AEROSPACE ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ ISU Level

TB2 EG-120 10 Strength of Materials

TB2 EG-144 10 Dynamic Systems

TB2 EG-160 10 Fluid Mechanics 1

TB2 EG-161 10 Thermodynamics 1

TB2 EG-165 10 Engineering Design 1

TB2 EG-190 10 Engineering Analysis 2

300+ ISU Level

TB2 EG-243 10 Control Systems

TB2 EG-260 10 Dynamics 1

TB2 EG-263 10 Engineering Design 2

TB2 EG-268 10 Experimental Studies

TB2 EG-294 10 Airframe Structures

TB2 EGA220 10 Aerospace Systems

400+ ISU Level

TB1+2 EG-353 30 Research Project

TB2 EG-386 10 Engineering Management

TB2 EG-397 10 Propulsion

TB2 EGA301 10 Composite Materials

TB2 EGA302 10 Aerospace Engineering Design 3

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-163 10 Design and Laboratory Classes 1

TB1 EG-166 10 Engineering Mechanics

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-180 10 Introduction to Materials Engineering

TB1 EG-189 10 Engineering Analysis 1

TB1 EG-194 10 Introduction to Aerospace Engineering

300+ ISU Level

TB1 EG-221 10 Structural Mechanics IIa

TB1 EG-261 10 Thermodynamics 2

TB1 EG-264 10 Computer Aided Engineering

TB1 EG-293 10 Aerodynamics

TB1 EG-296 10 Flight Mechanics

400+ ISU Level

TB1 EG-335 10 Gas Dynamics

TB1+2 EG-353 30 Research Project

TB1 EG-360 10 Dynamics 2

CHEMICAL AND BIOPROCESS ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ Level

TB2 EG-160 10 Fluid Mechanics 1

TB2 EG-190 10 Engineering Analysis 2

TB2 EGA102 10 Chemical Process Analysis and Design

TB2 EGA109 10 Introductory Organic Chemistry

TB2 EGA110 10 Instrumental and Analytical Chemistry

TB2 EGA114 10 Chemical Engineering Science

300+ Level

TB2 EG-203 10 Biochemical Engineering Principles 1

TB2 EG-206 10 Instrumentation Measurement and Control

TB2 EG-208 10 Process Design and Simulation

TB2 EG-210 10 Thermodynamics of Process Design

TB2 EG-215 10 Process Modelling

TB2 EGA218 10 Process and Environmental Plant Operations

400+Level

TB2 EG-307 10 Particulate Systems

TB2 EG-337 10 Reactor Design II

TB2 EG-386 10 Engineering Management

TB2 EGA323 10 Energy and Low Carbon Technologies

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-100 10 Chemical Process Principles

TB1 EG-101 10 Chemical Environmental Engineering Laboratory

TB1 EG-103 10 Heat Transfer

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-169 10 Environmental Awareness for Engineers

