

## The University of Hong Kong – Faculty of Engineering Course List 2025/26

### Important Notes:

- Please note that the available course list is for reference only. The approval of courses is at the discretion of respective faculty.  
Actual enrolment is subject to the availability of courses, quota and class schedule.  
[The information could be changed without prior notice.]
- Some courses may have special enrolment requirements (e.g. prerequisite). Please contact [enggex@hku.hk](mailto:enggex@hku.hk) if additional course information is required.

Course Level	Course Code	Course Title	Offering Semester	Credits
UG	BMED1207	Fundamentals of chemistry and biology for biomedical engineering	2	6
UG	BMED2206	Engineering in biology and medicine	1	6
UG	BMED2301	Life sciences I (Biochemistry)	1	6
UG	BMED2302	Life sciences II (Cell Biology & Physiology)	2	6
UG	BMED2500	Biomedical signals and linear systems	2	6
UG	BMED2600	Biomechanics for biomedical engineering	2	6
UG	BMED2810	Engineering management and society	1 & 2	6
UG	BMED3301	Life sciences III (Physiology)	1	6
UG	BMED3500	Electromagnetics in biomedicine	2	6
UG	BMED3501	Medical imaging	2	6
UG	BMED3600	Biomaterials science and engineering	1	6
UG	BMED3603	Statistics and mathematical analysis for biomedical engineering	2	6
UG	BMED3700	Artificial intelligence in biomedical engineering	1	6
UG	BMED4500	Biomedical instrumentation and systems	1	6
UG	BMED4501	Biophotonics	2	6
UG	BMED4505	Advanced bioelectronics	2	6
UG	BMED4506	Quantum technologies in biomedical sciences	2	6
UG	BMED4507	Deep learning for biomedical image analysis	2	6
UG	BMED4601	Biomaterials design and applications	1	6
UG	BMED4602	Molecular and cellular biomechanics	1	6
UG	BMED4604	Cell and tissue engineering	2	6
UG	CIVL1105	Environmental engineering	1 & 2	6
UG	CIVL1113	Engineering mechanics & materials	1 & 2	6
UG	CIVL1115	Civil engineering informatics	1 & 2	6
UG	CIVL1117	Construction materials	2	6
UG	CIVL2102	Engineering geology and rock mechanics	1 & 2	6
UG	CIVL2103	Fluid mechanics	1 & 2	6
UG	CIVL2104	Hydraulics and hydrology	1 & 2	6
UG	CIVL2106	Soil mechanics	1 & 2	6
UG	CIVL2108	Principles of civil engineering management	1 & 2	6
UG	CIVL2111	Transportation engineering	1 & 2	6
UG	CIVL2112	Structural analysis	1 & 2	6
UG	CIVL2113	Structural design	1 & 2	6
UG	CIVL3103	Construction project management	1 & 2	6
UG	CIVL3114	Slope engineering	2	6
UG	CIVL3115	Solid and hazardous waste management	2	6
UG	CIVL3116	Steel structures	2	6
UG	CIVL3120	Transportation infrastructure engineering	2	6
UG	CIVL3121	Water resources engineering	2	6
UG	CIVL3134	Environmental geotechnology	2	6
UG	CIVL3138	Advanced theory and design of structures	2	6
UG	CIVL3139	Building information Modelling (BIM) management for civil engineering	2	6
UG	CIVL3140	Artificial intelligence in civil engineering	2	6
UG	CIVL3141	Applied deep learning for civil engineers	2	6
UG	COMP3258	Functional programming	2	6
UG	COMP3259	Principles of programming languages	2	6
UG	COMP3270	Introduction to artificial intelligence	1 & 2	6
UG	COMP3271	Computer graphics	1	6
UG	COMP3316	Quantum information and computation	1	6
UG	COMP3317	Introduction to computer vision	2	6
UG	COMP3322	Modern technologies on World Wide Web	1 & 2	6
UG	COMP3329	Computer game design and programming	2	6
UG	COMP3330	Interactive mobile application design and programming	1	6

