

# BS ITP

# INDUSTRIAL TECHNOLOGY & PACKAGING



BS INDUSTRIAL TECHNOLOGY & PACKAGING

**The Industrial Technology and Packaging (ITP) major combines business, design, science, and technology to prepare professionals to craft innovative sustainable products and packaging systems, and to manage the supply chain and operations needed to produce and distribute them.**

Graduates can step into roles like packaging engineer, structural designer, product designer/developer, industrial engineer, supply chain engineer, internal operations engineer, manufacturing engineer, quality engineer, and business analyst.

Our curriculum encompasses a range of compelling subjects such as user-centered design, design thinking, sustainability, entrepreneurship, marketing, project management, manufacturing, automation materials, supply chain management, operations management, distribution, logistics, Lean Six Sigma, technical sales, business analytics, and procurement.

Within the ITP major, two coveted concentrations resonate deeply with industry demands:

- **Industrial Technology**
- **Packaging Technology**



**CAL POLY**

Industrial Technology  
& Packaging

ORFALEA COLLEGE OF BUSINESS



## STARTING SALARY

# \$73k

Average starting salary of recent graduates.

## JOB PLACEMENT

# 93%

Students with a job in the field within one year after graduation in 2023.

## STUDENT TEACHER RATIO

# 15:1

40 students max per lecture section.  
20 students max per lab section.

## BS INDUSTRIAL TECHNOLOGY & PACKAGING CURRICULUM

### MAJOR COURSES

**ITP 100** Student Orientation and Career Readiness

**ITP 150** Industrial Power Systems

**ITP 233** Product Modeling and Communication

**ITP 326** Product Design and Development

**ITP 341** Packaging Polymers and Processing

**ITP 406** Professional Technical Selling

**ITP 411** Packaging Sustainability

**ITP 461** Senior Project I

**ITP 125** Intro to Supply Chain and Packaging Systems

**ITP 211** Industrial Safety and Quality Program Leadership

**ITP 303** Lean Six Sigma Green Belt

**ITP 330** Packaging Fundamentals

**ITP 371** Supply Chain Management

**ITP 409** Packaging Machinery and Processes

**ITP 415** Supply Chain and Logistics

**ITP 462** Senior Project II

### SUPPORT COURSES

**BUS 346** Principles of Marketing

**CHEM 124** General Chemistry for Engineering I

**MATH 141** Calculus I

**PHYS 123** College Physics III

**BUS 391** Information Systems

**ECON 201** Survey of Economics

**PHYS 121** College Physics I

**STAT 217** Introduction to Statistical Concepts and Methods



BS ITP

# INDUSTRIAL TECHNOLOGY

BS INDUSTRIAL TECHNOLOGY & PACKAGING

INDUSTRIAL TECHNOLOGY CONCENTRATION

**Look around you. Most of the things you see have been designed, mass-produced, and shipped. From the food you eat, the beverages you drink, the clothes you wear, the medicines you take, and the products you use every day...**

Product designers, industrial engineers, and supply chain specialists create, develop, and test product systems and the supply chain needed to mass-produce and distribute them.

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#### WHY STUDY INDUSTRIAL TECHNOLOGY?

The Industrial Technology Concentration offers an exceptional interdisciplinary curriculum centered around **product development, manufacturing,** and the complexities of **supply chain** and **operations management.**

Students will immerse themselves in a diverse array of courses encompassing technology, product design, materials, manufacturing technology, quality assurance, automation, process improvement, Lean Six Sigma methodologies, commercialization of innovation, entrepreneurship, business administration, project management, operations management, and supply chain management.



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## Career Opportunities

Our graduates gain access to a wide spectrum of roles, encompassing industrial engineering, product development, supply chain management, procurement, manufacturing, and sales. This array of opportunities reflects the versatility and value of the **Industrial Technology Concentration**. Some of the companies that hire our graduates include:

- Adobe
- Apple
- Boeing
- Cisco
- Dell
- Edwards Lifesciences
- Genentech
- Google
- Intel
- Lockheed Martin
- Northrop Grumman
- Nvidia
- Oracle
- PepsiCo
- Raytheon
- Stryker
- Tesla
- Walmart

### WHAT WILL I LEARN?

- Sustainability
- Product design
- 3D Modeling
- Life Cycle Assessment
- Industrial materials
- Manufacturing tech.
- Supply chain mgmt.
- Operations mgmt.
- Automation
- Project management
- Design thinking
- Lean thinking
- Problem-solving
- Industry 4.0
- Digital technologies

## TESTIMONIAL



**Oliver Kensinger**  
Industrial Engineer  
at Boeing  
BS ITP '23

*"The Industrial Technology concentration taught me the technical skills that I needed to be able to excel as an industrial engineer, with enough course variety to understand and act as a bridge between other engineers, supply chain, and business colleagues.*

*But more than that, it threw me into real-world situations that developed leadership, strong communication, adaptability, and teamwork."*

### TOP PROGRAM



Top Industrial Technology  
Program in California.