TB1 EG-189 10 Engineering Analysis 1

300+ ISU Level

TB1 EG-200 10 Separation Processes

TB1 EG-204 10 Reactor Design

TB1+2 EG-209 20 Pilot Plant Operations

TB1 EG-211 10 Fluid Flow

TB1 EG-285 10 Statistical Techniques in Engineering

400+ ISU Level

TB1 EG-304 10 Safety and Loss Prevention

TB1 EG-338 10 Separation Processes II

TB1 EG-339 10 Process Equipment Design

TB1+2 EGA326 30 Chemical Engineering Design Project

TB1 EGA332 10 Applied Process Engineering

TB1 EGZ300 10 Environmental Engineering Practice

CIVIL ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ Level

TB2 EG-120 10 Strength of Materials

TB2 EG-121 10 Surveying

TB2 EG-122 10 Conceptual Design

TB2 EG-125 10 Civil Laboratory II

TB2 EG-160 10 Fluid Mechanics 1

TB2 EG-190 10 Engineering Analysis 2

300+ Level

TB2 EG-201 10 Fluid Mechanics II

TB2 EG-225 10 Structural Mechanics IIb

TB2 EG-228 10 Civil Laboratory III

TB2 EG-260 10 Dynamics 1

TB2 EGA200 10 Civil Engineering Design Practice I

TB2 EG-386 10 Engineering Management

400+ Level

TB2 EG-320 10 Structural Mechanics III

TB2 EG-326 10 Engineering of Foundation

TB2 EG-329 10 Hydrology and Unsteady Flow

TB2 EGA304 10 Civil Engineering Design Practice II

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-107 10 Civil Laboratory 1

TB1 EG-108 10 Engineering Sustainability

TB1 EG-163 10 Design and Laboratory Classes 1

TB1 EG-166 10 Engineering Mechanics

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-180 10 Introduction to Materials Engineering

TB1 EG-189 10 Engineering Analysis 1

300+ ISU Level

TB1 EG-221 10 Structural Mechanics IIa

TB1 EG-222 10 Reinforced Concrete Design

TB1 EG-223 10 Basic Soil Mechanics

TB1 EG-224 10 Steel Design

TB1 EG-285 10 Statistical Techniques in Engineering

TB1 GEL200 10 Introductory Geology for Engineers

400+ ISU Level

TB1 EG-321 10 Geomechanics

TB1 EG-323 10 Finite Element Method

TB1 EG-325 10 Ground and Water Engineering Design

TB1 EG-328 10 Superstructure Design

TB1+2 EG-353 30 Research Project

TB1 EGA331 10 Coastal processes and engineering

ELECTRICAL ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ Level

TB2 EG-142 10 Instrumentation and Control

TB2 EG-144 10 Dynamic Systems

TB2 EG-150 10 Signals and Systems

TB2 EG-152 10 Analogue Design

TB2 EG-190 10 Engineering Analysis 2

TB2 EGA107 10 Power Engineering 1

300+ Level

TB2 EG-240 10 Electronic Circuits

TB2 EG-241 10 Power Engineering 2

TB2 EG-243 10 Control Systems

TB2 EG-247 10 Signals and Systems

TB1+2 EG-251 10 Practical Circuits

TB1+2 EG-252 20 Group Design Exercise

TB2 EGA211 10 Semiconductor Technology

400+ Level

TB2 EG-319 10 IC Design

TB2 EG-342 10 Power Systems

TB2 EG-345 10 Power Electronics

TB1+2 EG-353 30 Research Project

TB2 EG-386 10 Engineering Management

TB2 EGA305 10 Nanoelectronics

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-143 10 Digital Design

TB1 EG-151 10 Microcontrollers

TB1 EG-155 10 Circuit Analysis

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-189 10 Engineering Analysis 1

TB1 EGA108 10 Functional and Smart Materials

300+ ISU Level

TB1 EG-242 10 Electronic Materials and Devices

TB1 EG-244 10 Software Engineering

TB1 EG-245 10 Communications

TB1+2 EG-251 10 Practical Circuits

TB1+2 EG-252 20 Group Design Exercise

TB1 EGA207 10 Electromagnetics

400+ ISU Level

TB1 EG-340 10 Design Electronics

TB1 EG-341 10 Microwave Circuits and Antennas

TB1 EG-348 10 Speech and Image Communications

TB1+2 EG-353 30 Research Project

TB1 EG-355 10 Quantum Devices

ENVIRONMENTAL ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ ISU Level

TB2 EG-160 10 Fluid Mechanics 1

TB2 EG-190 10 Engineering Analysis 2

TB2 EGA109 10 Introductory Organic Chemistry

TB2 EGA110 10 Instrumental and Analytical Chemistry

TB2 EGA114 10 Chemical Engineering Science

TB2 GEG106 10 Sustainability in a fragile world

300+ ISU Level

TB2 EGA102 10 Chemical Process Analysis and Design

TB2 EG-203 10 Biochemical Engineering Principles 1

TB2 EGA210 10 Power for transport, industry and the home

TB2 EGA218 10 Process and Environmental Plant Operations

TB2 GEG259 10 Data Analysis

400+ ISU Level

TB2 EG-307 10 Particulate Systems

TB2 EG-386 10 Engineering Management

TB2 EGA323 10 Energy and Low Carbon Technologies

TB2 GEG354 10 Environmental Modelling

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-100 10 Chemical Process Principles

