Master's Program Subject and Completion Requirements 2023

Departn	ent of M	ultimedia Engineering		ı		C-11	L 1		T	1	ı
	Classific ation	A completion requirements item name and subject name	Instructor	Unit	1st.Grade		hour a week 2nd.Grade		Unit	Necessary	Upper limit
Code						Fall and Winter Terms	Spring and Summer Terms	Fall and Winter Terms	multiplication method	lower limit units	units
		Total							1+2	30	
		1.Advanced Liberal Arts Educational subjects (selec	et from the attached list "	高度教	養教育科目	リスト(マルチ	メディア工学	専攻)」)		2	
		2.Major Subjects · Advanced Global Literacy Educat	ional subjects						(1)+(2)	28	
		(1)Core Subjects							(1,1)+(1,2)+(1,3)	22	
		(1,1)Core Subjects(Required)							Σ	4	
331625	M	Research on Multimedia Engineering Ia	All Staff	2	6						•
331626	M	Research on Multimedia Engineering Ib	All Staff	2		6					
		(1,2)Core Subjects (Required Elective)							(1,2,1)or(1,2,2)or	4	
		(1,2,1)Required Elective Subjects 1							(1,2,3) Σ	0	
331613	M	Exercises on Multimedia Engineering I	All Staff	2	4					0	
331613	M	Exercises on Multimedia Engineering II	All Staff	2	-	4			_		_
	141	(1,2,2)Required Elective Subjects 2	in Stan	Ť		-			Σ	0	
331527	M	Exercises on Information Security I	Hirozumi Yamaguchi Akira Uchiyama Naoto Yanai (Shingo Okamura)	2	2	2					
331528	М	Exercises on Information Security II	Hirozumi Yamaguchi Akira Uchiyama Naoto Yanai (Shingo Okamura)	2	2	2					
		(1,2,3)Required Elective Subjects 3							Σ	0	
331426	М	Introduction to Exercises on Information Engineering for Interactive Creation A	Taro Maeda Haruo Takemura Yuki Uranishi Susumu Date Yuichi Ito Masahiro Furukawa	4	4	4					
		(1,3)Core Subjects (Elective)							(1,3,1)+(1,3,2)	14	
		(1,3,1)Subjects held at the university							Σ	0	
331601	М	Architecture for Multimedia Systems	Shinji Shimojo Susumu Date Kazuhide Kojima Yoshiyuki Kido	2	2						
331635	М	Big Data Engineering	Makoto Onizuka Chuan Xiao	2	2						
331636	М	Big Data Analytics		2					\		
331610	М	Multimedia Agent	Norihiro Hagita Takahiro Miyashita Satoshi Satake	2		2					
331611	M	Seminar on Multimedia Engineering I	All Staff	2	2				1 \		
331612	G · M	Seminar on Multimedia Engineering II	All Staff	2		2			\		
331012	G · M		All Stall	2					\		
331619	M	Multimedia Data Engineering		2					\		
331620	М	Database Systems	Takahiro Hara Takuya Maekawa Tadashi Nakano Renee Patrizia Shultz Yasue Kishino	2	2						
331621	М	Information Security	Atsuo Inomata Naoto Yanai	2	2						
331622	М	Content Security		2						\	
331637	M	Robot Vision		2]	\	
331638	M	Machine Vision	Yasuyuki Matsushita	2	<u> </u>	2]	`	\
331627	M	Research on Multimedia Engineering IIa	All Staff	2			6]		\
331628	M	Research on Multimedia Engineering IIb	All Staff	2				6]		\
331629	М	Special Lectures on Multimedia Engineering	(Osamu Yonetani) (Osamu Shirakawa) (Yasuhiro Fujiwara) (Hideki Kashioka) (Toshiyasu Sugio) (Katsuyoshi Yamagami) (Masahiro Iwasaki)	2		2					
331639	G·M	Studies on International Integrated Sciences	Leibnitz Kenji Ferdinand Peper	2	2					1	\
		(1,3,2)Subjects held outside the university							MAX{(1,3,2,1),(1, 3,2,2)}	0	
		(1,3,2,1)				ļ				0	
331630	M	Internship on Multimedia Engineering	All Staff(Except Collaborative Division)	2	3	3					

