qualification Framework. Students completing this program will:

1. Have sufficient knowledge on the principles of food science (chemistry and food analysis, microbiology and food safety, engineering and food processing, biochemistry of food and nutrition) in producing safe food and quality along the food chain.
2. Have ability to design a process of adding value to foods by combining various unit operations to produce safe and quality foods.
3. Have strong awareness in international issues of food industry.
4. Have strong success skills (communication skills, critical-thinking/problem solving skills, life-long learning skills, professionalism skills, interaction skills, information acquisition skills, and organizational skills).



# STUDENT ADMISSION

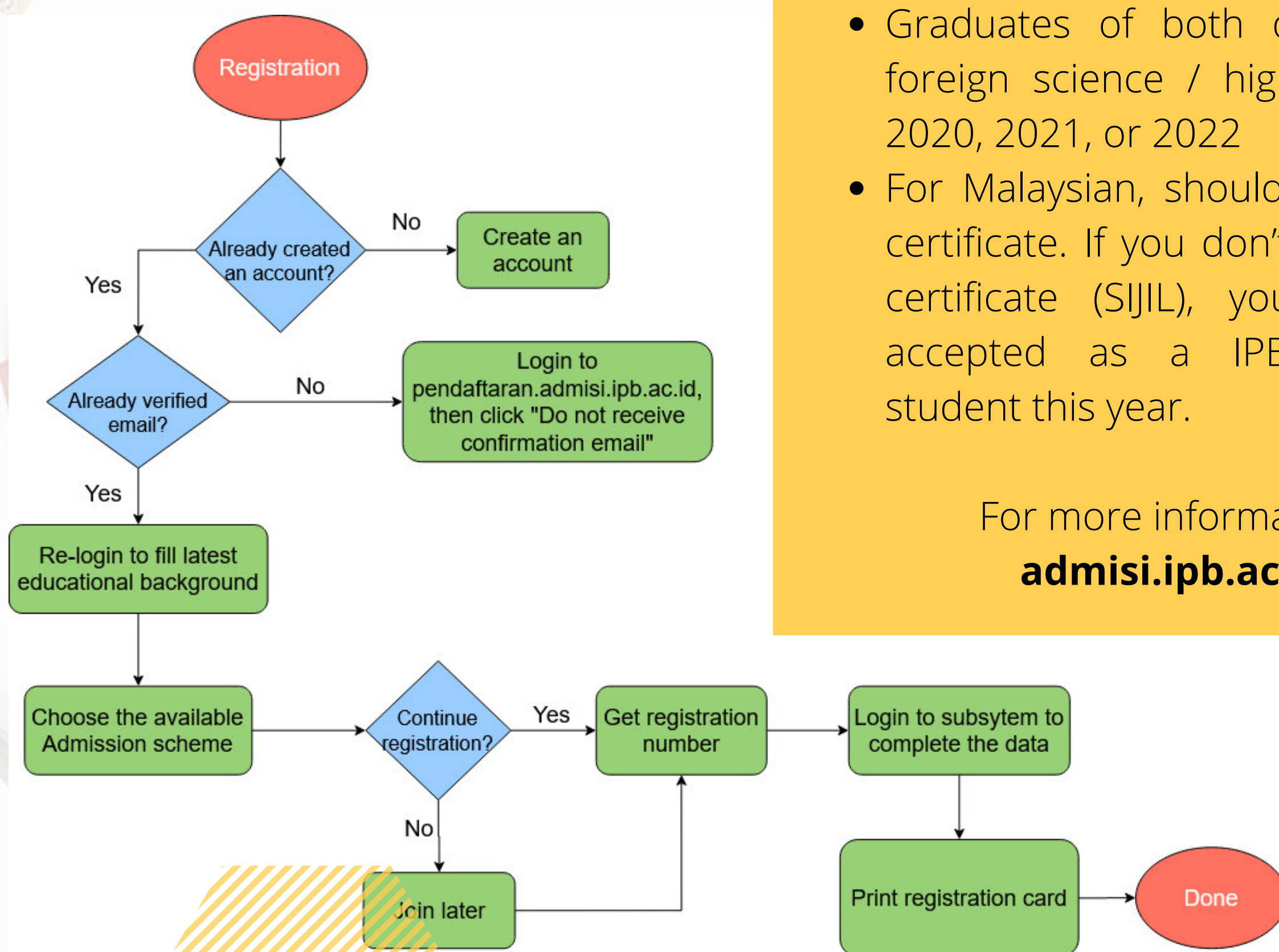
For Undergraduate International Program, the admission process follows the schedule announced by IPB University. The International program selection method is the same as the UTM pathway method through written examinations in English. Written examination is about scholastic test.



