_					Maste	r's Cour	se											
				[Diploma	Policy]													
														cience an				
				(information science and engineering, biological science, material science and engineering, and their interdisciplinary fields) from a holistic and comprehensive point of view to be able to pursue problem solving.														
Subject Type				DP2. To acquire the skills to set an agenda and topic in a specific field to conduct research or technical development, as well as the ability to apply these to interdisciplinary research and development in other fields.														
				DP3. To acquire global communication skills and a holistic perspective, and the ability to exercise leadership in research and														
				development in advanced science and technology fields.  DP4. To acquire high ethical and scientific perspectives in research and development in advanced science and technology fields.													fields	
				DP5. The master's thesis, special extended essay, or extended essay written produces results that contribute to advanced science and technology academically or in application.														
					nology ac	ademical	y or in ap	plication.										
	Category																	
				[Curricu	lum Polic	y]												
		jā.				subjects olistic com			neral scie	nce and te	echnology	trends n	ecessary 1	for studyin	g advanc	ed scienc	e and	
		Subject Number		CP2. Sul	ojects with	n balance	d content	for stude				ckground	ls to provi	de basic k	nowledge	of advan	ced	
		bject						op compre alized kno			-	l science	and techr	nology				
		ns		CP4. PBI	. subjects	to develo	p the abili							problems	in cooper	ation with	others,	
						nse of cha mprove th		tation and	commur	nication sk	ills neces	sary to be	active pro	ofessionall	/ in societ	у.		
				CP6. Thi	ough coo	peration	with indus	stry and g	overnmer					erstand sci			gy issues	
								ocietal act unication :		ired of res	searchers	and engi	neers, En	glish comr	nunicatio	n skills fo	r	
								municatio										
														for resear vritten test				
						tical work		on an aom	nt in voc	arab tadi	a that cou	stuikusta te		d anion an	and tooks	ologia		
				CP9. Importance is placed on active engagement in research tasks that contribute to advanced science and technology academically or in application to write a master's thesis, a special extended essay, or an extended essay through seminars and														
				research guidance. Through this, the acquisition of research or technology development skills are achieved and the spirit of														
					challenge, well-roundedness, interdisciplinary understanding, and ethics that will contribute to leading the next generation of advanced science and technology are fostered. Learning outcomes are evaluated by two or more supervising professors.													
		1001	技術と倫理 Technology and Professional Ethics	DP1	DP2	DP3	DP4	DP5	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	
		1001	科学哲学 Philosophy of Science			0	0									0		
		1003	科学コミュニケーション Science Communication 知的財産権 Intellectual Property Right			0	0							0		0		
		1019	知的財産権演習 Exercise for Intellectual Property Rights			0	0							0				
		1025	イノベーション創出特論 I Advanced lecture on creation of innovation I		0	0							0					
		4006	イノベーション創出特論 I Advanced lecture on creation of														_	
		1026	innovation II		0	0							0					
		1027	イノベーション創出特論 II Advanced lecture on creation of innovation III		0	0							0					
		1028	イノベーション創出特論IV Advanced lecture on creation of innovation IV		0	0							0					
		1020	イノベーション創出特論 V Advanced lecture on creation of		0	_												
10		1029	innovation V		0	0							0					
General Subjects		1010	プロフェッショナルコミュニケーション I Professional Communication I			0									0			
