

## Division of Mechanical Engineering (Master's Courses)

### English Course of Division of Mechanical Engineering

Group	Code	Subjects	Units per week		Credits	Instructors	Notes
			First semester	Second semester			
		Research Integrity A		1	①	Isao SANTO*	Graduate School Common Courses
A	M 101	Advanced Seminar in Mechanical Engineering I	4		②	All professors in Division of Mechanical Engineering	
	M 102	Advanced Seminar in Mechanical Engineering II		4	②		
	M 103	Special Project in Mechanical Engineering I	6		②		
	M 104	Special Project in Mechanical Engineering II		6	②		
B	M 114	Strength of Mechanical Engineering Materials		2	2	Tsutomu UMEDA** Isamu RIKU**	
	M 116	Advanced Manufacturing Engineering		2	2	Hirokazu FUKUDA*	
	M 121	Vibration & Noise Reduction Engineering		2	2	Atsuhiko SHINTANI*	
	M 125	Thermal Energy Engineering		2	2	Kazuhiko SUGA*	
	M 126	Combustion Phenomena		2	2	Daisuke SEGAWA*	
	M 127	Advanced Fluid Mechanics		2	2	Hiroyuki TAKAHIRA* Toshiyuki OGASAWARA**	
	M 132	Advanced Topics in Environmental Protection Engineering II		2	2	Masaaki OKUBO*	
	M 133	Advanced Energy Systems Design		2	2	Ryohei YOKOYAMA* Tetsuya WAKUI**	
	M 134	Advanced Precision Engineering		2	2	Hisao KIKUTA* Akio MIZUTANI***	
	M 224	Advanced Topics in Aerospace Engineering		2	2	All faculty members in Department of Aerospace Engineering	
	M 263	Fundamentals of Marine System Engineering	2		2	All professors in Department of Marine-System Engineering	
※	M 326	Advanced Quantum Mechanics	2		2	Takayuki UOZUMI*	
	M 352	Advanced Seminar in Physics and Electronics II		2	2	All professors in Department of Physics and Electronics	
	M 426	Advanced Digital Signal Processing	2		2	Hai LIN*	
	M 464	Advanced Intelligent Information Systems II		2	2	Special lecturers***	
	M 524	Advanced Applied Chemistry III		2	2	All professors in Department of Applied Chemistry	
	M 552	Advanced Chemical Engineering and Process Technology I		2	2	Yan XU**	
	M 571	Advanced Crystal Physics		2	2	Hiroshi NUMAKURA*	
	M 613	Advanced Technology in Radiation Physics		2	2		

#### Remarks

- (1) Students must acquire at least 31 credits which comprise 1 credit for "Research Integrity A", 8 credits for subjects in group A, at least 12 credits for subjects in group B, and remaining credits for subjects stated in remark (2).
- (2) Students may acquire remaining credits by choosing subjects in group B provided by other Departments and Divisions, and common/recommended subjects in group ※.
- (3) The subjects in group B are open for students in other Departments and Divisions.
- (4) The subjects with their credits circled are compulsory.
- (5) This course is for international students and all the lectures are given in English.
- (6) \*Professor, \*\*Associate Professor, \*\*\*Lecturer

## Division of Aerospace and Marine-System Engineering (Master's Courses)

### English Course of Division of Aerospace and Marine-System Engineering

Group	Code	Subjects	Units per week		Credits	Instructors	Notes
			First semester	Second semester			
		Research Integrity A		1	①	Isao SANTO*	Graduate School Common Courses
A	M 201	Advanced Seminar in Aerospace and Marine System Engineering I	4		②	All faculty members in Division of Aerospace and Marine-System Engineering	
	M 202	Advanced Seminar in Aerospace and Marine System Engineering II		4	②		
	M 203	Special Project in Aerospace and Marine System Engineering I	6		②		
	M 204	Special Project in Aerospace and Marine System Engineering II		6	②		
B	M 211	<u>Advanced Gas Dynamics</u>		2	2	Shoji SAKAUE** Takakage ARAI*	
	M 212	<u>Advanced Aerospace Fluid Mechanics</u>	2		2	Takakage ARAI*	
	M 224	Advanced Topics in Aerospace Engineering		2	2	All faculty members in Department of Aerospace Engineering	
	M 251	<u>Advanced Theory in Marine System Planning</u>		2	2	Masakazu ARIMA*	
	M 252	<u>Advanced Theory in Marine Systems Design</u>	2		2	Masakazu ARIMA*	
	M 253	<u>Advanced Theory in Marine Environments</u>	2		2	Naoki NAKATANI*	
	M 254	<u>Advanced Theory in Marine Environment Measurements</u>		2	2	Rei ARAI**	
	M 255	<u>Advanced Theory in Physical Oceanography</u>		2	2	Nobuhiro BABA*	
	M 256	<u>Advanced Theory in Marine Transportation</u>		2	2	Toru KATAYAMA*	
	M 257	<u>Advanced Theory in Dynamics of Floating Bodies</u>	2		2	Yasunori NIHEI**	
	M 258	<u>Advanced Theory in Ship Hydrodynamics</u>	2		2	Nobuhiro BABA* Toru KATAYAMA* Special lecturers***	
	M 259	<u>Advanced Theory in Ship Structural Design</u>	2		2	Special lecturers***	
	M 260	<u>Advanced Theory in Ocean Structure Engineering</u>		2	2	Takashi TSUBOGO**	
	M 263	Fundamentals of Marine System Engineering	2		2	All professors in Department of Marine-System Engineering	
	M 125	Thermal Energy Engineering		2	2	Kazuhiko SUGA*	
※	M 326	Advanced Quantum Mechanics	2		2	Takayuki UOZUMI*	
	M 352	Advanced Seminar in Physics and Electronics II		2	2	All professors in Department of Physics and Electronics	
	M 426	Advanced Digital Signal Processing	2		2	Hai LIN*	
	M 464	Advanced Intelligent Information Systems II		2	2	Special lecturers***	
	M 524	Advanced Applied Chemistry III		2	2	All professors in Department of Applied Chemistry	
	M 552	Advanced Chemical Engineering and Process Technology I		2	2	Yan XU**	
	M 571	Advanced Crystal Physics		2	2	Hiroshi NUMAKURA*	
M 613	Advanced Technology in Radiation Physics		2	2			