TB1 EG-101 10 Chemical and Environmental Engineering Laboratory

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-169 10 Environmental Awareness for Engineers

TB1 EG-189 10 Engineering Analysis 1

300+ ISU Level

TB1 EG-103 10 Heat Transfer

TB1 EG-200 10 Separation Processes

TB1 EG-201 10 Fluid Mechanics II

TB1 EG-204 10 Reactor Design

TB1 EG-206 10 Instrumentation Measurement and Control

TB1 EG-216 10 Practical Environmental Chemistry

TB1 EGA208 10 Engineering for sustainability

400+ ISU Level

TB1 EG-304 10 Safety and Loss Prevention

TB1 EGA319 10 Environmental Engineering Design Project

TB1 EGA327 10 Water and Wastewater Engineering

TB1 EGZ300 10 Environmental Engineering Practice

TB1 LA-356 10 Introduction to Environmental Law for Engineering Students

MATERIALS SCIENCE AND ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ Level

TB2 EG-182 10 Manufacturing Technology I

TB2 EG-184 10 Mechanical Properties of Materials I

TB2 EG-185 10 Materials Practicals 1

TB2 EG-188 10 Basic Engineering Analysis 2A

TB2 EGA110 10 Instrumental and Analytical Chemistry

TB2 EGA113 10 Materials Case Studies

300+ Level

TB2 EG-120 10 Strength of Materials

TB2 EG-281 10 Polymers: Structure and Processing

TB2 EG-283 10 Mechanical Deformation in Structural Materials

TB2 EG-284 10 Manufacturing Technology II

TB2 EG-287 10 Practicals 2b

400+ Level

TB1+2 EG-353 30 Research Project

TB2 EG-383 10 Ceramics

TB2 EG-385 10 Polymers: Properties and Design

TB2 EG-386 10 Engineering Management

TB2 EG-387 10 Metals: Advanced Manufacturing and Protection

TB2 EG-391 10 Microstructure and Characterisation

TB2 EGA301 10 Composite Materials

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-163 10 Design and Laboratory Classes 1

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-180 10 Introduction to Materials Engineering

TB1 EG-183 10 Materials Resources

TB1 EG-187 10 Basic Engineering Analysis 1A

300+ ISU Level

TB1 EG-279 10 Functional and Smart Materials

TB1 EG-280 10 Microstructure Evolution and Control

TB1 EG-282 10 Computational Materials 1

TB1 EG-285 10 Statistical Techniques in Engineering

TB1 EG-286 10 Practicals 2a

TB1 EG-290 10 Order and Disorder in Materials

TB1 EG-292 10 Modelling and Simulation of Materials

400+ ISU Level

TB1+2 EG-353 30 Research Project

TB1 EG-380 10 Computational Materials 2

TB1 EG-381 10 Fracture and Fatigue

TB1 EG-392 10 Physical Metallurgy of Steels

MECHANICAL ENGINEERING IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ ISU Level

TB2 EG-120 10 Strength of Materials

TB2 EG-160 10 Fluid Mechanics 1

TB2 EG-161 10 Thermodynamics 1

TB2 EG-165 10 Engineering Design 1

TB2 EG-182 10 Manufacturing Technology 1

TB2 EG-190 10 Engineering Analysis 2

300+ ISU Level

TB2 EG-144 10 Dynamic Systems

TB2 EG-260 10 Dynamics 1

TB2 EG-262 10 Stress Analysis 1

TB2 EG-263 10 Engineering Design 2

TB2 EG-268 10 Experimental Studies

TB2 EG-284 10 Manufacturing Technology II

400+ ISU Level

TB2 EG-243 10 Control Systems

TB1+2 EG-353 30 Research Project

TB2 EG-362 10 Fluid Mechanics 3

TB2 EG-386 10 Engineering Management

TB2 EGA324 10 Mechanical Engineering Practice

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 EG-108 10 Engineering Sustainability

