### COURSE DETAILS

**A separate sheet should be completed for each course.**

<table>
<thead>
<tr>
<th>Course title</th>
<th>Bachelor of Engineering Program in Mechatronics Engineering</th>
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| Entry qualifications | 1. Must have graduated or  
2. To receive graduate status of their high school in Mathematics-Science or English-Mathematics program, successfully completed grade 12 or  
3. Vocational Certificate Graduates  
4. High Vocational Certificate Graduates |
| Maximum number in class | 30 people |
| Average class contact hours per week | 15 – 21 hours per week |
| Examining body | RMUTT |
| Academic level | Bachelor of Engineering (Mechatronics Engineering) |
| Certificate awarded, and by whom | Ministry of Education |
| Duration of course | 4 years |
| Teacher/Course Leader responsible for the course | Asst. Prof. Dr. Dechrit Maneetham |
| Brief outline of the course content and its delivery | Students must complete at least 143 credits of the curriculum  
**A. General Education Courses 36 credits**  
**B. Specialized Courses 131 credits**  
Core Courses  
- Calculus for Engineers 1  
- Calculus for Engineers 2  
- Chemistry for Engineers  
- Chemistry Laboratory for Engineers  
- Physics for Engineers 1 |
- Physics Laboratory for Engineers 1
- Physics for Engineers 2
- Physics Laboratory for Engineers 2

Basic Engineering Courses
- Computer Programming
- Digital Circuits and Logic Design
- Engineering Mechanics
- Engineering Drawing
- Manufacturing Process
- Engineering Materials
- Basic Engineering Practical
- Mechatronics Engineering Laboratory
- Fundamental of Electrical Engineering
- Microprocessor and Microcontroller
- Electronic Devices and Circuit Design

Major Required Courses
- Pneumatics and Hydraulics
- Kinematics and Dynamics of Robotics
- Sensors and Transducers
- Microcontroller and Mechatronic Applications
- Automation Control System
- Computer Aided Design and Applications
- Control System Theory
- Electrical Machine in Automatic System
- Industrial Robotics and Machine Vision
- Advance Robotics Control System
- Power Electronics

C. Free Elective Courses 6 credits