Course Level	Course Code	Course Title	Offering Semester	Credits
UG	COMP3340	Introduction to deep learning	2	6
UG	COMP3353	Bioinformatics	1	6
UG	COMP3354	Statistical learning	1	6
UG	COMP3355	Cyber security	1	6
UG	COMP3356	Robotics	1	6
UG	COMP3357	Cryptography	1	6
UG	COMP3358	Distributed and parallel computing	2	6
UG	COMP3361	Natural language processing	2	6
UG	COMP3516	Data analytics for IoT	2	6
UG	DASE3111	Data-driven optimisation	2	6
UG	DASE3137	Virtual reality for systems engineering	2	6
UG	DASE4141	Digital twin and applications	2	6
UG	DASE4146	Additive manufacturing	2	6
UG	ELEC2147	Electrical energy technology	2	6
UG	ELEC2243	Introduction to electricity and magnetism	1	6
UG	ELEC2245	Control systems I	1	6
UG	ELEC2347	Fundamentals of optics	1	6
UG	ELEC2543	Object-Oriented programming and data structures	2	6
UG	ELEC2544	Introduction to electronic commerce and financial technology	2	6
UG	ELEC2843	Multivariable calculus and elementary partial differential equations	1	6
UG	ELEC2844	Probabilistic systems analysis	2	6
UG	ELEC3141	Power transmission and distribution	1	6
UG	ELEC3142	Electrical energy conversion	2	6
UG	ELEC3143	Power electronics	1	6
UG	ELEC3152	Metropolitan mass transportation	1	6
UG	ELEC3241	Signals and linear systems	2	6
UG	ELEC3243	Fundamentals of next-generation communications	1	6
UG	ELEC3244	Digital signal processing	2	6
UG	ELEC3249	Pattern recognition and machine intelligence	2	6
UG	ELEC3255	Control systems II	1	6
UG	ELEC3342	Digital system design	1	6
UG	ELEC3347	Electronic materials and quantum physics	1	6
UG	ELEC3349	Optical devices	1	6
UG	ELEC3350	Electronic circuits and devices I	2	6
UG	ELEC3442	Embedded systems	2	6
UG	ELEC3443	Computer networks	1 & 2	6
UG	ELEC3543	Advanced systems programming	1	6
UG	ELEC3544	Introduction to data analytics	2	6
UG	ELEC3644	Advanced mobile apps development	1	6
UG	ELEC3844	Engineering management and society	1 & 2	6
UG	ELEC3845	Economics, finance and marketing for engineers	1	6
UG	ELEC3846	Numerical methods and optimization	2	6
UG	ELEC4141	Electric railway systems	2	6
UG	ELEC4142	Power system protection and switchgear	1	6
UG	ELEC4144	Electric vehicle technology	1	6
UG	ELEC4145	Building services - electrical services	2	6
UG	ELEC4146	Building services - electrical installations	1	6
UG	ELEC4147	Power system analysis and control	2	6
UG	ELEC4149	Basic lighting engineering	1	6
UG	ELEC4151	Hybrid electric propulsion technology	2	6
UG	ELEC4245	Digital image processing	2	6
UG	ELEC4248	Photonic systems technologies	2	6
UG	ELEC4251	Microscopy	1	6
UG	ELEC4257	Telecommunications systems	2	6
UG	ELEC4542	Introduction to deep learning and computer vision	1	6
UG	ELEC4544	Artificial intelligence and deep learning	2	6
UG	ELEC4546	Investment and trading for engineering students	1	6
UG	ELEC4547	Emerging technology for VR/AR	1	6
UG	ELEC4642	VLSI design principles	2	6
UG	MECH2406	Fundamentals of electrical engineering	2	6
UG	MECH2414	Thermofluids	2	6
UG	MECH3402	Engineering thermodynamics	2	6
UG	MECH3408	Mechanics of fluids	2	6
UG	MECH3427	Design and manufacture	2	6

Course Level	Course Code	Course Title	Offering Semester	Credits
UG	MECH3430	Fire protection in building	2	6
UG	MECH4404	Automatic control	2	6
UG	MECH4407	CAD/CAM	2	6
UG	MECH4409	Energy conversion systems	2	6
UG	MECH4410	Engineering & technology management	2	6
UG	MECH4423	Building energy management and control system	2	6
UG	MECH4424	Sensors and actuators for robots	2	6
UG	MECH4425	Human-robot control interface and wearable robotics	2	6
UG	SDST1018	Foundations of data science	2	6
UG	SDST1600	Statistics: ideas and concepts	1 & 2	6
UG	SDST2601	Probability and statistics I	1 & 2	6
UG	SDST2602	Probability and statistics II	1 & 2	6
UG	SDST2604	Introduction to R/Python programming and elementary data analysis	1	6
UG	SDST2901	Probability and statistics: foundations of actuarial science	2	6
UG	SDST2902	Financial mathematics	2	6
UG	SDST3010	Image processing and computer vision	2	6
UG	SDST3021	Modern biostatistics	1	6
UG	SDST3600	Linear statistical analysis	1 & 2	6
UG	SDST3602	Statistical inference	1	6
UG	SDST3603	Stochastic processes	1	6
UG	SDST3606	Business logistics	1	6
UG	SDST3609	The statistics of investment risk	1	6
UG	SDST3610	Risk management and insurance	2	6
UG	SDST3612	Statistical machine learning	1 & 2	6
UG	SDST3613	Marketing analytics	1	6
UG	SDST3615	Practical mathematics for investment	2	6
UG	SDST3617	Sample survey methods	2	6
UG	SDST3618	Derivatives and risk management	2	6
UG	SDST3620	Modern nonparametric statistics	1	6
UG	SDST3621	Statistical data analysis	2	6
UG	SDST3622	Data visualization	2	6
UG	SDST3655	Survival analysis	2	6
UG	SDST3901	Life contingencies I	1	6
UG	SDST3904	Corporate finance for actuarial science	1	6
UG	SDST3906	Risk theory I	1	6
UG	SDST3908	Credibility theory and loss modelling	2	6
UG	SDST3910	Financial economics I	1	6
UG	SDST3911	Financial economics II	2	6
UG	SDST3953	Fundamentals of actuarial practice	1	6
UG	SDST4011	Natural language processing	1	6
UG	SDST4013	Applied high-performance computing and parallel programming	2	6
UG	SDST4022	Omics data analysis	2	6
UG	SDST4023	Medical image analysis	1	6
UG	SDST4601	Time-series analysis	1	6
UG	SDST4602	Multivariate data analysis	2	6
UG	SDST4603	Current topics in risk management	1	6
UG	SDST4607	Credit risk analysis	2	6
UG	SDST4608	Market risk analysis	2	6
UG	SDST4609	Big data analytics	2	6
UG	SDST4610	Bayesian learning	1	6
UG	SDST4903	Actuarial techniques for general insurance	1	6
UG	SDST7609	Research methods in statistics	1	6
UG	SDST7610	Advanced probability	2	6