

Faculty of Science and Technology

Contents

Seikei Liberal Arts Curriculum	2
Foreign Languages	2
Skill Building	4
Liberal Arts Basic	5
Sustainable Society Research	5
Faculty of Science and Technology	6
Major Courses	6
Study for Teaching Profession	10

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Faculty of Science and Technology

Seikei Liberal Arts Curriculum

Foreign Languages	
College English (Listening & Speaking) I	College English (Reading & Writing) I
College English (Listening & Speaking) II	College English (Reading & Writing) II
Intensive English I	Intensive English II
College English (Integrated Skills) I	College English (Integrated Skills) II
TOEFL Preparation Introduction	TOEFL Preparation Intermediate
TOEIC Preparation Introduction	TOEIC Preparation Intermediate
IELTS Preparation Introduction	IELTS Preparation Intermediate
Basic Grammar for Communication	Learning to Learn English By Your Design
English Pronunciation Skills	More Reading Skills
Presentation Skills Basic	Discussion Skills Basic
Writing Skills (Paragraph)	Presentation Skills Intermediate
Discussion Skills Intermediate	Writing Skills (Essay)
English and Culture through Extensive Reading I	English and Culture through Extensive Reading II
English and Culture through Movies	English and Culture through TV shows
English and Culture through Songs	English and Culture in the Media
English for Your Career	TOEFL Preparation Advanced I
IELTS Preparation Advanced I	TOEIC Preparation Advanced
TOEFL Preparation Advanced II	IELTS Preparation Advanced II
Media English *	Academic Listening
Cross Cultural Communication Skills	Discussion & Presentation
English for the Workplace *	Essay Writing
Intensive Reading	World Englishes *
Beginners' German A1	Beginners' German B1
Beginners' French A1	Beginners' French B1
Beginners' Spanish A1	Beginners' Spanish B1
Beginners' Chinese A1	Beginners' Chinese B1
Beginners' Korean A1	Beginners' Korean B1
Beginners' German A11	Beginners' German B11
Beginners' French A11	Beginners' French B11

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Faculty of Science and Technology

Foreign Languages	
Beginners' Spanish All	Beginners' Spanish BII
Beginners' Chinese All	Beginners' Chinese BII
Beginners' Korean All	Beginners' Korean BII
Beginners' Seminar on German, Communication Skills I	Beginners' Seminar on German, Communication Skills II
Beginners' Seminar on French, Communication Skills I	Beginners' Seminar on French, Communication Skills II
Beginners' Seminar on Spanish, Communication Skills I	Beginners' Seminar on Spanish, Communication Skills II
Beginners' Seminar on Chinese, Communication Skills I	Beginners' Seminar on Chinese, Communication Skills II
Beginners' Seminar on Korean, Communication Skills I	Beginners' Seminar on Korean, Communication Skills II
Advanced Seminar on German, Communication Skills III	Advanced Seminar on German, Communication Skills IV
Advanced Seminar on German, Communication Skills V	Advanced Seminar on French, Communication Skills III
Advanced Seminar on French, Communication Skills IV	Advanced Seminar on French, Communication Skills V
Advanced Seminar on Spanish, Communication Skills III	Advanced Seminar on Spanish, Communication Skills IV
Advanced Seminar on Spanish, Communication Skills V	Advanced Seminar on Chinese, Communication Skills III
Advanced Seminar on Chinese, Communication Skills IV	Advanced Seminar on Chinese, Communication Skills V
Advanced Seminar on Korean, Communication Skills III	Advanced Seminar on Korean, Communication Skills IV
Advanced Seminar on Korean, Communication Skills V	Advanced Seminar on German, Language and Culture I
Advanced Seminar on German, Language and Culture II	Advanced Seminar on German, Language and Culture III
Advanced Seminar on German, Language and Culture IV	Advanced Seminar on French, Language and Culture I
Advanced Seminar on French, Language and Culture II	Advanced Seminar on French, Language and Culture III
Advanced Seminar on French, Language and Culture IV	Advanced Seminar on Spanish, Language and Culture I
Advanced Seminar on Spanish, Language and Culture II	Advanced Seminar on Spanish, Language and Culture III
Advanced Seminar on Spanish, Language and Culture IV	Advanced Seminar on Chinese, Language and Culture I
Advanced Seminar on Chinese, Language and Culture II	Advanced Seminar on Chinese, Language and Culture III
Advanced Seminar on Chinese, Language and Culture IV	Advanced Seminar on Korean, Language and Culture I
Advanced Seminar on Korean, Language and Culture II	Advanced Seminar on Korean, Language and Culture III
Advanced Seminar on Korean, Language and Culture IV	Advanced Seminar on German, Diplom Deutsch Preparation I
Advanced Seminar on German, Diplom Deutsch Preparation II	Advanced Seminar on German, Diplom Deutsch Preparation III
Advanced Seminar on German, Diplom Deutsch Preparation IV	Advanced Seminar on French, DAPF Preparation I
Advanced Seminar on French, DAPF Preparation II	Advanced Seminar on French, DAPF Preparation III
Advanced Seminar on French, DAPF Preparation IV	Advanced Seminar on Spanish, DELE Preparation I