UNIVERSITIES.COM

### JOB PLACEMENT

# 100%

Graduates with a job in the field  
within one year after  
graduation in 2023.

### STUDENT TEACHER RATIO

# 15:1

40 students max per  
lecture section.  
20 students max  
per lab section.

## INDUSTRIAL TECHNOLOGY CONCENTRATION COURSES

### REQUIRED COURSES

**ITP 260** Manufacturing Processes and Materials

**ITP 390** Industrial Automation

**ITP 403** Lean and Quality Systems Management

**ITP 410** Operations Planning and Control

**ITP 428** Commercialization of New Technologies

**ITP 467** Applied Business and Production Management

### SELECTED ELECTIVE COURSES

**BUS 215** Managerial Accounting

**BUS 304** International Supply Chains

**BUS 310** Introduction to Entrepreneurship

**ITP 470** Sketching for Product Design

# BS ITP PACKAGING TECHNOLOGY

BS INDUSTRIAL TECHNOLOGY & PACKAGING

PACKAGING TECHNOLOGY CONCENTRATION

**Look around you. Most of the things you see have been shipped in packaging systems. From the food you eat, the beverages you drink, the clothes you wear, the medicines you take, and the products you use everyday...**

Packaging engineers, designers, and scientists create, develop, and test the myriad packaging systems that enable modern life.

## WHY STUDY PACKAGING?

Packaging has evolved from being considered a logistical or materials concern into a strategic business function with a central focus on value creation. The Packaging Technology Concentration delves into the **complete packaging value chain**, seamlessly integrating aspects of business, design, engineering, material science, and technology.

Our students cultivate a deep comprehension of pressing packaging concerns such as sustainability, inclusion, and globalization and their far-reaching implications within the industry. We inspire our students to channel their passions, enabling them to explore diverse industry sectors such as food and beverage, cosmetics and personal care, consumer goods, automotive, healthcare, and electronics.



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ORFALEA COLLEGE OF BUSINESS

## Career Opportunities

Our graduates gain access to a wide spectrum of roles, encompassing packaging engineering, packaging design, research and development, procurement, manufacturing, sales, and management. This array of opportunities reflects the versatility and value of the **Packaging Technology Concentration**. Some of the companies that hire our graduates include:

- Amazon
- Amgen
- Applied Medical
- Apple
- Avery
- Boston Scientific
- Clorox
- Edwards Lifesciences
- Genentech
- Gilead Sciences
- Google
- Intel
- Munchkin
- Landsberg Orora
- PepsiCo
- Tesla
- TransPak
- Wonderful

### WHAT WILL I LEARN?

- Sustainable design
- Structural design
- Graphic design
- Life Cycle Assessment
- Packaging materials
- Packaging technologies
- Testing methods
- Packaging machinery
- Packaging regulations
- Food packaging
- Healthcare packaging
- Design thinking
- Lean thinking
- Problem-solving
- Scientific research

## TESTIMONIAL



**Sophia Tamrazian**  
Packaging Product  
Design Engineer at  
Apple  
BS ITP '20

*“The ITP program provided a framework of design principles and real-life experiences that translated directly into my day-to-day work. I gained a lot of experience in team projects by brainstorming, prototyping concepts, widening my material understanding, and learning to execute at an accelerated pace. Working with different students with various backgrounds also prepared me for collaborating with cross functional partners in industry.”*

### TOP PROGRAM



Top Undergraduate  
Packaging Program  
in the Nation.

VALUECOLLEGES.COM

### JOB PLACEMENT

85%

Graduates with a job in the field  
within one year after  
graduation in 2023.

### GLOBAL RECOGNITION



Most WorldStar Student Awards  
than any university  
in the world.

WORLD PACKAGING ORGANISATION

## PACKAGING TECHNOLOGY CONCENTRATION COURSES

### REQUIRED COURSES

**ITP 234** Packaging Design Fundamentals

**ITP 408** Fiber-Based Packaging

**ITP 412** Instrumental Analysis of Packaging Polymers

**ITP 430** Healthcare Packaging

**ITP 475** Packaging Distribution Dynamics

**ITP 485** Packaging Development

### SELECTED ELECTIVE COURSES

**FSN 354** Packaging Function in Food Processing

**ITP 403** Lean and Quality Systems Management

**ITP 414** Packaging Laws & Regulations

**ITP 419** Cooperative Education/Internship