TB1 EG-163 10 Design and Laboratory Classes 1

TB1 EG-166 10 Engineering Mechanics

TB1 EG-168 10 Scientific and Engineering Skills

TB1 EG-180 10 Introduction to Materials Engineering

TB1 EG-189 10 Engineering Analysis 1

300+ ISU Level

TB1 EG-103 10 Heat Transfer

TB1 EG-211 10 Fluid Flow

TB1 EG-255 10 Circuit Analysis

TB1 EG-261 10 Thermodynamics 2

TB1 EG-264 10 Computer Aided Engineering

TB1 EG-269 10 Design of Machine Elements

400+ ISU Level

TB1 EG-323 10 Finite Element Method

TB1+2 EG-353 30 Research Project

TB1 EG-360 10 Dynamics 2

TB1 EG-365 10 Manufacturing Optimisation

TB1 EG-399 10 Engineering Analysis 3

TB1 EGA312 10 Engineering Design 3

PHYSICS IN SWANSEA, WALES

TB1 = Fall Semester Class

TB2 = Spring Semester Class

TB1+2 = Academic Year Class

200+ ISU Level

TB2 PH-123 10 Matter and Fields II

TB2 PH-125 10 Waves and Optics

TB2 PH-127 10 The Quantum World

TB1+2 PH-128 10 Quantative Methods in Physics

TB1+2 PH-129 10 Laboratory Physics I

TB2 PH-131 10 Differential Equations for Physics

300+ Level

TB2 PH-207 10 Condensed Matter Physics I

TB1+2 PH-209 20 Laboratory Physics and Group Projects

TB1+2 PH-210 10 Laboratory Physics and Group Projects

TB2 PH-211 10 Laboratory Physics and Group Projects

TB2 PH-222 10 Electromagnetism II

TB2 PH-227 10 Mathematical Methods in Physics II

TB2 PH-229 10 Particle Physics I

400+ Level

TB2 PH-311 20 Project

TB2 PH-318 20 Theoretical Physics Project

TB2 PH-320 10 Foundations of Astrophysics

TB2 PH-322 10 Cosmology

TB2 PH-325 10 Teaching Physics via a School Placement

TB2 PH-333 10 Atomic Physics and Quantum Optics II

TB2 PH-335 10 Particle Physics II

TB2 PH-339 10 Climate Physics

TB2 PH-353 10 Computational Physics

TB2 PH-355 10 Mathematical Methods in Physics III

TB2 PH-361 10 Probing the nano-scale

**\*Classes listed below are available but require finals to be taken mid-January**

200+ ISU Level

TB1 PH-101 10 Dynamics I

TB1 PH-104 10 Introduction to Astronomy and Cosmology

TB2 PH-122 10 Dynamics II

TB1 PH-124 10 Matter and Fields I

TB1+2 PH-128 10 Quantative Methods in Physics

TB1+2 PH-129 10 Laboratory Physics I

300+ ISU Level

TB1 PH-203 10 Statistical Physics

TB1 PH-204 10 Physics Simulation

TB1 PH-205 10 Quantum Mechanics I

TB1 PH-206 10 Mathematical Methods in Physics I

TB1+2 PH-209 20 Laboratory Physics and Group Projects

TB1+2 PH-210 10 Laboratory Physics and Group Projects

TB1 PH-221 10 Electromagnetism and Special Relativity I

400+ ISU Level

TB1 PH-302 10 Quantum Mechanics II

TB1 PH-306 10 Atomic Physics I

TB1 PH-307 10 Condensed Matter Physics II

TB1 PH-312 10 Option Experiments

TB1 PH-321 10 General Relativity

TB1 PH-338 10 Frontiers of Nuclear Physics