ral Su	-	1011	プロフェッショナルコミュニケーションI Professional Communication I			0									0			
Gene		1012	アカデミックディスカッション Academic Discussion			0									0			
		1013	リサーチプレゼンテーション Research Presentation			0									0			
		1014	リサーチライティング Research Writing アドバンスドリサーチライティング Advanced Research Writing			0		-							0		<del>                                     </del>	
		1016	日本文化 Japanese Culture			0									0			
		1017	日本語 I Japanese Course I 日本語 I Japanese Course II			0		-							0		-	
		1020	日本語Ⅲ Japanese CourseⅢ			0									0			
		1021	日本語IV Japanese CourseIV 日本語V Japanese CourseV			0 0		-							0 0		<u> </u>	
		1022	アカデミックボランティア I Academic Volunteer I		0	0							0					
		1024 1030	アカデミックボランティア II Academic Volunteer II バイオDXプログラミング演習 I BioDX Programing I		0	0				0			0					
		1030	バイオDXプログラミング演習 BioDX Programming I バイオDXプログラミング演習 BioDX Programming II		0					0							<del>                                     </del>	
		1032 1033	バイオDXデータ処理演習 I BioDX Data Processing I		0					0								
	cts	2001	バイオDXデータ処理演習 II BioDX Data Processing II 情級押工学序論 Introduction to Information Science and Engineering	0	U				0	U								
	Subjects	2001	情報理工学序論 Introduction to Information Science and Engineering パイオサイエンス序論 Introduction to Biological Science	0					0									
		2003	物質理工学序論 Introduction to Materials Science and Engineering	0					0									
	Introduction	2008	融合プログラム序論 Introduction to Interdisciplinary Research	0					0									
		3031	Programs 情報科学基礎 I Fundamentals of Information Science I	0						0								
		3032	情報科学基礎II Fundamentals of Information Science II	0						0								
		3002	プログラミング演習 Programming Course 分子生物学 Molecular Biology	0						0								
		3013	細胞膜と物質輸送 Cell Membranes and Transport	0						0								
		3014 3015	細胞の情報伝達 Cell Signaling 微生物科学 Microbial Science	0						0 0								

3017 バイオメディカルサイエンス Biomedical Science 3018 細胞骨格と細胞周期 Cytoskeleton and Cell Cycle 3019 遺伝学と幹細胞 Genetics and Stem Cell Biology 3020 遺伝子クローニングとDNA解析 Gene Cloning and DNA Analysis 3033 先端バイオサイエンス概論 Introduction to NAIST Bioscience 3021 物質科学解析 Mathematical Analyses for Materials Science 3022 量子力学 Quantum Mechanics 3023 物質物理学 Core Quantum Mechanics II 3024 物質化学 Core Physical Chemistry I 3025 物理化学 Physical Chemistry 3026 現代固体物理学 Core Solid State Physics I 3027 現代半導体物性 Core Solid State Physics II 3028 有機反応化学 Core Molecular Science I 3029 反応解析化学 Core Molecular Science II 3030 生体材料化学 Biomaterials Chemistry 3034 半導体材料 Semiconductor Materials 3035 光電子工学 Optoelectronics 3036 有機・高分子化学 Organic Synthesis and Polymer Science 4006 ソフトウェア工学Software Engineering 4090 サイバーセキュリティ/ Cyber Security 4091 伝送理論 Translmission Theory 4092 高性能計算基盤 High-performance computing platforms 4093 アルゴリズム設計論 Advanced Algorithm Design 4003 ユビキタスシステム Ubiquitous System 4034 系列データモデリング Sequential Data Modeling 4097 視覚メディア処理 I Visual Media Processing I 4101 ロボティクス Robotics 4103 人間情報処理Human Information Processing 4094 システム・リソース・マネージメント Systems Resource Management 4038 ハードウェアセキュリティ Hardware Security 4095 ロバスト最適制御 Robust/Optimal Control 4096 ソフトウェアシステム構築論Software Systems Development コンピュータ・ネットワーク Computer Network 4008 4098 視覚メディア処理 II Visual Media Processing II 4099 データマイニング Data Mining 4100 多次元信号処理 Multidimensional signal processing 4102 自然言語処理 Natural Language Processing 4105 データサイエンス論 (DS科目) Data Science 4029 情報科学特別講義A Special Lecture in Information Science A 4030 情報科学特別講義B Special Lecture in Information Science B 4031 情報科学特別講義C Special Lecture in Information Science C 4032 情報科学特別講義D Special Lecture in Information Science D Subjects 4086 システム要求工学 System Requirements Engineering 4087 システム開発プロセス Systems Development Process 情報セキュリティ運用リテラシー I Lecture of Information Security Technology Management Literacy I 情報セキュリティ運用リテラシー II Lecture of Information