

Bachelor of Technology Program in Industrial Technology (Continuing Program) B. Tech. (Industrial Technology)

OVERVIEW AND PHILOSOPHY

Faculty of Industrial Technology, Phranakhon Rajabhat University began offering a Bachelor of Technology in Industrial Technology (Continuing Program), accredited by the Ministry of University Affairs in the year 2013. The course was tailored for students who have vocational certificates from any field related to the industrial trade and technology. It aimed at producing graduates with an ability to apply industrial technology and disciplinary knowledge to their work in the industrial sectors and other organizations, and to pursue their studies at a higher level.

Bachelor of Technology (B. Tech.) in Industrial Technology (Continuing Program) is a two-year full time course that helps students to develop well-round skills in industrial technology, endowed with the capability of specialized knowledge of their own vocational field of study.

Currently, the Bachelor of Technology in Industrial Technology (Continuing Program) comprises eight academic areas:

- Industrial Product Design
- Electrical Technology
- Electronics Technology
- Mechanical Technology
- Industrial Computer Technology
- Industrial Technology
- Industrial Management Technology
- Construction Technology

PROGRAM STRUCTURE

The program of study covers 2 academic years (4 semesters in total) and consists of 80 credits including:

1. General Education 18 credits
2. Professional Courses 51 credits
 - a. Professional Foundation Course 15 credits

5502103	Technical English	3(3-0)
5503102	English for Industrial Works	3(3-0)
5513307	Industrial Entrepreneur	3(3-0)

Basic courses 6 credits

5503101	Industrial Computer	3(2-2)
5503308	Organization and Industrial Management	3(3-0)
5504903	Industrial Statistics	3(3-0)
5504904	Industrial Mathematics	3(3-0)
5513101	Material Science	3(3-0)
5721119	Industrial Safety	3(3-0)
 - b. Major Courses 36 credits
 - 1. Industrial management Technology**

- Required Courses		15 credits
5513502	Industrial Quality Management	3(3-0)
5513505	Production and Operation Management	3(3-0)
5514302	Material Management	3(3-0)
5514510	Human Resource Management in Industry	3(3-0)
5514903	Research for Industrial Management	3(2-2)
- Elective Courses		21 credits
5503203	Ethics for Administration	3(3-0)
5503501	Value Engineering	3(3-0)

5504204	Leadership and Team Development	3(3-0)
5512302	Industrial Plant Design	3(3-0)
5512304	Feasibility Analysis and Project Management	3(3-0)
5512502	Industrial Economics	3(3-0)
5513301	Safety Engineering	3(3-0)
5513501	Industrial Management Strategy	3(3-0)
5513506	Industrial Management Technology	3(3-0)
5513507	Technical Report and Presentation	3(3-0)
5513509	Logistics Management	3(3-0)
5514303	Work Study	3(3-0)
5514306	Industrial Psychology and Organization	3(3-0)
5514311	Production Planning and Control	3(3-0)
5514501	Human Relations in Industrial Management	3(3-0)
5514503	Industrial Productivity Improvement	3(3-0)
5514507	Industrial Efficiency Development	3(3-0)
5514509	Financial Management in Industry	3(3-0)
5514902	Seminar on Industrial Management Technology	3(3-0)

2. Industrial design Technology

- Required Courses	15	credits
5543107	Computer Aided Design 1	3(2-2)
5543111	Industrial Product Design 4	3(2-2)
5543113	Industrial Product Design 5	3(2-2)
5543118	Contemporary Lifestyle and Trend of Product Technology	2(1-2)
5544901	Thesis Design	4(2-4)

- Elective Courses	21	credits	
5542108	Contemporary Thai Product Design		3(2-2)
5542206	Wood Product Design		3(2-2)
5542403	Furniture Design 3		3(2-2)
5542601	Plastic Product Design		3(2-2)
5542703	Packaging Design 3		3(2-2)
5543103	Product Design Technology and Innovation		3(2-2)
5543109	Computer Aided Design 2		2(1-2)
5543117	Saving Energy in Product Design		3(2-2)
5543212	Jewelry Design		3(2-2)
5543401	Furniture Design 4		3(2-2)
5543701	Packaging Design 4		3(2-2)
5543901	Research Methodology for Industrial Product Design		2(1-2)

