

(For students who will remain enrolled therein after AY2018 onwards)

※1	Not open to non-native or near-non-native Japanese speakers
※2	Not open to native or near-native Japanese speakers
※3	Not open in AY2018

Classification of Courses (Categories)			C o d e	Course Name	SR	Academic Credits			Standard Year of Course Completion (num. of slots)																Note	
Cate gory	Sub-category					1st year				2nd Year				3rd Year				4th Year				Opning Class in Ay2018				
		Required				Elective	Optional	01	02	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Noma	(Retake)	
G e n e r a l E d u c a t i o n C o u r s e s	Humanities and Social Sciences (HS)	HS01	Philosophy			2			4														Int (Q2)	-		
		HS02	Logic※3			2			4															Q3	-	
		HS03	Psychology			2			4															Q4	-	
		HS04	Linguistics			2			4															Int (Q2)	-	
		HS05	Literature			2			4															Int (Q2)	-	
		HS06	Art			2			4															Q3	-	
		HS07	Gender and Sexuality			2			4															Int (Q2)	-	
		HS09	Jurisprudence			2			4															Q4	-	
		HS10	Economics			2			4															Int (Q4)	-	
		HS11	Sociology			2			4															Q3	-	
		HS12	Constitution of Japan			2			4															Q3	-	
		HS13	International Relations			2			4															Int (Q2)	-	
		HS16	Theory of Physical Education			2			4															Q4	-	
		HS17	History of Science			2			4															Q4	-	
		HS18	Social Simulation			2			4															Q2, Int (Q4)	-	
		HS19	History and Culture of Aizu			2			4															Q4	-	
		HS20	Academic Skill 1	○		2			4 (Q1)																Q1	-
	HS21	Academic Skill 2	○		2			4 (Q2)																Q2	-	
	Physical Activities (PA)	PA01	Physical Activity 1	○		1			2(S)																S1 (Q12)	-
		PA02	Physical Activity 2	○		1				2(S)															S2 (Q34)	-
		PA03	Physical Activity 3			1																			S1 (Q12)	-
PA04		Physical Activity 4			1																			Int (Q3)	-	
F o r e i g n L a n g u a g e C o u r s e s	English Language Courses (EN) ※1only apply for EN01 through EN07	EN01	Introductory English 1	○		1		4																Q1	-	
		EN02	Introductory English 2	○		1			4																Q2	-
		EN03	Introductory English 3	○		1				4															Q3	-
		EN04	Introductory English 4	○		1					4														Q4	-
		EN05	Intermediate English 1	○		2						4													Q1	-
		EN06	Intermediate English 2	○		2							4												Q2	-
		EN07	Intermediate English 3	○		2								4											Q3	-
		EN08	Thesis Writing and Presentation	○		1														2(S)					S2 (Q34)	S2 (Q34)
	Other Language Courses (JP) ※2	EL01	Advanced English Acquisition			2 each											4								各Q	-
		EL02	Advanced Professional English Applications			2 each												4							各Q	-
		EL03	Advanced English and Technology			2 each												4							各Q	-
		EG01	Global Experience Gateway			2 each											4								S2 (Q34)	S2 (Q34)
		JP01	Introductory Japanese I			1				4															Q3	-
		JP02	Introductory Japanese II			1					4														Q4	-
		JP03	Intermediate Japanese I			1			4																Q1	-
		JP04	Intermediate Japanese II			1				4															Q2	-
		JP05	Advanced Japanese I			2								4											Q3	-
JP06	Advanced Japanese II			2									4										Q4	-		
JP07	Business Japanese			2								4											Q1	-		

Course List (Specialized Courses)

(For students who will remain enrolled therein after AY2018 onwards)

Notes: shaded Courses shaded in the table are "SR (strongly recommended courses)"
 ※1 Academic Credits, etc. of "O7 Graduate School Courses" are set by the Graduate School Regulation on the Completion of University of Aizu Graduate School Studies.
 ※2 To take two courses out of Integrated Exercise
 ※3 Open in AY2018 only
 ※4 Not open in AY2018
 ● Required Number of Credits for Graduation is allowed up to total of 4 credits

Fields
 CS Computer Science
 SY Computer Systems
 CN Computer Network Systems
 IT(SPR,CMV) Information Technologies
 SE-DE Software Engineering

