Master's Program Subject and Completion Requirements 2019 (Partially revised on October 1, 2019)

Department of Multimedia Engineering

Code	Classification	A completion requirements item name and subject name	Instructor	Unit	1st.Grade Spring and Summer Terms	1st.Grade Fall and Winter Terms	2nd.Grade Spring and Summer Terms	2nd.Grade Fall and Winter Terms	Unit multiplication method	Necessary lower limit units	Necessary lower limit units
		Total							1+2	30	
		1.Advanced Liberal Arts Educational subjects (select 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 Educational subjects							(1)+(2)	28	
		(1)Core Subjects							(1,1)+(1,2)+(1,3)	22	
		(1,1)Core Subjects(Required)							Σ	4	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(1,2,3)	4	4
		(1,2,1)Required Elective Subjects 1							Σ	0	
331613	M	Exercises on Multimedia Engineering I	All Staff	2	4						
331614	M	Exercises on Multimedia Engineering II	All Staff	2		4					
		(1,2,2)Required Elective Subjects 2							Σ	0	
331527	M	Exercises on Information Security I	Morito Matsuoka / Yuya Tarutani / Naoto Yanai / (Shingo Okamura)	2	2		2				
331528	M	Exercises on Information Security II	Morito Matsuoka / Yuya Tarutani / Naoto Yanai / (Shingo Okamura)	2	2		2				
		(1,2,3)Required Elective Subjects 3							Σ	0	
331426	M	Introduction to Exercises on Information Engineering for Interactive Creation A	Taro Maeda / Haruo Takemura / Toru Fujiwara / Hideyuki Ando / Susumu Date / Yuichi Ito	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	M	Architecture for Multimedia Systems	Shinji Shimojo / Susumu Date / Kazuhide Kojima / Yoshiyuki Kido	2	2						
331635	M	Big Data Engineering	Makoto Onizuka / Yuya Sasaki	2	2						
331636	M	Big Data Analytics		2							
331610	M	Multimedia Agent	Norihiro Hagita / Takahiro Miyashita / Satoshi Satake	2		2					
331611	M	Seminar on Multimedia Engineering I	All Staff	2	2						
331612	G・M	Seminar on Multimedia Engineering II	All Staff	2		2					
331619	M	Multimedia Data Engineering		2							
331620	M	Database Systems	Takahiro Hara / Takuya Maekawa / Tomoki Yoshihisa / (Kaname Harumoto)	2	2						
331621	M	Information Security	Toru Fujiwara / Kenji Yasunaga	2	2						
331622	M	Content Security		2							
331637	M	Robot Vision		2							
331638	M	Machine Vision	Yasuyuki Matsushita	2		2					
331627	M	Research on Multimedia Engineering IIa	All Staff	2			6				
331628	M	Research on Multimedia Engineering IIb	All Staff	2				6			
331629	M	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 / Cruz Jason Paul	2	2						
		(1,3,2)Subjects held outside the university							MAX{(1,3,2,1),(1,3,2,2)}	0	
		(1,3,2,1)								0	
331630	M	Internship on Multimedia Engineering	All Staff(Except Collaborative Division)	2	3	3					
		(1,3,2,2)								0	
331633	M	Collaborative Research in Multimedia Engineering	All Staff(Except Collaborative Division)	4	6	6					
		(2)Elective subject							(2,1)+(2,2)+(2,3)		

