

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

Department of Information and Physical Sciences

Code	Classification	A completion requirements item name and subject name	Instructor	Unit	School hour a week				Unit multiplication method	Necessary lower limit units	Necessary lower limit units			
					1st.Grade		2nd.Grade							
					Spring and Summer Terms	Fall and Winter Terms	Spring and Summer Terms	Fall and Winter Terms						
		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(情報数理学専攻)」")								2				
		2.Major Subjects・Advanced Global Literacy Educational subjects							(1)+(2)	28				
		(1)Core Subjects							(1,1)+(1,2)	22				
		(1,1)Core Subjects(Required)							Σ	7				
331212	M	Exercises on Information and Physical Sciences I	All Staff	2	2	2								
331213	M	Exercises on Information and Physical Sciences II	All Staff	2	2	2								
331214	M	Research on Information and Physical Sciences I	All Staff	3	4.5	4.5								
		(1,2)Core Subjects(Elective)										Σ	0	
331203	M	Computational Informatics	Takayuki Wada	2		2								
331204	M	Mathematical Programming	Shunji Umetani	2	2									
331225	M	Topics on Nonlinear Phenomena	Hideyuki Suzuki	2		2								
331206	M	Nonlinear Analysis	Yoshitaka Yamamoto	2	2									
331207	M	Applied Information Analysis	Yasumasa Fujisaki	2	2									
331208	M	Advanced Statistical Analysis	Hiroshi Morita	2		2								
331210	G・M	Seminar on Information and Physical Sciences I	All Staff	2	1	1								
331211	G・M	Seminar on Information and Physical Sciences II	All Staff	2	1	1								
331215	M	Research on Information and Physical Sciences II	All Staff	3			4.5	4.5						
331216	M	Special Lectures on Information and Physical Sciences I	(Undecided)	2	2									
331217	M	Special Lectures on Information and Physical Sciences II	(Undecided)	2		2								
331218	M	Information Physics I	Jun Tanida	2	2									
331219	M	Information Physics II	Yusuke Ogura	2		2								
331220	M	Intelligence and Learning	Masayuki Numao	2	2									
331224	M	Knowledge Informatics	Kenichi Fukui	2		2								
331222	M	Advanced Introduction to Information Physical Science	All Staff	2	2									
331223	M	Internship on Information and Physical Sciences	Yasumasa Fujisaki Jun Tanida Hiroshi Morita Masayuki Numao Hideyuki Suzuki	2	3	3								
		(2)Elective subject							(2,1)+(2,2)+(2,3)	0				
		(2,1)Inter-disciplinary Subjects							Σ	0				
331005	M	Information 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									
331130	M	Computational Mathematics I	Daisuke Furihata	2	2									
331131	M	Computational Mathematics II	Tsuyoshi Chawanya	2		2								
331132	M	Applied Mathematics	Takayuki Hibi	2	2									
331135	M	Topics in Frontiers of Mathematics	Susumu Arika	2		2								
331325	M	Fundamentals of Computer Science	All staff of dept. of Computer Science	2	2									
331406	M	Image Signal Processing	Katsuyoshi Miura	2		2								
331525	M	Advanced Introduction to Information Networking	All staff of dept. of Information	2		2								
331621	M	Informartion Security	Toru Fujiwara Kenji Yasunaga	2	2									
331639	G・M	Studies on International Integrated Sciences	Leibnitz Kenji Ferdinand Peper Cruz Jason Paul	2	2									
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								
331702	M	Molecular Bio-information Analysis		2										
331720	M	Bio-network engineering		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									

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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			
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								0	
		(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)				

Note)

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 regards to Advanced Liberal Arts Educational subjects offered by other graduates schools (or other institutions) in Osaka university, the subjects approved by Department of Information and Physical Sciences 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(情報数理学専攻)」".
10. Only Humanware Innovation Program students can register subjects from 331037 to 331041.