#### Remarks

- (1) Students must acquire at least 31 credits which comprise 1 credit for "Research Integrity A", 8 credits for subjects in group A, at least 12 credits for subjects in group B, and remaining credits for subjects stated in remark (2).
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- (3) The subjects in group B are open for students in other Departments and Divisions.
- (4) The subjects with their credits circled are compulsory.
- (5) This course is for international students and all the lectures are given in English.
- (6) \*Professor, \*\*Associate Professor, \*\*\*Lecturer

## Division of Electronics, Mathematics, and Physics (Master's Courses)

### English Course of Division of Electronics, Mathematics, and Physics

Group	Code	Subjects	Units per week		Credits	Instructors	Notes
			First semester	Second semester			
		Research Integrity A		1	①	Isao SANTO*	Graduate School Common Courses
A	M 301	Advanced Seminar in Electronics, Mathematics and Physics I	4		②	All faculty members in Division of Electronics, Mathematics, and Physics	
	M 302	Advanced Seminar in Electronics, Mathematics and Physics II		4	②		
	M 303	Special Project in Electronics, Mathematics and Physics I	6		②		
	M 304	Special Project in Electronics, Mathematics and Physics II		6	②		
B	M 326	Advanced Quantum Mechanics	2		2	Takayuki UOZUMI*	
	M 351	<u>Advanced Seminar in Physics and Electronics I</u>	2		2	Special lecturers***	
	M 361	<u>Photophysics of Organic Materials</u>	2		2	Takashi KOBAYASHI**	
	M 364	<u>Advanced Electron and Ion Beam Technology</u>		2	2	Masaaki YASUDA**	
	M 362	<u>Advanced Laser Engineering</u>		2	2	Koichi OKAMOTO* Kenji WADA**	
	M 363	Advanced Electroceramics	2		2	Takeshi YOSHIMURA**	
	M 352	Advanced Seminar in Physics and Electronics II		2	2	All professors in Department of Physics and Electronics	
※	M 125	Thermal Energy Engineering		2	2	Kazuhiko SUGA*	
	M 224	Advanced Topics in Aerospace Engineering		2	2	All faculty members in Department of Aerospace Engineering	
	M 263	Fundamentals of Marine System Engineering	2		2	All professors in Department of Marine-System Engineering	
	M 426	Advanced Digital Signal Processing	2		2	Hai LIN*	
	M 464	Advanced Intelligent Information Systems II		2	2	Special lecturers***	
	M 524	Advanced Applied Chemistry III		2	2	All professors in Department of Applied Chemistry	
	M 552	Advanced Chemical Engineering and Process Technology I		2	2	Yan XU**	
	M 571	Advanced Crystal Physics		2	2	Hiroshi NUMAKURA*	
	M 613	Advanced Technology in Radiation Physics		2	2		

#### Remarks

- (1) Students must acquire at least 31 credits which comprise 1 credit for "Research Integrity A", 8 credits for subjects in group A, at least 12 credits for subjects in group B, and remaining credits for subjects stated in remark (2).
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- (3) The subjects in group B are open for students in other Departments and Divisions.
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- (6) \*Professor, \*\*Associate Professor, \*\*\*Lecturer