## Requirements (for 2022 intake):

- Foreign citizen and Indonesian citizen
- Graduates of both domestic and foreign science / high school / in 2020, 2021, or 2022
- For Malaysian, should have college certificate. If you don't have college certificate (SIJIL), you cannot be accepted as a IPB University's student this year.

For more information:  
[admisi.ipb.ac.id](http://admisi.ipb.ac.id)





# PROGRAM STRUCTURE

PROGRAM SCHEME	
Single Degree (3.5 + 0.5)	3.5 years at IPB University 0.5 year at partner university
Double Degree (3 +1)	3 years at IPB University 1 year at partner university

## ACADEMIC ACTIVITIES

### Student Exchange Program/Credit Earning Activity

Student may apply in credit earning program for a semester in partner university in ASEAN, Japan, or Europe. Through this program, students take several food science or elective courses in partner universities.

### Final Year Project

Students will conduct their final year research project in a partner university for a semester. Research is supervised by lecturers from both IPB University (home) and partner (host) university. As option to final year research project, student is also possible to take internship program at international food company abroad.

### Short-term International Mobility At Partner University

Students may participate in international academic program such as, summer courses, trainings or conferences.



# PARTNER UNIVERSITIES



# CURRICULUM

The curriculum at Food Technology Undergraduate Program allows flexibility for students to pursue mobility/ exchange program, internship, or other activities that are of interest. Two schemes of four years undergraduate program (144 unit of credits) are designed to provide alternatives for students either to finish the entire program in IPB (4+0 program) or to spend their final (fourth) year in partner universities abroad (3+1 or 3.5+0.5 program). Students completing an IUP-FT are awarded the Bachelor of Food Technology degree.

## SEMESTER 1

IPB110A Religion 3(2-1)  
 IPB110C Innovative Agriculture 2(2-0)  
 EKO1101 Economy 2(2-0)  
 IPB110F English 2(1-1)  
 KIM1104 Chemistry 3(2-1)  
 KPM1131 Sociology 2(2-0)  
 MAT1102 Mathematics and Logical Thinking 3(2-1)  
 STA1111 Statistics and Data Analysis 3(3-0)

## SEMESTER 3

KIM1222 Organic Chemistry 2 3(3-0)  
 TPN1201 Global Perspective in Food Science & Technology 2(2-0)  
 TPN1202 Basic Food Chemistry & Biochemistry 3(1-2)  
 TPN1211 Food Chemistry 3(3-0)  
 TPN1221 Food Microbiology 3(3-0)  
 TPN1241 Food Biochemistry 3(3-0)  
 Elective/ Enrichment Course (Learning hours) 3

## SEMESTER 5

TPN1301 Food Analysis 3(3-0)  
 TPN1302 Food Analysis Laboratory 2(0-2)  
 TPN1321 Food Safety and Sanitation 2(2-0)  
 TPN1331 Food Engineering II 3(2-1)  
 TPN1332 Food Manufacturing Technology I 4(3-1)  
 TPN1303 Research Design in Food Science 2(1-1)  
 TPN1341 Basic Functional Foods 3(3-0)

## SEMESTER 7

TPN1305 Food Innovation 3(1-2)  
 TPN1421 HACCP for Food Safety Control 2(2-0)  
 IPB303 Professional Development (internship) 3(0-3)  
 IPB400 Thematic Student Community Services 4  
 Elective/ Enrichment Course 3  
 Elective/ Enrichment Course 3

## SEMESTER 2

BIO1102 Biology 3(2-1)  
 FIS1104 Physics 3(2-1)  
 IPB1106 Indonesian Language 2(1-1)  
 IPB110D Pancasila 1(1-0)  
 IPB110E Civics 1(1-0)  
 IPB110G Sports and Arts 1(0-1)  
 KOM1102 Computational Thinking 2(2-0)  
 MAT1104 Calculus 1 3(2-1)  
 Elective/ Enrichment Course (Learning hours) 3

## SEMESTER 4

TPN 1222 Food Microbiology Laboratory 2(0-2)  
 TPN1223 Food Fermentation Technology 2(2-0)  
 TPN1231 Fundamentals of Process Engineering in Food Industry 3(2-1)  
 TPN1232 Food Process Engineering I 3(2-1)  
 TPN1242 Metabolism of Food Components 3(3-0)  
 TPN1233 Sensory Evaluation of Foods 3(2-1)  
 TPN1203 Food Regulation 2(2-0)  
 Elective/ Enrichment Course (Learning hours) 3

## SEMESTER 6

TPN1333 Food Packaging and Storage Technology 2(2-0)  
 TPN1311 Food Additives 2(2-0)  
 TPN1334 Food Manufacturing Technology II 3(2-1)  
 TPN1335 Food Quality Assurance 3(2-1)  
 TPN1342 Biological Evaluation of Food Component 3(2-1)  
 TPN1304 Scientific Writing and Oral Presentation 2(1-1)  
 TPN1336 Halal Assurance System 2(2-0)  
 Elective/ Enrichment Course (Learning hours) 3

