CURRICULUM INFORMATION

Bachelor of Engineering Program
Automotive Engineering (International program)
Total number of credits required for graduation at least 144 credits

(1) General Education Required Course   **at least**   **30**   **Credits**

- Wellness	at least	3	credits

01175xxx	Physical Education Activities		1(0-2-1)

and select at least 2 credits from Wellness courses

- Entrepreneurship	at least	6	credits

select at least 6 credits from Entrepreneurship courses

- Language and Communication		13	credits
01358xxx	Foreign Languages (1 Language)		9(- -)
	Thai Language		3(- -)
	Information/Computer		1(- -)

- Thai Citizen and Global Citizen	at least	5	credits

01999111	Knowledge of the Land		2(2-0-4)

and select at least 3 credits from Thai Citizen and Global Citizen courses

- Aesthetics		3	credits

select at least 3 credits from Aesthetics courses

(2) Major Required Courses   **at least**   **108** **Credits**

2.1) Basic Mathematics and Sciences	30 credits

2.1.1) Mathematics and Sciences fundamental courses   *21 credits*

01403114	Laboratory in Fundamentals of General Chemistry	1(0-3-2)
01403117	Fundamental of General Chemistry	3(3-0-6)
01417167	Engineering Mathematics I	3(3-0-6)

01417168	Engineering Mathematics II	3(3-0-6)
01417267	Engineering Mathematics III	3(3-0-6)
01420111	General Physics I	3(3-0-6)
01420113	Laboratory in Physics I	1(0-3-2)
01420114	Laboratory in Physics II	1(0-3-2)

2.1.2) Engineering fundamental courses   *9 credits*

03608111	Automotive Engineering Drawing	3(2-3-6)
03608221	Automotive Engineering Materials	3(3-0-6)
03608241	Thermodynamics for Automotive Engineering	3(3-0-6)

2.2) Automotive Engineering   at least   78 credits

2.2.1) Engineering required courses   *66 credits*

03604223	Basic Principles of Engineering Mechanics	3(3-0-6)
03604262	Health Safety and Environment	3(3-0-6)
03604271	Digital Technology in Mechanical Engineering	3(2-3-6)
03604281	Workshop Practice	1(0-3-2)
03604331	Internal Combustion Engines	3(3-0-6)
03604442	Power Plant Engineering	3(3-0-6)
03604471	Robots, Artificial Intelligence, and Internet of Things	3(3-0-6)
03608131	Automotive Technology Exploration	3(3-0-6)
03608222	Mechanics of Automotive Materials	3(3-0-6)
03608232	Vehicle Aerodynamics	3(3-0-6)
03608251	Automotive Electrical System	3(2-3-6)
03608261	Automotive Engineering Laboratory I	1(0-3-2)
03608312	Computer-Aided Design in Automotive Engineering	3(2-3-6)
03608313	Automotive Part Design	3(3-0-6)
03608314	Introduction to Modern Automotive Design	3(2-3-6)
03608323	Modern Automotive Mechanics	3(3-0-6)
03608333	Automotive Dynamic System and Control	3(3-0-6)
03608334	Automotive Engineering Processes	3(3-0-6)
03608342	Automotive Thermal Management System	3(3-0-6)
03608343	Automotive Air Conditioning	3(3-0-6)

03608352	Autonomous Vehicle Control	3(3-0-6)
03608362	Automotive Engineering Laboratory II	1(0-3-2)
03608424	Noise, Vibration and Harshness	3(3-0-6)
03608444	Engineering Management and Economic	3(3-0-6)

2.2.2) Major Electives   *at least*   *12 credits*

1) <u>Students who participate</u> in the cooperative education program

(Students should participate in the cooperative education program)

03600490	Cooperative Education	6
03608399	Automotive Engineering Project Preparation	1(0-3-2)
03608499	Automotive Engineering Project	2(0-6-3)

and select from the following **engineering electives courses** at least **3 credits**

OR

2) <u>Students who do not participate</u> in the cooperative education program

03608399	Automotive Engineering Project Preparation	1(0-3-2)
03608499	Automotive Engineering Project	2(0-6-3)

and select from the following **engineering elective courses** at least **9 credits**

Engineering elective courses

03604334	Safety for Motor Vehicle	3(3-0-6)
03604432	Automotive Powertrains	3(3-0-6)
03604433	Automotive Classis	3(3-0-6)
03604437	Lubrication	3(3-0-6)
03608353	Visual Programming for Automotive Engineering	3(2-3-6)
03608445	Batteries for Electric Vehicles	3(3-0-6)

(3) Free Electives   **at least**   **6 Credits**

(4) Internship   **at least**   **240 Hours**

The meaning of course codes

The 8-digit course codes in the Bachelor of Automotive Engineering Program are explained as the followings:

1st-2nd digit		refers to	Campus (for example – "03" Sriracha Campus)
3rd-5th digit		refers to	Major (for example – "608" Automotive Engineering)
6th digit		refers to	the Academic year
7th digit		refers to following	
	0	refers to	General subjects for nondisciplinary
	1	refers to	Engineering Design
	2	refers to	Engineering Mechanics
	3	refers to	Engineering Vehicle
	4	refers to	Energy
	5	refers to	Control System
	6	refers to	Laboratory
	9	refers to	Engineering Project course
8th digit		refers to	Ordering numbers