Master's Program Subject and Completion Requirements 2023

Department of Multimedia Engineering School hour a week Unit 1st.Grade 2nd.Grade A completion requirements item name and subject Upper limi Code Instructor Unit multiplication lower limit Spring and Fall and pring and ation Fall and Winter units method units Terms (1,3,2,2)0 All Staff(Except 331633 М Collaborative Research in Multimedia Engineering 4 6 6 Collaborative Division) (2.1)+(2.2)+(2.3)(2)Elective subject (2,1)Inter-disciplinary Subjects 0 Staffs of dept. of Information Systems Engineering 2 331005 Μ Informartion Technology and Ethics 2 Staffs of dept. of Multimedia Engineering (Michio Nakanishi) 331006 $G \cdot M$ English Presentation Skills Bettina Wutzl 2 *2 *2 (Shuichi Mukai) The Foundation of Intellectual Property (Focusing (Tsuyoshi Masuda) &Other 331014 Μ 2 2 on Computer Science) Minoru Eto 2 2 331030 Innovation Management Yuko Sasahara 331135 \mathbf{M} Topics in Frontiers of Mathematics Kouichi Yasui 2 2 Takayuki Wada 2 2 331203 Μ Computational Informatics 2 331204 2 Mathematical Programming Yasunori Akag 2 2 331208 М Advanced Statistical analysis Hiroshi Morita Advanced Introduction to Information Physical Μ All Staff 2 331222 2 2 331224 \mathbf{M} Knowledge Informatics Kenichi Fukui 2 2 331307 Μ Algorithm Design Toshimitsu Masuzawa 2 2 331308 Theory of Distributed System Software Taisuke Izumi 331319 Theory of Software Design Shinji Kusumoto 2 331337 Μ 2 Image Recognition Hajime Nagahara 2 331338 Μ Computational Phogography 2 Tomoya Nakamura Takao Onoye Ittetsu Taniguchi 2 331404 2 Μ Computer-Aided System-on-a-Chip Design Norio Ito Kimihiko Imamura Shohei Yamada Tatsuhiro Tsuchiya 331408 2 2 Concurrent Systems Hiroyuki Nakagawa Haruo Takemura 331409 System Interface Design 2 2 Yuki Uranishi 2 331419 Μ Integrated System Architecture and Synthesis 2 331420 M Dependable Systems Yoshinobu Kawahara 331431 Μ Machine Learning Systems Theory 2 Takuya Konishi Hideyuki Shimonishi 2 331501 Μ Information Network Design 2 Shin-ichi Arakawa 2 331502 Μ Multimedia Network 2 М 331507 Mobile Computing Hirozumi Yamaguchi 331508 2 2 Mobile Communication Protocols Akira Uchiyama 2 331509 Μ Gigabit Network Masayuki Murata 2 331510 High-Speed Network Architecture 2 Μ Tomoki Yoshihisa Hirozumi Yamaguchi 2 331511 Μ Economics of Information Network Akira Uchiyama 2 (Keita Arai) All staff of dept. of 331525 2 Advanced Introduction to Information Networking Information Networking Human Information Processing 2 331709 331720 Bio-network Engineering 2 Naoki Wakamiya 331721 2 2 Basic Theory of Bio-networks Masaki Ogura 331723 Μ **Human Information Engineering** 2 2 Masahiro Frukawa