## SEMESTER 8

TPN1498 Undergraduate Seminar 1  
 TPN1499 Final Year Project (Research/ Internship) 6

**NOTE:**  
**Elective/ Enrichment Courses are courses/ activities taken outside the study program that can be converted into credits.**

# EXTRACURRICULAR ACTIVITIES

Food Technology Student Association or Himitepa organizes student extra-curricular activities. Several extra-curricular student activities are as follows:

## Food Product Development Competition (FPDC)

FPDC is design to challenge students to take all of the skills and food science knowledge and apply them to a real-world situation. Each participating student team develops a new food idea and carries the concept through marketing and production. It challenges organizational, teamwork, creative, and scientific skills. HIMITEPA arranges the competition in collaboration with SEAFast Center and Food Ingredients Asia (FIA).



## Ksatria Pangan (Kapangan)

Kapangan is a place for students who has passion to directly apply the food science knowledge for community in the areas of food safety and food processing development. The targeted community are small-scale food producer, elementary school students, and food vendors.



## Food Alert

Food Alert is a platform to inform community regarding food science and technology in practice through social media, posters, or other media.



## Food Processing Club (FPC)

FPC is student club to facilitate student interest to strengthen their skills in food processing and product development.

## World Food Day (WFD)

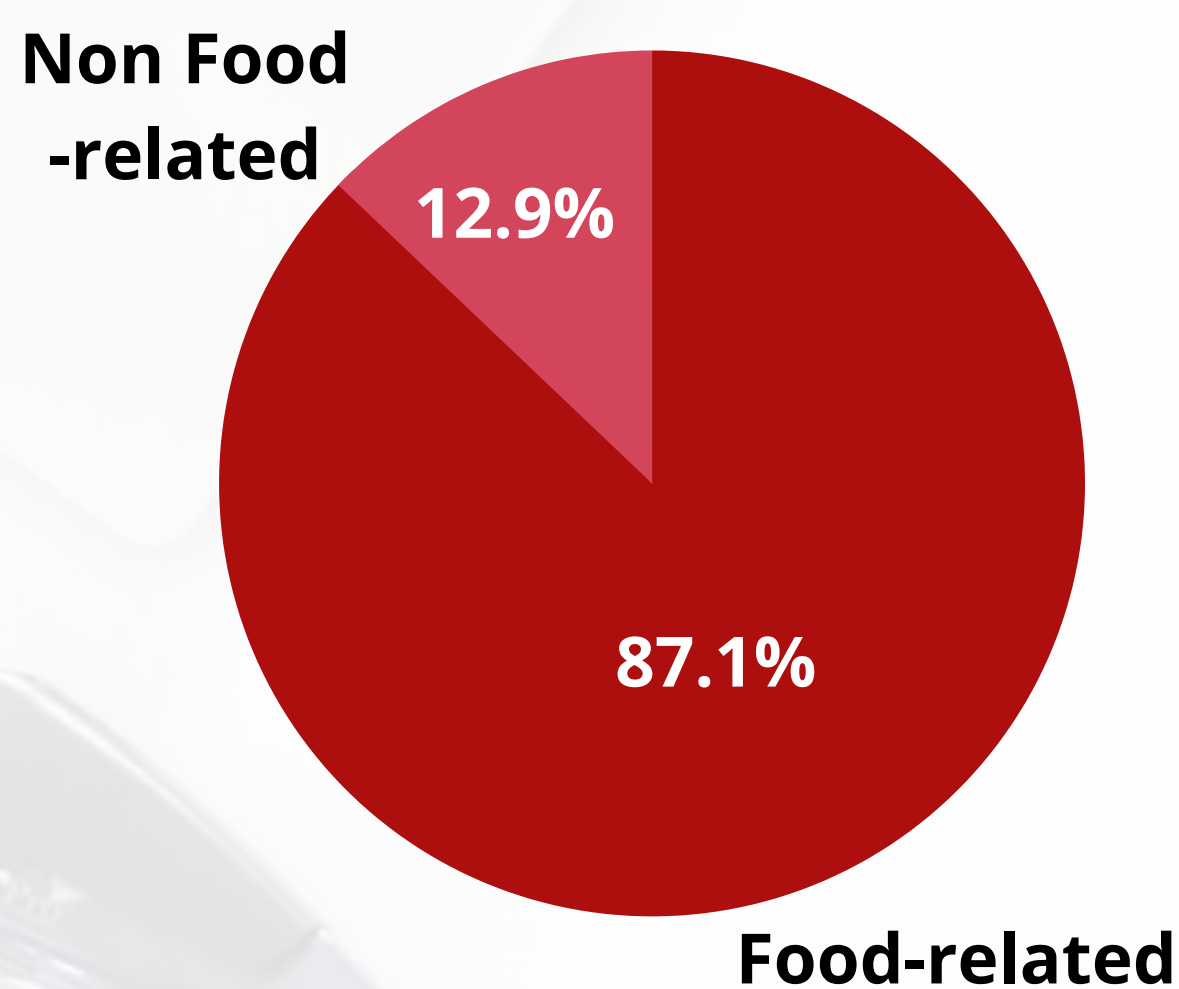
WFD is an annual student event to celebrate world food day on October 16th.



