# THE UNIVERSITY OF HONG KONG FACULTY OF ENGINEERING

<u>Course Selection Instruction Form</u>
4 Year - B.Eng. in Mechanical Engineering Year 3 (2021–2022)

This form should be completed by the student and handed in together with a signed copy of the finalized Course Selection Report to the Department of Mechanical Engineering by **August 16, 2021.** 

| Name in BLOCK letter  | s, surna | ame first |     |       |  |       |         |
|-----------------------|----------|-----------|-----|-------|--|-------|---------|
| University number     |          |           |     |       |  |       |         |
|                       |          |           |     |       |  |       |         |
| Contact phone number: |          |           | E-m | nail: |  | Cours | e Year: |

### (A) Curriculum Structure

### **Graduation Requirements - Checklist**

Please indicate by a "✓" in the 'completed' column the courses that you have completed.

Please indicate by a "✓" in the '2021-22' column the courses that you have selected to enroll in the 2021-2022 academic year.

Please indicate by a "E" in the 'others' column the courses that you have been granted exemption.

### (1) University Requirements (CC = Common Core Courses)

| <b>Course Code</b> | Course Title                                 | Status Symbol |         |        |         |
|--------------------|--|---------------|---------|--------|---------|
|                    |  | Completed     | 2021-22 | others | Credits |
| CAES1000           | Core University English                      |               |         |        | 6       |
| CAES9544           | Technical English for Mechanical Engineering |               |         |        | 6       |
| CENG9001           | Practical Chinese for Engineering Students   |               |         |        | 6       |
|                    | (or other replacement courses)               |               |         |        |         |
| CCST               |  |               |         |        | 6       |
| CCGL               |  |               |         |        | 6       |
| CCCH               |  |               |         |        | 6       |
| CCHU               |  |               |         |        | 6       |
| CC                 |  |               |         |        | 6       |
| CC                 |  |               |         |        | 6       |
|                    | Total credits                                |               |         |        | 54      |

### (2) Faculty Requirements

| <b>Course Code</b> | Course Title                                 | Stat      | us Symb | ol     |         |
|--------------------|--|-----------|---------|--------|---------|
|                    |  | Completed | 2021-22 | others | Credits |
| MATH1851           | Calculus and Ordinary Differential Equations |           |         |        | 6       |
| MECH1853           | Linear Algebra, Probability & Statistics     |           |         |        | 6       |
| ENGG1300           | Fundamental mechanics                        |           |         |        | 6       |
| ENGG1310           | Electricity and electronics                  |           |         |        | 6       |
| ENGG1320           | Engineers in the modern world                |           |         |        | 6       |
| ENGG1330           | Computer programming I                       |           |         |        | 6       |
| Choose one of t    | he following:                                |           |         |        |         |
| ENGG1340           | Computer programming II                      |           |         |        | 6       |
| ENGG1350           | Thermofluid mechanics                        |           | ·       |        | 6       |
|                    | Total credits                                |           |         |        | 42      |

# (3) Department Requirements

### **Year II (Introductory Core Courses)**

| <b>Course Code</b> | Course Title  | Stat      | Status Symbol |        |         |
|--------------------|---|-----------|---------------|--------|---------|
|                    |   | Completed | 2021-22       | others | Credits |
| MECH2404           | Drawing and Elements of Design and Manufacture            |           |               |        | 6       |
| MECH2406           | Fundamentals of Electrical Engineering                    |           |               |        | 6       |
| MECH2407           | Multivariable Calculus and Partial Differential Equations |           |               |        | 6       |
| MECH2413           | Engineering Mechanics                                     |           |               |        | 6       |
| MECH2414           | Thermofluids  |           |               |        | 6       |
| MECH2419           | Properties of Materials                                   |           |               |        | 6       |
|                    | Total credits   |           |               |        | 36      |

# **Engineering Training (Core Courses)**

| <b>Course Code</b> | Course Title                  | Status Symbol |         | ol     |         |
|--------------------|-------------------------------|---------------|---------|--------|---------|
|                    |                               | Completed     | 2021-22 | others | Credits |
| MECH2418           | Engineering Training (summer) |               |         |        | 6       |
|                    | Total credits                 |               |         |        | 6       |

### **Year III (Advanced Core Courses)**

| <b>Course Code</b> | Course Title   | Status Symbol |         | ol     |         |
|--------------------|--|---------------|---------|--------|---------|
|                    |  | completed     | 2021-22 | others | Credits |
| MECH3402           | Engineering Thermodynamics                                   |               |         |        | 6       |
| MECH3407           | Advanced Partial Differential Equation and Complex Variables |               |         |        | 6       |
| MECH3408           | Mechanics of Fluids  |               |         |        | 6       |
| MECH3409           | Mechanics of Solids  |               |         |        | 6       |
| MECH3418           | Dynamics and Control   |               |         |        | 6       |
| MECH3427           | Design and Manufacture                                       |               |         |        | 6       |
|                    | Total credits  |               |         |        | 36      |