Classification of Courses (Categories)			C o u r s e	Course Name	SR	Academic Credits			Field recommend						Standard Year of Course Completion (num. of slots) 50min/slot																Items		Note(1) Opening Class in Ay2018 (Retake)	Note(2)
Category	Sub-category					Requ red	Elective	Optional	CS	SY	CN	IT-S P R	IT-C M V	SE-DE	1st year				2nd Year				3rd year				4th Year				Lec	Ex		
S p e c i a l i z e d F u n d a m e n t a l C o u r s e s	Mathematics (MA)	MA01 Linear Algebra I	○	2											6 (01/2)															4	2	Q3		
		MA02 Linear Algebra II	○	2													6 (03/4)														4	2	Q1	
		MA03 Calculus I	○	2												6 (01/2)															4	2	Q4	
		MA04 Calculus II	○	2													6 (03/4)														4	2	Q2	
		MA05 Fourier Analysis		2														4												4	-	-		
		MA06 Complex Analysis		2															4											4	-	-		
		MA07 Probability and Statistics	○	2														4												4	-	-		
		MA08 Applied Algebra※4		2							○		○									4								4	-	-		
		MA09 Mathematical Logic		2						○													4							4	-	-		
		MA10 Introduction to Topology※4		2																			4							4	-	-		
		MA11 Applied Geometry and Topology		2																			4							4	-	-		
		Natural Science (NS)	NS01 Dynamics	○	2										8																4	4	Q3	
			NS02 Electromagnetism	○	2												8														4	4	-	
			NS03 Quantum Mechanics		2													4													4	-	-	
			NS04 Semiconductor Devices		2														4												4	-	-	
			NS05 Thermodynamics and Statistical Mechanics		2															4											4	-	-	
			NS07 Introduction to Optoelectronics※4		2																	4								4	-	-		
			Computer Fundamentals (LI)	LI01 Computer Literacy	○	4										8															2	6	-	
		LI03 Guidance of Computer Science and Engineering		○	2										4																4	-	-	
		LI04 Introduction to Computer Systems		○	2												4														4	-	-	
		LI06 Information Security		○	2												4														4	-	-	
		LI07 Information and Occupations				2																	4 (Int)								4	-	-	
	LI08 Information Ethics	○		2										4															4	-	-			
	LI09 Fundamentals of System Development and Project Management			2																			4						4	-	-			
	LI10 Introduction to Multimedia Systems	○		2																									4	-	-			
	LI11 Introduction to Computer Network	○		2														4											4	-	-			
	LI12 Creativity Studio			2																									-	-	-			
	LI13 CSE Exercise I			3															3 (S)										-	3	-			
	LI14 CSE Exercise II		3																3 (S)									-	3	-				
	Programming Languages (PL)	PL01 Introduction to Programming	○	4										8																4	4	-		
		PL02 C Programming	○	4											8															4	4	-		
		PL03 Java Programming I	○	4												8														4	4	Q4		
		PL04 C++ Programming※4		3				○			○	○									6									4	2	-		
		PL05 Computer Languages		3																	6									4	2	-		
		PL06 Java Programming II		3								○								6		6								4	2	-		
	Foundations of Computer Science & Engineering (FU)	FU01 Algorithms and Data Structures I	○	4										8																4	4	-		
		F01 Algorithms and Data Structures(Interim)※3	○	4													8													4	4	-		
		FU02 Information Theory and Data Compression※4		3			○			○	○	○										6								4	2	-		
		FU03 Discrete Systems	○	3														6												4	2	-		
		FU04 Logic Circuit Design	○	4															8											4	4	-		
		FU05 Computer Architecture	○	4																8										4	4	-		
		FU06 Operating Systems	○	4																	8									4	4	Q1		
		F07 Database Systems(Interim)※3																											4	2	-			
		FU08 Automata and Languages	○	3																										4	2	-		
		F08 Automata and Languages(Interim)※3	○	3																		6							4	2	-			
		FU09 Algorithms and Data Structures II		3			○	○		○	○	○	○								6									4	2	-		
		FU10 Language Processing Systems		3																		6								4	2	-		
		FU11 Numerical Analysis		3			○				○	○											6							4	2	-		
		FU14 Introduction to Software Engineering	○	3								○	○									6								4	2	-		
		FU15 Introduction to Data Management	○	3																										4	2	-		
Computer Systems (SY)	SY02 Electronics		4					○													8								4	4	-			
	SY04 Embedded Systems		4					○													8								4	4	-			
	S04 Embedded Systems(Interim)※3		3					○														8							4	4	-			
	SY05 Parallel Computer Systems		3					○													6								4	2	-			
	SY06 VLSI Design		2					○												4								2	2	-				
	SY07 Advanced Logic Circuit Design		3					○												6								4	2	-				
	Computer Network Systems (CN)	CN02 Network Security		3						○												6								4	2	-		
CN03 Network Programming			3						○												6								4	2	-			
N03 Computer Network Organization and Design			3						○															6				4	2	-				
CN04 Wireless Networking			2						○													4						4	-	-				
CN05 Computer and Network System Modeling and Simulation			3						○													6						4	2	-				
Applications (IT)	IT01 Artificial Intelligence		4							○		○									8								4	4	-			
	IT02 Computer Graphics		3			○				○	○										6								4	2	-			
	IT03 Image Processing		3								○	○												6				4	2	-				
	A04 Biomedical Information Technology(Interim)※3		3							○	○													6				4	2	-				
	IT05 Robotics and Automatic Control		3								○													6				4	2	-				
	IT06 Human Interface and Virtual Reality		3									○	○											6				4	2	-				
	IT08 Signal Processing and Linear System		4			○	○			○										8								4	4	-				

