Bachelor of Engineering Program in Computer Engineering (International Program)
B.Eng. (Computer Engineering)

Philosophy of the program

The Bachelor in Computer Engineering program requires students to register for at least 128 credits. These include 31 credits of general education courses, 91 credits of required specialization courses, and 6 credits of elective courses. The main objective of all courses is to provide the students with fundamentals in computer technology and prepare them to become good researchers, knowledgeable engineers suited for industry, or entrepreneurs. As juniors during the summer of the 3rd year, students will receive practical training in the industry or private companies for at least 6 weeks. In the final year, every student will take on a research project by choosing an appropriate topic of interest

Professions after graduation:

1. Computer engineers
2. Computer specialists
3. Computer system analyst and designers
4. Software and computer system developers
5. Information scientists
6. Network system and information archive administrators
7. Software managers
8. Computer project managers
9. Entrepreneurs

Curriculum

Total Program Credits **127 Credits**

Curriculum Components

General Education **31 credits**

Specific course **90 credits**

- ☐ Core course 30 credit
- ☐ Specific course 48 credits
- ☐ Technical Elective and Computer Professional courses 12 credits

Elective courses **6 credits**

COURSE STRUCTURE

First Year

First Semester	**Credits**
CPE 100 Computer Programming for Engineers	3(2-2-6)
CPE 101 Engineering Exploration	3(2-2-6)
CPE 121 Discrete Mathematics for Computer Engineers	3(2-2-6)

LNG 105 Academic English for International Students	3(3-0-6)
MTH 101 Mathematics I	3(3-0-6)
PHY 103 General Physics for Engineering Student I	3(3-0-6)
Total	18(15-6-36)

Second Semester	**Credits**
CPE 111 Programming with Data Structures	3(2-2-6)
CPE 122 Basic Circuits and Electronics	3(2-2-6)
GEN 121 Learning and Problem Solving Skills	3(3-0-6)
LNG 106 Academic Listening and Speaking	3(3-0-6)
MTH 102 Mathematics II	3(3-0-6)
PHY 104 General Physics for Engineering Student II	3(3-0-6)
Total	18(16-4-36)

Second Year

First Semester	**Credits**
CPE 212 Algorithm Design	3(3-0-6)
CPE 223 Digital Electronics and Logic Design	3(2-2-6)
GEN 101 Physical Education	1(0-2-2)
GEN 231 Miracle of Thinking	3(3-0-6)
LNG 107 Academic Reading and Writing	3(3-0-6)
MTH 201 Mathematics III	3(3-0-6)
CHM 103 * Fundamental Chemistry	3(3-0-6)
Or	
MIC 101 * General Biology	3(3-0-6)
Total	19(17-4-38)

Second Semester	**Credits**
CPE 213 Data Models	3(2-2-6)
CPE 224 Computer Architectures	3(2-2-6)
CPE 231 Database Systems	3(2-2-6)
STA 302 Statistics for Engineers	3(3-0-6)
GEN 111 Man and Ethics of Living	3(3-0-6)
GEN xxx General Education Elective I	3(3-0-6)
Total	18(15-6-36)

Third Year

First Semester	**Credits**
CPE 325 Big Data	3(3-0-6)
CPE 326 Operating Systems	3(3-0-6)
CPE 327 Software Engineering	3(3-0-6)
CPE 332 Professional Issues in Computer Engineering	1(1-0-2)

GEN 241 Beauty of Life	3(3-0-6)
PRE 380 Engineering Economics	3(3-0-6)
Total	16(16-0-32)
Second Semester	**Credits**
CPE 314 Computer Networks	3(2-2-6)
CPE 329 Business Intelligence	3(3-0-6)
CPE 327 Software Engineering	3(3-0-6)
GEN 351 Modern Management and Leadership	3(3-0-6)
GEN xxx General Education Elective II	3(3-0-6)
XXX xxx Free Elective I	3(3-0-6)
XXX xxx Free Elective 2	3(3-0-6)
Total	18(17-2-36)

Summer Session

CPE 300 Computer Professional Practices	2(0-35-4)
Total	2(0-35-4)

Forth Year

First Semester	**Credits**
CPE 401 Computer Engineering Project I	3(0-6-9)
CPE xxx Computer Engineering Elective I	3(3-0-6)
CPE xxx Computer Engineering Elective II	3(3-0-6)
Total	9(6-6-21)
Or	
CPE 405 Work-Integrated Learning I	6(0-24-8)
CPE 403 Independent Study I	3(0-3-6)
Total	9(0-27-14)
Second Semester	**Credits**
CPE 402 Computer Engineering Project II	3(0-6-9)
CPE xxx Computer Engineering Elective III	3(3-0-6)
CPE xxx Computer Engineering Elective IV	3(3-0-6)
Total	9(6-6-21)
Or	
CPE 406 Work-Integrated Learning II	6(0-24-8)
CPE 404 Independent Study II	3(0-3-6)
Total	9(0-27-14)