3. Building Technology

- Required Courses	15	credits	
5563601	Strength of Materials		3(3-0)
5563602	Structural Analysis		3(3-0)
5564602	Reinforced Concrete Structure		3(3-0)
5564606	Soil Mechanics		3(2-2)
5564901	Construction Technology Project		3(1-4)
- Elective Courses	21	credits	
5563101	Construction Materials		2(2-0)
5563102	Construction Management		3(3-0)
5563103	Computer Aided Construction Drawings		3(2-2)
5563104	Modern Technology in Construction		3(3-0)
5563701	Cost Estimation		3(2-2)
5564101	Construction Supervision and Inspection		3(3-0)

5564102	Construction Equipment Technology	2(2-0)
5564103	Construction Failure Analysis	3(3-0)
5564604	Timber and Steel Structure	3(3-0)
5564607	Materials Testing Technology	3(2-2)
5564608	Foundation's Technology	3(3-0)
5564615	Construction Survey	3(2-2)
5564701	Concrete Technology	3(2-2)
5564707	Introduction to Hydraulics	3(2-2)
5564708	Sanitation System in Building	3(3-0)
5564904	Seminar on Construction Technology	2(2-0)
5712501	Laws and Building Acts	3(3-0)

4. Electrical Technology

- Required Courses	15	credits
5573103	Industrial Measurement and Control	3(1-4)
5573302	Power Plant and Substation	3(3-0)
5573601	Electrical Programming Usage	3(1-4)
5573605	Microcontroller	3(1-4)
5574905	Special Project	3(0-6)
- Elective Courses	21	credits
5572102	Electrical Measurement and Instruments	3(3-0)
5572103	Practice in Electrical Measurement and Instruments	1(0-3)
5572104	Electric Circuit Analysis	3(3-0)
5572203	Electrical Installation	3(3-0)
5572204	Practice in Electrical Installation	1(0-3)
5572602	Digital System Design	3(3-0)
5572603	Practice in Digital System Design	1(0-3)
5572701	Electronic Circuits	3(3-0)
5572702	Practice in Electronic Circuits	1(0-3)

5573306	Electrical Machines	3(1-4)
5573101	Industrial Electrical Technology	2(1-2)
5573104	Electrical Industrial Product Standards	3(3-0)
5573105	Practice in Electrical Industrial Product Standards	1(0-3)
5573301	Electric Power Transmission and Distribution	3(3-0)
5573402	Electrical System Design	3(3-0)
5573410	Programmable Logic Control System	3(1-4)
5573504	Refrigeration and Air Conditioning System	3(3-0)
5573505	Practice in Refrigeration and Air Conditioning System	1(0-3)
5573607	Robotics	3(1-4)
5574111	Electrical Project Management	3(3-0)
5574401	Illumination	3(3-0)
5574403	Power System Analysis	3(3-0)

5. Electronics Technology

- Required Courses	15	credits
5582103	Electronic Circuit Analysis	3(2-2)
5583702	C Programming	3(2-2)
5583711	Data Communication and Computer Network	3(2-2)
5583719	Microcontroller Technology	3(2-2)
5584909	Electronic Technology Project	3(2-2)
- Elective Courses	21	credits
5582101	Electronic Circuit Design	3(2-2)
5582104	Electronic Technology	3(2-2)
5582705	Electronic Measuring Instruments	3(2-2)

5583404	Sensors and Transducers	3(2-2)
5583406	Industrial Electronics	3(2-2)
5583408	Automatic Control System	3(2-2)
5583504	Communication Technology	3(3-0)
5583506	Fiber Optic Communication	3(2-2)
5584301	Television Technology	3(2-2)
5584303	Mobile Phone Technology	3(3-0)
5584306	Robotic Technology	3(2-2)
5584703	Microcontroller Applications	3(2-2)
5584713	Computer Maintenance	3(2-2)
5584902	Electronic Research Management	3(3-0)
5584908	Seminar on Electronics	3(2-2)

6. Mechanical Technology

- Required Courses 15 credits

5593705	Engineering Thermodynamics	3(3-0)
5593706	Fluid Mechanics	3(3-0)
5593707	Heat Transfer	3(3-0)
5593715	Engineering Mechanics	3(3-0)
5594905	Mechanical Technology Project	3(2-2)

- Elective Courses 21 credits

5592501	Machinery Technology	3(2-2)
5593602	Refrigeration and Air Conditioning	3(2-2)
5593703	Machinery Design	3(3-0)
5593709	Measurement and Instrument in Industry	3(2-2)
5593711	Industrial Hydraulics	3(2-2)
5593712	Industrial Pneumatics	3(2-2)
5593717	Material Mechanics	3(3-0)
5593718	Mechanics of Machinery	3(3-0)