Security Management Literacy II . pue 4044 情報セキュリティ演習A Exercise for Information Security A 4045 情報セキュリティ演習B Exercise for Information Security B 4046 情報セキュリティ演習C Exercise for Information Security C 4054 発生生物学特別講義 Advanced Lecture in Developmental Biology 4055 バイオサイエンスの先端技法 Advanced Techniques in Bioscience 4056 植物発生生理学 Plant Developmental Physiology 4057 動物発生学 Developmental Biology of Animals 4058 薬理・病態生化学 Pharmacology and Pathological Chemistry 4059 免疫学 Immunology 4060 ゲノム・がん生物学 The Biology of Genome and Cancer サバイバル生物学 -科学論文とのつきあい方 Survival Biology -how to 4106 read scientific papers-4062 国際バイオ特論A International Forefront in Bioscience A 4063 国際バイオ特論B International Forefront in Bioscience B 4064 バイオサイエンスにおけるビッグデータ Big data in Bioscience 4089 科学的発見の思考法 Logic in Scientific Discovery 4107 応用生命科学 Applied Life Science 4108 バイオサイエンスの産業展開 Development of Bioscience into Industry 科学技術の社会実装 Social Implementation of Science and 4109 バイオサイエンスにおける統計と数理 Statistics and Mathematics in 4110 バイオサイエンスにおける先進トピックスA Advanced Topics in 4111 バイオサイエンスにおける先進トピックスB Advanced Topics in 4112 Biological Science B 4113 先端バイオゼミナール I Advanced Bioscience Seminar I 4114 先端バイオゼミナール II Advanced Bioscience Seminar II 電子原子物性特論 Electronic Properties and Atomic Structures of Solids and Surfaces Special 4068 光・情報素子工学特論 Light and Information Devices Special 4070 生体分子科学特論 Biomolecular Science 4072 分子フォトサイエンス特論 Molecular Photo-science 4067 フォトニクス特論 Photonics Special

3016 植物科学 Plant Science

			量子情報・エネルギー材料特論 Materials Science for Quantum										
		4069	重力情報・エイルキー材料特論 Materials Science for Quantum Information and Energy Conversion	0					0				
		4115	有機金属触媒化学特論 Organometallic Chemistry	0					0				
		4073	高分子化学特論 Polymer Chemistry	0					0				
		4074	マテリアルインフォマティクス特論 Materials Informatics	0					0				
		4076	物質科学特論A Materials Science Special A	0					0				
		4077	物質科学特論B Materials Science Special B	0					0				
		4078	物質科学特論C Materials Science Special C	0					0				
		4079	物質科学特論D Materials Science Special D	0					0				
		4083	プロジェクト実習 Project Practice	0					0				
		5001	情報理工学 P B L I Information Science and Engineering PBL I		0	0				0			
		5002	情報理工学 P B L II Information Science and Engineering PBL II		0	0				0			
		5003	情報生命科学 P B L I Computational Biology PBL I		0	0				0			
		5004	情報生命科学 P B L II Computational Biology PBL II		0	0				0			
		5005	バイオサイエンス P B L I Biological Sciences PBL I		0	0				0			
			バイオサイエンス P B L II Biological Sciences PBL II		0	0				0			
	PBL Subjects		バイオナノ理工学 P B L I Bionanotechnology PBL I		0	0				0			
			バイオナノ理工学 P B L II Bionanotechnology PBL II		0	0				0			
			物質理工学 P B L I Materials Science and Engineering PBL I		0	0				0			
		5010	物質理工学 P B L II Materials Science and Engineering PBL II		0	0				0			
		5011	知能社会創成科学 P B L I Intelligent Cyber-Physical Systems PBL I		0	0				0			
		5012	知能社会創成科学 P B L II Intelligent Cyber-Physical Systems PBL II		0	0				0			
		5013	データサイエンスPBLI Data Science PBLI		0	0				0			
		5014	データサイエンス P B L II Data Science PBL II		0	0				0			
pa	-	6008	ゼミナールI Seminar I	0	0		0						0
-bas		6009	ゼミナールI SeminarI	0	0		0						0
Research-based Subjects			修士論文研究 Research Thesis	0	0		0						0
See			特別課題研究 Specific Resarch Project	0	0		0		,				0
æ		6012	課題研究 Research Project	0	0		0						0