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		(2,1)Inter-disciplinary Subjects							Σ	0	
331005	M	Informartion Technology and Ethics	Staffs of dept. of Information Systems Engineering Staffs of dept. of Multimedia Engineering (Michio Nakanishi)	2	2						
331006	G・M	English Presentation Skills	Bettina Wutzl	2	*2	*2					
331014	M	The Foundation of Intellectual Property (Focusing on Computer Science)	(Shuuichi Mukai) (Tsuyoshi Masuda) & Other	2		2					
331030	M	Innovation Management	Minoru Eto Yuko Sasahara	2	2						
331135	M	Topics in Frontiers of Mathematics	Susumu Ariki	2		2					
331204	M	Mathematical Programming	Shunji Umetani	2	2						
331222	M	Advanced Introduction to Information Physical Science	All Staff	2	2						
331224	M	Knowledge Informatics	Kenichi Fukui	2		2					
331308	M	Theory of Distributed System Software	Toshimitsu Masuzawa	2		2					
331319	M	Theory of Software Design	Shinji Kusumoto Yoshiki Higo	2	2						
331337	M	Image Recognition		2							
331404	M	Computer-Aided System-on-a-Chip Design	Takao Onoye Ittetsu Taniguchi Norio Ito Kimihiko Imamura Shohei Yamada	2	2						
331405	M	Integrated Systems Engineering	Katsuyoshi Miura	2	2						
331406	M	Image Signal Processing	Katsuyoshi Miura	2		2					
331408	M	Concurrent Systems	Tatsuhiro Tsuchiya Hiroyuki Nakagawa	2	2						
331409	M	System Interface Design	Haruo Takemura	2	2						
331419	M	Integrated System Architecture and Synthesis		2							
331420	M	Dependable Systems		2							
331501	M	Information Network Design	Morito Matsuoka Shin-ichi Arakawa	2	2						
331502	M	Multimedia Network		2							
331507	M	Mobile Computing		2							
331508	M	Mobile Communication Protocols	Teruo Higashino Hirozumi Yamaguchi	2		2					
331509	M	Gigabit Network		2							
331510	M	High-Speed Network Architecture	Masayuki Murata	2	2						
331511	M	Economics of Information Network	Teruo Higashino Hirozumi Yamaguchi (Keita Arai)	2	2						
331709	M	Human Information Processing		2							
331723	M	Human Information Engineering	Taro Maeda Hideyuki Ando	2		2					
331724	M	Introduction to Bioinformatic Engineering	All staff of dept. of Bioinformatic Engineering	2	2						
331732	M	Introduction to Integrated Biological and Information Engineering	Hiroshi Shimizu Fumio Matsuda Yoshihiro Toya Nobuyuki Okahashi	2	2						
331031	M	Humanware Fundamentals I M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	2						
331032	M	Humanware Fundamentals II M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2		2					
331033	M	Humanware Innovation Creation M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2		2					
331034	M	Humanware Seminar M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	1	1					
331035	M	Humanware Innovation Introduction M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	1	1					
331036	M	Humanware Communication M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2			1	1			

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Department of Multimedia Engineering

Code	Classification	A completion requirements item name and subject name	Instructor	Unit	School hour a week 1st.Grade Spring and Summer Terms	1st.Grade Fall and Winter Terms	2nd.Grade Spring and Summer Terms	2nd.Grade Fall and Winter Terms	Unit multiplication method	Necessary lower limit units	Necessary lower limit units
331037	M	Humanware Laboratory Rotation M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	1	1					
331038	M	Internship (Short Term) M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	3	3					
331039	M	Internship (Long Term) M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	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	Overseas Internship (Short Term) M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	2	3	3					
		(2,3,2)									
331025	G・M	Academic Internship Abroad M(S)	All Staff	4	6	6	(※6)				
331041	G・M	Overseas Internship (Long Term) M	Hiroshi Shimizu Naoki Wakamiya Takahiro Hara Kazufumi Hosoda MAHZOON HAMED	4	6	6					
		(2,3,3)								0	
331027	G・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~~ subjects designated by each department, and pass a final evaluation of their master's thesis.
   In the 30 credits, students must include ~~27~~ 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 Liberal Arts Educational and Major subjects' characteristics.
8. If you have acquired subjects with both Advanced Liberal Arts Educational and Major subjects' characteristics, the credits will be included preferentially for Advanced Global Literacy Educational subjects. If 1 credit of 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 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 details, please refer the attached "「高度教養教育科目リスト（マルチメディア専攻）」".
10. Only Humanware Innovation Program students can register subjects from 331037 to 331041.

Note2)
The requirements to complete "SecCap" course shall be prescribed separately.