## Division of Electrical Engineering and Information Science (Master's Courses)

### English Course of Division of Electrical Engineering and Information Science

Group	Code	Subjects	Units per week		Credits	Instructors	Notes
			First semester	Second semester			
		Research Integrity A		1	①	Isao SANTO*	Graduate School Common Courses
A	M 401	Advanced Seminar in Electrical Engineering and Information Science I	4		②	All faculty members in Division of Electrical Engineering and Information Science	
	M 402	Advanced Seminar in Electrical Engineering and Information Science II		4	②		
	M 403	Special Project in Electrical Engineering and Information Science I	6		②		
	M 404	Special Project in Electrical Engineering and Information Science II		6	②		
B	M 420	<u>Advanced Communication Network</u>	2		2	Osanori KOYAMA**	
	M 415	<u>Advanced Electrical Control Systems</u>		2	2	Naoyuki HARA**	
	M 426	Advanced Digital Signal Processing	2		2	Hai LIN*	
	M 462	Advanced Computational Intelligence		2	2	Yusuke NOJIMA**	
	M 466	Advanced Intelligent Information Systems I	2		2	All faculty members in Department of Computer Science and Intelligent Systems	
	M 464	Advanced Intelligent Information Systems II		2	2	Special lecturers***	
	M 125	Thermal Energy Engineering		2	2	Kazuhiko SUGA*	
	M 224	Advanced Topics in Aerospace Engineering		2	2	All faculty members in Department of Aerospace Engineering	
	M 352	Advanced Seminar in Physics and Electronics II		2	2	All professors in Department of Physics and Electronics	
	M 524	Advanced Applied Chemistry III		2	2	All professors in Department of Applied Chemistry	
※	M 263	Fundamentals of Marine System Engineering	2		2	All professors in Department of Marine-System Engineering	
	M 326	Advanced Quantum Mechanics	2		2	Takayuki UOZUMI*	
	M 552	Advanced Chemical Engineering and Process Technology I		2	2	Yan XU**	
	M 571	Advanced Crystal Physics		2	2	Hiroshi NUMAKURA*	
	M 613	Advanced Technology in Radiation Physics		2	2		

#### Remarks

- (1) Students must acquire at least 31 credits which comprise 1 credit for "Research Integrity A", 8 credits for subjects in group A, at least 12 credits for subjects in group B, and remaining credits for subjects stated in remark (2).
- (2) Students may acquire remaining credits by choosing subjects in group B provided by other Departments and Divisions, and common/recommended subjects in group ※.
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- (6) \*Professor, \*\*Associate Professor, \*\*\*Lecturer

## Division of Materials Science and Engineering (Master's Courses)

### English Course of Division of Materials Science and Engineering

Group	Code	Subjects	Units per week		Credits	Instructors	Notes
			First semester	Second semester			
		Research Integrity A		1	①	Isao SANTO*	Graduate School Common Courses
A	M 501	Advanced Seminar in Materials Science and Engineering I	4		②	All faculty members in Division of Materials Science and Engineering	
	M 502	Advanced Seminar in Materials Science and Engineering II		4	②		
	M 503	Special Project in Materials Science and Engineering I	6		②		
	M 504	Special Project in Materials Science and Engineering II		6	②		
B	M 513	<u>Advanced Physical Chemistry of Photoreactions</u>		2	2	Masaya MATSUOKA* Masato TAKEUCHI** Yu HORIUCHI**	
	M 514	<u>Advanced Electrochemistry</u>		2	2	Hiroshi INOUE* Eiji HIGUCHI** Masanobu CHIKU**	
	M 520	<u>Advanced Biopolymer Chemistry</u>		2	2	Atsushi HARADA* Eiji YUBA**	
	M 525	<u>Advanced Nanobiochemistry</u>		2	2	Shiho TOKONAMI** Chie KOJIMA**	
	M 522	Advanced Applied Chemistry I	2		2	Special lecturers***	
	M 524	Advanced Applied Chemistry III		2	2	All professors in Department of Applied Chemistry	
	M 552	Advanced Chemical Engineering and Process Technology I		2	2	Yan XU**	
	M 553	Advanced Chemical Engineering and Process Technology II		2	2	Yan XU**	
	M 571	Advanced Crystal Physics		2	2	Hiroshi NUMAKURA*	
	M 574	<u>Advanced Physical Chemistry at High Temperature</u>	2		2	Masaki NARISAWA**	
	M 583	Advanced Materials Science		2	2	All faculty members in Department of Materials Science	
	M 125	Thermal Energy Engineering		2	2	Kazuhiko SUGA*	
	M 352	Advanced Seminar in Physics and Electronics II		2	2	All professors in Department of Physics and Electronics	
	M 464	Advanced Intelligent Information Systems II		2	2	Special lecturers***	
	M 613	Advanced Technology in Radiation Physics		2	2		

#### Remarks

- (1) Students must acquire at least 31 credits which comprise 1 credit for "Research Integrity A", 8 credits for subjects in group A, at least 12 credits for subjects in group B, and remaining credits for subjects stated in remark (2).
- (2) Students may acquire remaining credits by choosing subjects in group B provided by other Departments and Divisions, and common subjects.
- (3) The subjects in group B are open for students in other Departments and Divisions.
- (4) The subjects with their credits circled are compulsory.
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