5593719	Hydronics and Pneutronics	3(2-2)
5593720	Computer Aided Drawing and Design	3(2-2)
5594202	Internal Combustion Engines	3(2-2)
5594404	Plastic and Fiber Glass Technology	3(2-2)
5594503	Renewable Energy	3(3-0)
5594510	Energy Conservation in Factory	3(3-0)
5594701	Automotive Engineering	3(3-0)
5594705	Power Plant	3(3-0)
5594709	Mechanical Engineering Laboratory 1	1(0-3)
5594710	Mechanical Engineering Laboratory 2	1(0-3)
5594716	Agricultural Processing Engineering	3(2-2)

7. Industrial Computer Technology

- Required Courses	15	credits
5652101	Data Communication and Computer Network	3(2-2)
5653306	Software Engineering	3(2-2)
5653611	Computer Aided Engineering Management	3(2-2)
5654901	Industrial Computer Technology Project	3(2-2)
5654902	Independent Study on Industrial Computer Programming	3(2-2)
- Elective Courses	21	credits
5651301	Basic Computer Programming	3(2-2)
5652201	Data Structures and Algorithms	3(3-0)
5652204	Operating Systems	3(2-2)
5652301	Database Management Systems	3(2-2)
5652302	Advanced Computer Programming	3(2-2)
5652703	Computer Architecture	3(2-2)
5653201	Data Resource Management	3(2-2)

5653202	Security and Assurance in Information Systems	3(3-0)
5653604	Application Program for Science and Industry	3(2-2)
5653607	Computer Drawing and Design	3(2-2)
5653608	Computer in Controlling	3(2-2)
5653703	Microprocessor and Microcontroller	3(2-2)

8. Industrial technology

- Required Courses	15	credits
5721101	Engineering Materials	3(3-0)
5721108	Computer Aided Design	3(2-2)
5722201	Manufacturing Processes	3(2-2)
5723206	CNC Technology	3(3-0)
5724219	Industrial Technology Project	3(2-2)
- Elective Courses	21	credits
5722107	Engineering Economics	3(3-0)
5722202	Quality Control	3(3-0)
5722203	Industrial Work Study	3(3-0)
5723204	Production Planning and Control	3(3-0)
5723208	Foundry Technology	3(2-2)
5723209	Welding Technology	3(2-2)
5723211	Energy Management	3(3-0)
5723212	Measurement and Measuring Instrument	3(2-2)
5724301	Machine Tool Technology	3(2-2)
5724303	Computer Aided Design and Manufacturing	3(2-2)
5724304	Stamping Dies Design	3(2-3)
5724305	Plastic Mold Design	3(2-3)
5724404	Logistics and Supply Chain Management	3(3-0)

	5724405	Application Program for Industrial Technology	3(2-2)
	5724407	Industrial Plant Layout	3(3-0)
	5724409	Community Business Management	3(3-0)
	5724501	Environment Management	3(3-0)
	5724505	Energy Conservation in Building	3(3-0)
3.	Free Elective Courses	6	credits
4.	Professional Internship	5	credits
	5503801	Preparation for Professional Internship in Industrial Technology	2(90)
	5504802	Professional Internship in Industrial Technology	3(270)

EXPECTED QUALITY GRADUATES

Upon successful completion of this course, it is expected that graduates will be able to

- Implement knowledge and technical skills related to their expertise in real world professions.
- The graduates are expected to have desired attributes of cultivated ethics, principles and moral values
- Established personal discipline and awareness of social responsibility.

PROSPECTIVE CAREERS

Graduates with Bachelor of Technology (B. Tech.) can expect to find employment in:

1. Engineering staffs' for private companies or government sectors.
2. Industrial Technicians; in Government sectors and Private Sectors
3. Head officians; on the industrial companies

4. Independent occupations; on basic of Building Technology, Electrical Technology, Electronics Technology, Production Technology, Mechanical Technology, Computing in Industry, Industrial Management and Product Design Technology etc.

Those who have a job, they can be qualified to advance academic standing and educational motion to future graduation.

ACADEMIC SCHEDULE

- 1st Semester June - September
- 2nd Semester November - February
- 3rd Semester March – May

ACADEMIC FEES

Academic Fees per semester of 12,000 Baht

CONTACT

Interested persons are welcome to contact the Chairman of the study program or directly contact Secretary of the Dean office, Faculty of Industrial Technology (FIT), Phranakhon Rajabhat University, Bang Khen District, Bangkok Metropolis Thailand at the phone number: +662 5448243, +662 5448244 or email: techno_fac@yahoo.com

For more information , please visit our web site : <http://tech.pnru.ac.th>