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Faculty of Science and Technology

Foreign Languages	
Advanced Seminar on Spanish, DELE Preparation II	Advanced Seminar on Spanish, DELE Preparation III
Advanced Seminar on Spanish, DELE Preparation IV	Advanced Seminar on Chinese, Test of Chinese Proficiency Preparation I
Advanced Seminar on Chinese, Test of Chinese Proficiency Preparation II	Advanced Seminar on Chinese, Test of Chinese Proficiency Preparation III
Advanced Seminar on Chinese, Test of Chinese Proficiency Preparation IV	Advanced Seminar on Korean, S-TOPIK Preparation I
Advanced Seminar on Korean, S-TOPIK Preparation II	Advanced Seminar on Korean, S-TOPIK Preparation III
Advanced Seminar on Korean, S-TOPIK Preparation IV	Advanced Seminar on German, Presentation Skills I
Advanced Seminar on German, Presentation Skills II	Advanced Seminar on French, Presentation Skills I
Advanced Seminar on French, Presentation Skills II	Advanced Seminar on Spanish, Presentation Skills I
Advanced Seminar on Spanish, Presentation Skills II	Advanced Seminar on Chinese, Presentation Skills I
Advanced Seminar on Chinese, Presentation Skills II	Advanced Seminar on Korean, Presentation Skills I
Advanced Seminar on Korean, Presentation Skills II	Introduction to the Russian Language I
Introduction to the Russian Language II	Introduction to the Thai Language I
Introduction to the Thai Language II	Introduction to the Italian Language I
Introduction to the Italian Language II	

Skill Building	
Practical Japanese Writing and Communication	Practical Japanese Speaking
Lectures on Japanese Writing	Lectures on Chinese Character
Lectures on Japanese Vocabulary and Reading Comprehension	Japanese Idiomatic Expressions through Classical Literature
Practical Document Writing and Communication Skills	Topics in Japanese Writing and Communication
Career Planning	Business Training Seminar
Career Seminar	Global Career Seminar
Advanced Lecture on Career Planning	Current Topics on Japanese Business
Preparatory Seminar for Internship	Internship for Business and Public Sector
Internship for Engineering	Preparatory Seminar for Advanced Internship
Advanced Internship	Global Career Design *
Information Literacy	Practical Use of Information Technology A

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Faculty of Science and Technology

Skill Building	
Practical Use of Information Technology B	Practical Use of Information Technology C
Practical Use of Information Technology D	Practical Use of Information Technology E
Practical Use of Information Technology F	Introduction to Python
Introduction to Data Science	Introduction to Data Analysis using Excel
Health and Sports Seminar A	Health and Sports Seminar B
Sports and Science	Sports and Culture
Sports and Society	Health and Science

Liberal Arts Basic	
Introduction to Philosophy	Introduction to Ethics
Contemporary Societies and Philosophy	Contemporary Societies and Ethics
Introduction to Literature	Introduction to Art
Cultural Studies	Introduction to Psychology
Psychology for Self-understanding	Principles of Education
Educational Psychology	Introduction to Political Science
Introduction to Economics	Sociology and the Contemporary World
Introduction to Constitutional Law	Introduction to Civil Law A
Introduction to Civil Law B	Mass Media in the Contemporary Society
Introduction to Social Psychology	Introduction to Business and Management
School and Society	Modern and Contemporary History of Japan A
Modern and Contemporary History of Japan B	Geography and Contemporary Society
Introduction to Subatomic World	Introduction to Anthropology
Psychology and Brain Science	Introduction to Astronomy
Introduction to Pharmaceuticals	Science of the Everyday World
History of Science	History of Science and Technology
Science Topics	Basic Mathematics for Data Science
Introduction to Artificial Intelligence	Introduction to Statistical Analysis