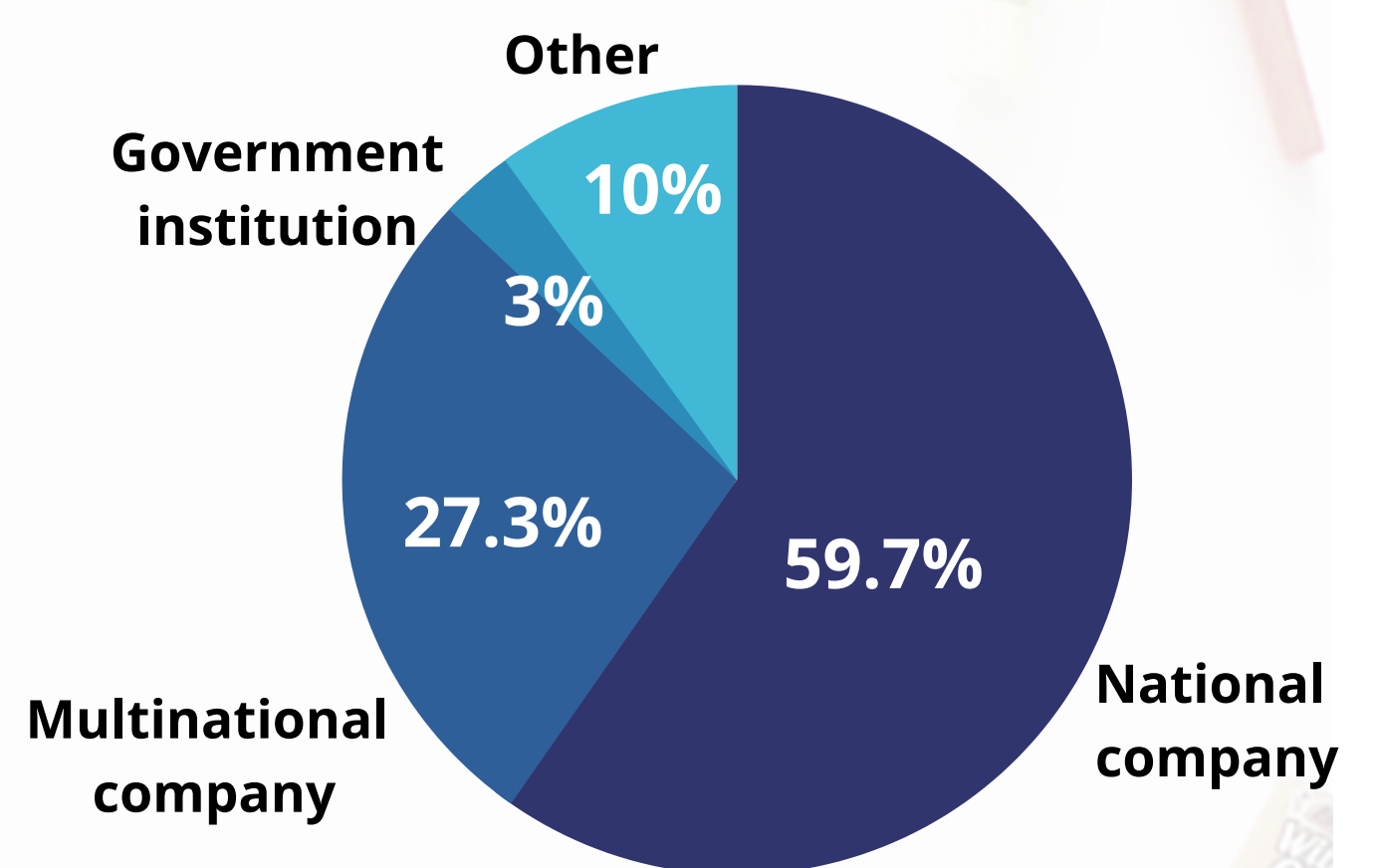
# ALUMNI

Our undergraduate students come from almost all provinces in Indonesia. More than 4,000 of our alumni are working in various food-related sectors in our country and abroad, mostly in food industries in the areas of production, R&D, marketing, regulatory affair, food quality and safety system, etc.

## Field of Work



## Institution





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Faculty of Agricultural Engineering & Technology  
IPB University**

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