Classification of Courses (Categories)		C o u r s e	Course Name	SR	Academic Credits			Field recommend					Standard Year of Course Completion (num. of slots)/50min/slot																Items		Note(1) Opening Class in Ay2018 (Retake)	Note(2)	
Cate gory	Sub-category				Requ red	Elective	Optional	CS	SY	CN	IT-S P R	IT-C M V	SE-DE	1st year				2nd Year				3rd year				4th Year				Lec			Ex
														S1	S2	S1	S2	S1	S2	S1	S2	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
C o u r s e s	i n t e g r a t e d	Software Engineering (SE)	IT09 Sound and Audio Processing			3						○																4	2				
			IT10 Geometry for Visual Computing			3																							4	2			
			IT11 Information Retrieval and Natural Language Processing			3			○					○															4	2			
			SE01 Web Engineering			3																							4	2			
			SE02 Web Data Modeling			3																							4	2			
			SE04 Advanced Software Engineering			3																							4	2			
			SE05 Software Studio			3																							3	(S)			
			SE06 Concurrent and distributed systems			3																							2	4			
			SE07 Database Systems			3																							4	2			
			Integrated Exercise(IE)	IE01 Integrated Exercise for Systems I			3			○	○	○	○※2	○※2	○																3	(S)	
	IE02 Integrated Exercise for Systems II				3			○	○	○	○※2	○※2	○																3	(S)			
	IE03 Integrated Exercise for Software I				3			○	○	○	○※2	○※2	○																3	(S)			
	IE04 Integrated Exercise for Software II				3			○	○	○	○※2	○※2	○																3	(S)			
	Others (OT)	OT01 Basic Knowledge Course on Starting Up Ventures I/II			2 each																								4				
		OT02 Factories for Experiencing Starting Up Ventures ①~④			1 each																								2	(S)			
		OT03 SCOP				1 each																							2	(S)			
		OT04 Courses for the Information Technology Examination				1																							4	(Int)			
		OT05 Career Design I				1																							2	(S)			
		OT06 Career Design II				1																							2	(S)			
		OT07 Graduate School Courses ※				※1																							※				
		OT08 TOEIC Preparation Course①~④				1 each																							2	(S)			
		OT09 Extracurricular Activity Course I			●1 each																								2	(Int)			
		OT10 Extracurricular Activity Course II			●2 each																								4	(Int)			
Graduation Thesis (GT)		GT01 Graduation Thesis			8																												

※ All Intensive SE courses from AY2016, it is not included in the minimum requested number of categories of Attachment 3 FD subjects.

