

### Bachelor of Engineering Program in Automation Engineering (International Program)

#### B.Eng. (Automation Engineering)

#### Philosophy of the program

Bachelor of Engineering program in automation is a multidisciplinary program destined for producing graduates who are skillful in automation engineering and manufacturing information. The graduates can communicate and cooperate effectively with others. They are trained to be good engineers with morals and ethics in addition to sufficient fundamental knowledge of the profession. They can think, analyze and solve problems systematically as well as understand multiple -cultures and differences amongst countries in the region.

#### Professions after graduation:

1. Automation engineers
2. Automatic system analysts
3. Engineers in factories operated by high technology machines
4. Programmers for manufacturing information

#### Curriculum

Total Program Credits **144 Credits**

#### Curriculum Components

General Education Courses **31 Credits**

Major Courses **107 Credits**

- Science and Mathematics Course 16 Credits
- Engineering Foundation Course 11 Credits
- Computer Engineering Course 18 Credits
- Automation Engineering Course 56 Credits
- Automation Engineering Elective Course 6 Credits

Free Elective Courses **6 Credits**

#### COURSE STRUCTURE

##### First Year

First Semester	Credits
GEN 101 Physical Education	1
LNG 105 Academic English for International Students	3
MTH 101 Calculus and Analytics Geometry I	3
PHY 103 General Physics for Engineering Students I	3
CPE 110 Computer Engineering Exploration	3
CPE 100 Introduction to Computer Programming	3
LNG xxx Integrated English: Listening	1
<b>Total</b>	<b>17</b>

Second Semester	Credits
GEN 111 Man and Ethics of Living	3
LNG 106 Academic Listening and Speaking	3
MTH 102 Calculus and Analytic Geometry II	3
CPE 112 Discrete Mathematics for Computer Engineers	3
CPE 130 Algorithms and Data Structures	3
INC 111 Basic Engineering Circuit Analysis	3
<b>Total</b>	<b>18</b>

### Second Year

First Semester	Credits
LNG 107 Academic Reading and Writing	3
MTH 201 Linear Algebra and Vector Calculus	3
CPE 220 Digital System Design	3
CPE 221 Digital System Laboratory	2
CPE 231 Principles Programming Languages	3
INC 211 Mathematics for Signals and Systems	3
<b>Total</b>	<b>17</b>

Second Semester	Credits
GEN 121 Learning and Problem Solving Skills	3
GEN 231 Miracle of Thinking	3
STA 302 Statistics for Engineers	3
INC 212 Signals and Systems	3
INC 221 Electronics Devices and Circuit Design	3
INC 241 Programmable Logic Control	3
<b>Total</b>	<b>18</b>

### Third Year

First Semester	Credits
MEE 224 Thermal Engineering	3
CPE 332 Database and ERP Systems	3
CPE325 Computer Architectures and Systems	3
INC 331 Industrial Process Measurement	3
INC 341 Feedback Control Systems	3
INC 352 Process Control and Instrumentation Drawing	1
LNG xxx Integrated English : Presentation	1
<b>Total</b>	<b>17</b>

Second Semester	Credits
EEE 118 Electromechanical Energy Conversion	3
CPE 341 Computer Network	3

CPE 342 Computer Network Laboratory	2
INC 354 Process Instrumentation Laboratory	1
INC 342 Industrial Process Control	3
INC 361 Microprocessor Systems and Applications	3
INC 441 Automation System Technology	3
LNG xxx Integrated English : Writing	1
<b>Total</b>	<b>19</b>

**Summer Session**

INC 300 Industrial Training	2 (S/U)
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**Forth Year**

**First Semester**

**Credits**

GEN 241 Beauty of Life	3
GEN xxx Approved Elective (GEN)	3
INC 451 Process Control Laboratory	1
INC 457 Control and Instrumentation Engineering Project Study	1
INC xxx Approved Elective (INC)	3
PRE 394 Industrial Safety	3
XXX xxx Free Elective	3
<b>Total</b>	<b>17</b>

**Second Semester**

**Credits**

GEN 351 Modern Management and Leadership	3
GEN xxx Approved Elective (GEN)	3
INC xxx Approved Elective (INC)	3
INC 458 Control and Instrumentation Engineering Project	3
XXX xxx Free Elective	3
<b>Total</b>	<b>15</b>