Sustainable Society Research	
Earth and Environment	Meteorology and Climatology

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Sustainable Society Research	
Natural Environment and Civilization	Japan's Geological History and Natural Disasters
Regional Geography of Japan	World Regional Geography A
World Regional Geography B	Town and Community Planning
Environmental Science Topics	Japan and the World after the Second World War
Asian Countries in the Modern World A	Asian Countries in the Modern World B
Western Countries in the Modern World A	Western Countries in the Modern World B
History in the Middle East	Introduction to Contemporary International Politics
The Global Economy	Cross-cultural Relations
Topics in Cross-cultural Studies	Legal Procedure and Human Life
Bioethics and Law	Studies on Community Welfare
Human Rights and Gender	Mental Health and Clinical Psychology
Studies on Welfare for the Elderly	Welfare Society and Everyday Life
Special Needs Education	Topics on Inclusive Society
Getting to Know Seikei	Communication Accessibility and Volunteering
Field Science Education	Seminar on Locality Studies
Studies on the Musashino Area	Musashino City Endowed Lectures
Understanding Adolescent Topics and Identities	Seikei Global Seminar A
Seikei Global Seminar B	Seminar on Local Cooperation with Musashino
Global Studies Seminar I *	Global Studies Seminar II *
Global Studies Seminar III *	

Faculty of Science and Technology

Major Courses	
Academic Skills I	Academic Skills II
Project Based Learning I	Project Based Learning II
Ethics in an Information Society	Business Skills for Science and Technology
Entrepreneurship and Patents	Collaborative Project I
Collaborative Project II	Exercise in Inspiring Program (Life Science)
Exercise in Inspiring Program (Management Science)	Exercise in Inspiring Program (Educational Method)

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Faculty of Science and Technology

Major Courses	
High-Technology	Ethics for Technologists
Fundamental Programming	Computer Fundamentals
Basic Mathematics for Computer Science	Basic Knowledge of Internet
Introduction to Information Processing	Practical Data Modeling
Applied Data Science	Introduction to Fundamental Information Processing
Java Programming	Functional Programming
Programming for IoT	Data Analysis for Fundamental Chemistry
Information Theory	Database Systems
Numerical Computation	Artificial Intelligence
Data Mining	Calculus I
Linear Algebra I	Exercises in Physics I
Exercises in Physics II	Essentials of Physics
Essentials of Biology	Exercises in Mathematics I
Exercises in Mathematics II	Essentials of Geology
English for Science and Technology	Biology Laboratory
Earth Science Laboratory	Quantum Mechanics
Introduction to Industry	Physics I
Physics II	Physics Laboratory
Essentials of Chemistry	Chemistry Laboratory
Mathematics for Chemistry	Calculus II
Linear Algebra II	Fundamentals of Probability and Statistics
Applied Fourier Analysis	Geometry
Differential Equations	Algebra
Introduction to Mathematics	Introduction to Physics
Introduction to Chemistry	Introduction to Biology
Seminar	Senior Thesis I
Senior Thesis II	Discrete Mathematics
C++ Programming I	C++ Programming Laboratory I
Probability and Statistics	Mathematical Programming
C++ Programming II	C++ Programming III

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Major Courses	
C++ Programming Laboratory II	Algorithms and Data Structures
Industrial Engineering	CAD/CAM I
Ergonomics	Dynamics of Machinery I
Mechanics of Materials I	Fluid Mechanics I
Mechanical Engineering Laboratory	Electric Circuit I
Introduction to Electrical and Electronic Engineering	Programming in C I
Electronic Circuits I	Control Engineering I
Electrical and Electronic Engineering Laboratory	Fundamentals of Physical Chemistry
Fundamentals of Organic Chemistry	Fundamentals of Inorganic Chemistry
Applied Chemistry Laboratory I	Exercise in Applied Chemistry I
Fundamentals of Biochemistry	Fundamentals of Analytical Chemistry
Applied Chemistry Laboratory II	Applied Chemistry Laboratory III
Exercise in Applied Chemistry II	Exercise in Applied Chemistry III
Probability Theory	Combinatorics
Statistical Data Analysis	Optimization Modeling
Algorithm Design	Machine Learning
Thermodynamics and Statistical Mechanics I	Formal Languages and Automata
Optimization Theory	Mechanism Design
Multivariate Data Analysis	Applied Machine Learning
Operations Research	Theory of Computation
Big Data Analytics	Statistical Modeling
Digital Systems	User Interface
Introduction to Media Technology	Image Processing
Computer Systems	Information and Communication
Speech Processing	Web Technologies
Operating Systems	Computer Graphics Technologies
Programming Languages	IP Network
Pattern Recognition	Software Design
Information Security	Natural Language Processing
Parallel and Distributed Processing	Neural Networks