Course List (Courses Concerning the Teaching Profession)

(For students who will remain enrolled therein after AY2018 onwards)

	Code	Course Name	Academic Credits or Hours			Standard Year	Remarks
			Required	Elective	Optional		
Upper Division Courses Concerning the Teaching Profession	TE01	Introduction For Becoming a Teacher		2		2	Courses related to significance, etc. of the teaching profession
	TE02	Introduction To Education		2		2	Courses related to fundamental theories of education
	TE03	Education Psychology		2		2	
	TE19	Education Systems		2		2	
	TE04	Studies on Curriculums		2		2	<p>Courses related to curriculums and teaching methods Studies on Curriculums, education methods for relevant courses, Special Activities and Education Methods are required subjects. (Education Methods of Mathematical Studies 2 and Moral Education are required for a class-one junior high school teachers' license.)</p>
	TE06	Education Methods of Mathematical Studies 1		2		2	
	TE07	Education Methods of Mathematical Studies 2		2		2	
	TE08	Education Methods of Mathematical Studies 3		2		2	
	TE09	Education Methods of Mathematical Studies 4		2		2	
	TE10	Education Methods of Information Studies 1		2		3	
	TE11	Education Methods of Information Studies 2		2		3	
	TE12	Moral Education		2		3	
	TE13	Special Activities		2		3	
	TE05	Education Methods		2		3	
	TE14	Student Guidance and Counseling		2		2	Courses related to student guidance, course counseling, and career guidance, etc.
	TE15	Career Education		2		3	
	TE16	Practical Applications in Education 1		4		4	<p>Teaching Practice Practical Applications In Education 1 is a required subject for a class-one junior high school teacher's license or a junior high/high school teacher's license. Practical Applications In Education 2 is a required subject for those who obtain only a class-one high school teacher's license.</p>
	TE17	Practical Applications in Education 2		2		4	
	TE18	Pre and Post Guidance for Teaching Practice		1		4	
	TE20	Practice for Teaching Profession		2		4	For the students who will enrolled therein after AY 2010 onwards

Notes: The courses listed above shall not be counted as the academic credits for graduation.

(For students enrolled in AY2016 and after)

Classification of Courses (Categories)		A Minimum Number of Academic Credits for Relevant Course Categories
General Education Courses (At least 10 credits)		
	Humanities and Social Sciences	8
	Physical Activities	2
Foreign Language Courses (At least 15 credits)		15
Specialized Courses (At least 95 credits)		
(Specialized Fundamental Courses)		
	Mathematics and Related Courses	10
	Natural Sciences and Related Courses	4
	Computer Fundamentals and Related Courses	16
	Programming and Related Courses	12
	Foundations of Computer Science & Engineering and Related Courses※1	21
(Specialized Courses)		
	Computer Systems and Related Courses	–
	Computer Network Systems and Related Courses	–
	Applications and Related Courses	–
	Software Engineering and Related Courses	–
	Integrated Exercise	–
	Other Courses※2	–
Graduation Theses (8 credits)		8
A Minimum Requisite Number of Academic Credits to Graduate from the University:		128 Credits (excluding Optional Courses)

※1 F07 database system is included only when you acquire a unit with transitional measures acquired before AY2017 or only in 2018 (available only for enrollees before 2015).

※2 Required Number of Credits for Graduation is allowed up to a total of 8 credits

(For students enrolled in AY2015 and before)

Classification of Courses (Categories)		A Minimum Number of Academic Credits for Relevant Course Categories
General Education Courses (At least 10 credits)		
	Humanities and Social Sciences	8
	Physical Activities	2
Foreign Language Courses (At least 15 credits)		15
Specialized Courses (At least 95 credits)		
(Specialized Fundamental Courses)		
	Mathematics and Related Courses	8
	Natural Sciences and Related Courses	4
	Computer Fundamentals and Related Courses	11
	Programming and Related Courses	12
	Foundations of Computer Science & Engineering and Related Courses※1	21
(Specialized Courses)		
	Computer Systems and Related Courses	–
	Computer Network Systems and Related Courses	–
	Applications and Related Courses	–
	Software Engineering and Related Courses	–
	Integrated Exercise	–
	Other Courses※2	–
Graduation Theses (8 credits)		8
A Minimum Requisite Number of Academic Credits to Graduate from the University:		128 Credits (excluding Optional Courses)

※1 F07 database system is included only when you acquire a unit with transitional measures acquired before AY2017 or only in 2018 (available only for enrollees before 2015).

※2 Required Number of Credits for Graduation is allowed up to a total of 8 credits