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All staff of dept. of

Bioinformatic Engineering

331724

Introduction to Bioinformatic Engineering

Master's Program Subject and Completion Requirements 2023

Department of Multimedia Engineering

Dopustus	LOLLO OI IVI	uitimedia Engineering		I	School hour a week						T
Code	Classific ation	A completion requirements item name and subject name	Instructor	Unit	School 1st.Grade		hour a week 2nd.Grade		Unit	Necessary	[
					Spring and Summer Terms	Fall and Winter Terms	Spring and Summer Terms	Fall and Winter Terms	multiplication method	lower limit units	Upper limit units
331732	М	Introduction to Integrated Biological and Information Engineering	Hiroshi Shimizu Fumio Matsuda Yoshihiro Toya Nobuyuki Okahashi Teppei Niide Taisuke Seike	2	2					,	
331031	М	Humanware Fundamentals I M	MAHZOON HAMED Satoru Iwasaki Shin'ichi Arakawa Hiroshi Shimizu	2	2						
331032	M	Humanware Fundamentals II M	Satoru Iwasaki Taisuke Izumi	2		2					
331033	М	Humanware Innovation Creation M	Toshimitsu Masuzawa Shigeru Kondo Hideyuki Takahashi	2		2					
331034	М	Humanware Seminar M	Ittetsu Taniguchi Nobuyuki Okahashi Yoshiki Higo MAHZOON HAMED Hiroshi Shimizu	2	1	1					
331035	M	Humanware Innovation Introduction M	Tatsuhiro Tsuchiya Naoki Wakamiya	2	1	1					\
331036	M	Humanware Communication M	Shin-ichi Arakawa Suguru Shimomura	2			1	1			\
331037	M	Humanware Laboratory Rotation M	Yoshiki Higo	2	1	1					1
331038	М	Humanware Internship (Short Term) M	Takuya Maekawa Naoki Wakamiya Satoru Iwasaki	2	3	3					
331039	М	Humanware Internship (Long Term) M	Takuya Maekawa Naoki Wakamiya Satoru Iwasaki	4	6	6					
		(2,2)Others									
		(2,3)Academic Internship Abroad							MAX{(2,3,1),(2,3, 2),(2,3,3)}	0	
		(2,3,1)								0	
331040	G · M	Humanware Overseas Internship (Short Term) M	Yasuyuki Matsushita Satoru Iwasaki	2	3	3					
		(2,3,2)								0	
331025	G · M	Academic Internship Abroad M(S)	All Staff	4	6	6	(6)				
331041	G · M	Humanware Overseas Internship (Long Term) M	Yasuyuki Matsushita Satoru Iwasaki	4	6	6					
		(2,3,3)								0	
331027	$G \cdot M$	Academic Internship Abroad M(L)	All Staff	8	12	12	(12)				

Note1)

- 1. Σ = Integrate the total number of credits for subjects with a slant line directly below.
- 2. MAX= Integrate only one subject with the maximum number of credits.
- 3. The class with * is held twice a year. However, registration is limited according to the department.
- 4. The class is not offered this year when the instructor's name field is blank.
- 5. Requirements for Completion: Students must receive 30 credits or more from this table, and pass a final evaluation of their master's thesis. In the 30 credits, students must include 22 credits of Major subjects, 1 credit of Advanced Global Literacy Educational subjects, and 2 credits of Advanced Liberal Arts Educational subjects.
 6. M1 students can register Academic Internship AbroadM(S),M(L) from "fall and winter terms" through "spring and summer terms".
 7. "M" in the classification column represents Major subjects, "G" represents Advanced Global Literacy Educational subjects, and "G·M" represents subjects with both Advanced

- 7. "M" in the classification column represents Major subjects, "G" represents Advanced Global Literacy Educational subjects, and "G・M" represents subjects with both Advanced Global Literacy Educational and Major subjects' characteristics.

 8. If you have acquired subjects with both Advanced Global Literacy Educational subjects is already fulfilled, the credits will be included for Major subjects.

 9. With regard to Advanced Liberal Arts Educational subjects and Advanced Global Literacy Educational subjects offered by other graduates schools (or other institutions) in Osaka university, the subjects approved by Department of Multimedia Engineering can be included for Requirements for Completion up to 2 credits for Advanced Liberal Arts Educational subjects.

 For details, please refer the attached "「高度教養教育科目リスト(マルチメディア工学専攻)」「高度国際性涵養教育科目リスト(マルチメディア工学専攻)」

 10. Only Humanware Innovation Program students can register subjects from 331036 to 331041.

Note2)

The requirements to complete "SecCap" course shall be prescribed separately.