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Major Courses	
Thermodynamics I	Human Factors
Human Interface	Design Engineering
Advanced Python Programming	Thermodynamics II
Engineering Economics I	Dynamics of Machinery II
Mechanical Processing	CAD/CAM II
Mechanics of Materials II	Fluid Mechanics II
Introduction to Numerical Simulations	Artificial Intelligence Basics
Production Systems Engineering	Mathematics for Electronics and Electrical Engineering
Electric Circuit II	Electric Circuit III
Electromagnetism I	Electromagnetism II
Robotics	Solid State Properties for Electronics
Semiconductor Fundamentals	Programming in C II
Analysis and Measurements for Electronics and Electrical Engineering	Electronic Circuits II
Special Lecture on Applied Chemistry I	Chemical Thermodynamics
Organic Reaction Mechanism	Coordination Chemistry
Chemical Kinetics	Organic Stereochemistry
Solid State Chemistry	Cellular Biochemistry
Instrumental Analysis	Scientific Programming
Fundamentals of Chemical Engineering	Special Lecture on Applied Chemistry II
Materials Informatics	Bioinformatics
Essentials of Quantum Information Science	Transport Phenomena
Instrumentation Engineering	Reliability Engineering
Cognitive Engineering	Design of Experiments
Computational Mechanics	Materials Science and Engineering
Engineering Acoustics	Fundamentals of Accounting Information
Kansei Engineering	Sensor Data Processing
Electric Power System	Power Electronics
Plasma Science and Technology	Semiconductor Devices
Control Engineering II	Electrical and Electronic Materials

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Major Courses	
Digital Signal Processing	Electrical Control Simulation
Electrical Equipment	Integrated Circuits
Motion Control	Thermodynamics and Statistical Mechanics II
Quantum Chemistry	Materials Chemistry
Bioorganic Chemistry	Electrochemistry
Polymer Chemistry	Separation Processes
Biopharmaceutical Engineering	Engineering Economics II
Synthetic Organic Chemistry	Catalysis
Bioresource Engineering	Surface Chemistry
Chemical Reaction Engineering	Food Chemistry
Environmental Engineering	Employment Guidance
Development of Science Teaching Materials	Information Technology and Profession
International Business *	Japanese Economy *
Current Topics in Business and Economics *	International Relations *
Regional Studies *	Current Topics in Global Issues *
Japanese Contemporary Issues *	Japanese Traditional Culture *
Current Topics in World Affairs *	

Study for Teaching Profession

Study for Teaching Profession	
Introduction to Teaching	Student and Career Guidance
Studies in Curriculum	Methods of Education
Educational Counseling	Methods of Moral Education
Methods of the Period for Integrated Studies	Methods of Special Activities Teaching
Preparation for Teaching Practice	Practice in Teaching
Final Brushup for Teaching Profession	Teaching Methods of Industrial Arts I
Teaching Methods of Industrial Arts II	Teaching Methods of Informatics I
Teaching Methods of Informatics II	Teaching Methods of Natural Sciences III
Teaching Methods of Natural Sciences IV	Teaching Methods of Japanese I

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Study for Teaching Profession	
Teaching Methods of Japanese II	Teaching Methods of Japanese III
Teaching Methods of Japanese IV	Teaching Methods of Social Studies, Geography & History
Teaching Methods of Social Studies and Civics	Teaching Methods of Social Studies A
Teaching Methods of Social Studies B	Teaching Methods of History and Geography
Teaching Methods of Citizenship Education	Teaching Methods of English I
Teaching Methods of English II	Teaching Methods of English III
Teaching Methods of English IV	Teaching Methods of Mathematics I
Teaching Methods of Mathematics II	Teaching Methods of Mathematics III
Teaching Methods of Mathematics IV	Seminar for Teacher Training I
Seminar for Teacher Training II	School Administration and School Library
Structure of School Library Media	Teaching and the School Library
Self-cultivation Through Reading	Using Media Information
Methods and Techniques of Instruction	Theories and Methods of ICT in Education

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