# **Year IV (Advanced Core Courses)**

| <b>Course Code</b> | e Code   Course Title               |               | Status Symbol |         |        |         |
|--------------------|-------------------------------------|---------------|---------------|---------|--------|---------|
|                    |                                     |               | completed     | 2021-22 | others | Credits |
| MECH4410           | Engineering & Technology Management |               |               |         |        | 6       |
|                    |                                     | Total credits |               |         |        | 6       |

# **Capstone Experience (Core Courses)**

| <b>Course Code</b> | Course Title                               |               | Status Symbol |         | ol     |         |
|--------------------|--|---------------|---------------|---------|--------|---------|
|                    |  |               | completed     | 2021-22 | others | Credits |
| MECH4429           | Integrated Capstone Experience (full year) |               |               |         |        | 12      |
|                    |  | Total credits |               |         |        | 12      |

### **Disciplinary Elective Courses**

| <b>Course Code</b> | Course Title   | Stat      | us Symb | ol     |         |
|--------------------|--|-----------|---------|--------|---------|
|                    |  | completed | 2021-22 | others | Credits |
| MECH3406           | Electrical and Electronic Engineering                    |           |         |        | 6       |
| MECH3416           | Fundamentals of Aeronautical Engineering                 |           |         |        | 6       |
| MECH3420           | Air Pollution Control                                    |           |         |        | 6       |
| MECH3428           | Research Experience for Undergraduates (full year)       |           |         |        | 6       |
| MECH3429           | Air conditioning and refrigeration                       |           |         |        | 6       |
| MECH3430           | Fire protection in buildings                             |           |         |        | 6       |
| MECH3431           | Utility services in buildings                            |           |         |        | 6       |
| MECH3432           | Industrial Training (summer semester)*                   |           |         |        | 0       |
|                    | *This course normally takes place in the summer semester |           |         |        |         |
|                    | after the third year of study                            |           |         |        |         |
| MECH3433           | Robotics, drones and autonomous ground vehicles          |           |         |        | 6       |
| MECH4404           | Automatic Control  |           |         |        | 6       |

| MECH4407 | CAD/CAM   |  | 6 |
|----------|---|--|---|
| MECH4409 | Energy Conversion Systems                       |  | 6 |
| MECH4411 | Heat Transfer                                   |  | 6 |
| MECH4412 | Product Design and Development                  |  | 6 |
| MECH4414 | Materials of Engineering Applications           |  | 6 |
| MECH4415 | Applied Stress and Strength Analysis            |  | 6 |
| MECH4421 | Viscous Flow                                    |  | 6 |
| MECH4427 | Innovative design and unmanned aerial systems   |  | 6 |
| MECH4428 | Sound and Vibration                             |  | 6 |
| MEDE4601 | Biomaterials design and applications            |  | 6 |
| MEDE4602 | Molecular and Cellular Biomechanics             |  | 6 |
| MEDE4603 | Transport Phenomena in Biological Systems       |  | 6 |
| MEDE4604 | Cell and Tissue Engineering                     |  | 6 |
| CIME2101 | Water and Air Quality: Concepts and Measurement |  | 6 |
| CIVL3111 | Municipal and Industrial Waste Treatment        |  | 6 |
| CIVL3115 | Solid and Hazardous Waste Management            |  | 6 |
| CIVL3122 | Wind Engineering                                |  | 6 |
|          | Counted up to 36                                |  |   |

#### (Free Elective Courses) (12 Credits)

| <b>Course Code</b> | Course Title | Status Symbol |         |        |         |
|--------------------|--------------|---------------|---------|--------|---------|
|                    |              | completed     | 2021-22 | others | Credits |
|                    |              |               |         |        | 6       |
|                    |              |               |         |        | 6       |
|                    |              |               |         |        | 12      |

### (B) Delivery and Implementation

#### Time Clash

You will not be allowed to take courses with time clash. Please note that some teachers may take roll call and require full attendance in their lectures. Consequently, if you have to re-take a course which clashes in lecture hours with a higher level course, you may have to drop the higher level course.

#### **On-line Course Enrolment**

| I 1              | XX 2 . 1  |
|------------------|---|
| Enrolment period | Year 3 student starting from <b>12:00noon</b> on August 4-10 2021, (4:00pm) |
| Emoment period   | 1 car 3 stadent starting from 12.0010011 on ragast + 10 2021, (4.00pm)      |

<sup>\*</sup>Online course selection will be suspended from 9:00am to 2:29pm on August 5, 2021.

Please submit a signed copy of Course Selection Report together with this form to the Department immediately after your enrolment is finalized. Note that the course approval status will not be changed from TW to TA until your forms are received and checked by the Department.

### **Enquiry**

Enquiries can be directed to:

Dr. C.K. Chan (HW5-25; phone: 3917 8554; email: <a href="mailto:ckchan1@hku.hk">ckchan1@hku.hk</a>). Dr. C.H. Liu (HW7-08; phone: 3917 7901; email: <a href="mailto:chliu@hku.hk">chliu@hku.hk</a>).

**IMPORTANT**: Failing to properly complete your course enrolment may prevent you from being eligible to sit for the examination. As a student, you bear the primary responsibility to check carefully if your course selection is accurate and follows the curriculum requirements stipulated in the *Regulations for the Degree of Bachelor of Engineering*.

| Date: | Signature: |
|-------|------------|
|       |            |