

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

Department of Bioinformatic Engineering

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(バイオ情報工学専攻)」")								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	4				
331725	M	Research on Bioinformatic Engineering Ia	All Staff	2	6									
331726	M	Research on Bioinformatic Engineering Ib	All Staff	2		6								
		(1,2)Core Subjects (Elective)										Σ	0	
331003	M	Special Lectures on Information Science & Technology I	(Nobuyuki Shibano) (Hideharu Nakajima) (Yasue Kishino) (Hiroaki Sugiyama) (Masakazu Ishihata) (Masaya Hirashima) (Hiroshi Ban) (Yasushi Naruse)	2	2									
331004	M	Special Lectures on Information Science & Technology II	(Toshiyuki Kano) (Norihiko Taya)	2		2								
331701	M	Bio-database Engineering	Hideo Matsuda	2	2									
331702	M	Molecular Bio-information Analysis		2										
331703	M	Metabolic Information Engineering	Hiroshi Shimizu	2	2									
331707	M	Advanced Biosystems	Fumio Matsuda Sunami Takeshi	2	2									
331709	M	Human Information Processing		2										
331711	M	Seminar on Bioinformatic Engineering I	All Staff	2	2									
331712	G・M	Seminar on Bioinformatic Engineering II	All Staff	2		2								
331713	M	Exercises on Bioinformatic Engineering I	All Staff	2	4									
331714	M	Exercises on Bioinformatic Engineering II	All Staff	2		4								
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								
331719	M	Bioprocess Engineering		2										
331720	M	Bio-network Engineering		2										
331721	M	Basic Theory of Bio-networks	Naoki Wakamiya	2	2									
331722	M	Advanced Evolutional Systems		2										
331723	M	Human Information Engineering	Taro Maeda Hideyuki Ando	2		2								
331724	M	Introduction to Bioinformatic Engineering	All Staff	2	2									
331732	M	Introduction to Integrated Biological and Information Engineering	Hiroshi Shimizu Fumio Matsuda Yoshihiro Toya Nobuyuki Okahashi	2	2									
331727	M	Research on Bioinformatic Engineering IIa	All Staff	2			6							
331728	M	Research on Bioinformatic Engineering IIb	All Staff	2				6						
331729	M	Internship on Bioinformatic Engineering	All Staff	2	3	3								
		(2)Elective subject							(2,1)+(2,2)+(2,3)	0				
		(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 Arika	2		2								
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								
331208	M	Advanced Statistical Analysis	Hiroshi Morita	2		2								
331222	M	Advenced Introduction to Information Pysicscal Science	All staff of dept. of Information and Physical Sciences	2	2									
331303	M	Parallel Programming	Fumihiko Ino	2	2									
331308	M	Theory of Distributed System Software	Toshimitsu Masuzawa	2		2								

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331325	M	Fundamentals of Computer Science	All staff of dept. of Computer Science	2	2						
331404	M	Computer-Aided System-on-a-Chip Design	Takao Onoye Ittetsu Taniguchi Norio Ito Kimihiro Imamura Shohei Yamada	2	2						
331409	M	System Interface Design	Haruo Takemura	2	2						
331502	M	Multimedia Network		2							
331511	M	Economics of Information Network	Teruo Higashino Hirozumi Yamaguchi (Keita Arai)	2	2						
331525	M	Advanced Introduction to Information Networking	All staff of dept. of Information Networking	2		2					
331635	M	Big Data Engineering	Makoto Onizuka Yuya Sasaki	2	2						
331636	M	Big Data Analytics		2							
331621	M	Information Security	Toru Fujiwara Kenji Yasunaga	2	2						
331639	G・M	Studies on International Integrated Sciences	Leibnitz Kenji Ferdinand Peper Cruz Jason Paul	2	2						
331730	M	Seminar on Biomedical Engineering	All staff of dept. of Bioinformatic Engineering	2	2						
331731	M	Exercises on Biomedical Informatics	All staff of dept. of Bioinformatic Engineering	1	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			
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)				

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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)

- Σ= Integrate the total number of credits for subjects with a slant line directly below.
- MAX= Integrate only one subject with the maximum number of credits.
- The class with * is held twice a year. However, registration is limited according to the department.
- The class is not offered this year when the instructor's name field is blank.
- 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.
- M1 students can register Academic Internship AbroadM(S),M(L) from "fall and winter terms" through "spring and summer terms".
- "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.
- 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.
- 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 Bioinformatic 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(バイオ情報工学専攻)」".
- Only Humanware Innovation Program students can register subjects from 331037 to 331041.