## [Diploma Policy] DP1. To acquire sophisticated expertise and skills to understand the broad theory and structures of advanced science and technology fields (information science and engineering, biological science, material science and engineering, and their interdisciplinary fields) from a holistic and comprehensive point of view to challenge solving difficult problems. DP2. To acquire the skills and the spirit of challenge to actively and independently promote the identification and resolution of problems in a specific field, as well as to lead new interdisciplinary research and development in other fields. DP3. To acquire sophisticated global communication skills and a holistic perspective, and the ability to exercise international leadership in a global environment in advanced science and technology field research and development. DP4. To acquire high ethical and sci ves in research and development in advanced science and technology fields. DP5. The doctoral thesis written produces particularly excellent research results that contribute to advanced science and technology academically or in application. [Curriculum Policy] CP1. Subjects teaching state-of-the-art expertise in information science, biological science, materials science, and their interdisciplinary fields. CP2. Subjects to foster the ability to actively envision relationships with society, including broad perspectives based on interdisciplinary knowledge, rehensive understanding, and career planning. CP3. Subjects to develop the ability to actively and independently plan and execute research projects, to solve problems, and pursue the boundaries of science and technology. CP4. Subjects focused on the acquisition of the presentation and communication skills necessary for successful international activity The learning outcomes of each of these subjects shall be evaluated based on the results of written tests, reports, exercises, experiments, practical work, etc. CP5. Importance is placed on active engagement in sophisticated research tasks that contribute to advanced science and technology academically or in application to write a doctoral thesis through seminars and research guidance. Through this, the acquisition of the ability to actively and independently identify and resolve problems in a specific field are achieved and the spirit of challenge, well-roundedness, interdisciplinary nderstanding, and ethicality that will globally contribute to leading next generation advanced science and technology are fostered. Learning autcomes are evaluated by three or more supervising professors Туре Subject Name DP1 DP2 DP3 DP4 DP5 CP1 CP2 СРЗ CP4 CP5 Subject 英語上級A Advanced English A 英語上級B Advanced English B 0 英語上級C Advanced English C 0 英語上級D Advanced English D 0 0 英語上級E Advanced English E 0 0 海外英語研修 I Overseas English Training I 0 海外英語研修 II Overseas English TrainingII 0 国際研修 I International Training I 国際研修 II International Training I I 0 国際研修Ⅲ International Training I II 0 0 0 0 研究留学 I Study Abroad I 0 研究留学 II Study Abroad I I 0 0 0 研究留学Ⅲ Study Abroad I II 国際ワークショップ企画演習 Seminar for International Workshop Planning プロジェクトマネジメント I Project Management I 0 0 0 0 プロジェクトマネジメント II Project ManagementII 0 0 0 0 research skills プロジェクトマネジメントⅢ Project Management I II 0 0 0 0 Subjects for I 情報理工学特別講義 Special Lectures in Information Science and 0 Engineering 情報生命科学特別講義 Special Lectures in Computational Biology 0 バイオサイエンス特別講義 Special Lectures in Biological Science 0 0 バイオナノ理工学特別講義 Special Lectures in Bionanotechnology 0 0 物質理工学特別講義 Special Lectures in Materials Science and 0 0 知能社会創成科学特別講義 Special Lectures in Intelligent Cyber-Physical 0 0 データサイエンス特別講義 Special Lectures in Data Science 0 0 イノベーションマネジメントA Innovation Management A 0 イノベーションマネジメントB Innovation Management B 0 0 キャリアマネジメントA Career Management A 0 0 キャリアマネジメントB Career Management B 0 0 先進ゼミナール Research Status Hearing Subjects for independe 博士論文研究 I Doctoral Research I 0 0 abilities 博士論文研究II Doctoral Research I I 博士論文研究II Doctoral Research I II research 博士論文研究IV Doctoral ResearchIV 0 0 0 0 博士論文研究 V Doctoral Research V 0 0 0 0 0 0 博士論文研究VI Doctoral ResearchVI 0 0 0 0 Number of credits required for completion

Doctoral course