

Courses List in 2019 (Master Course)  
 Department of Engineering Mechanics and Energy  
 Graduate School of Engineering, Information and Systems, University of Tsukuba

Required Courses

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM011	Seminar in Engineering Mechanics and Energy I	2	2.0	1	Whole year			All faculty member
01CM012	Seminar in Engineering Mechanics and Energy II	2	2.0	2	Whole year			All faculty member
01CM021	Research in Engineering Mechanics and Energy I	3	4.0	1	Whole year			All faculty member
01CM022	Research in Engineering Mechanics and Energy II	3	4.0	2	Whole year			All faculty member

Courses in Structure, Disaster, Reliability Engineering Field

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM101	Advanced Structural Mechanics	1	2.0	1, 2	Autumn-AB	Tue1,2	3B305	D. Isobe, K. Yamamoto
01CM102	Advanced Vibration Analysis	1	2.0	1, 2	Spring-AB	Fri1,2	3B406	G. Shoji, Y. Sakai
01CM111	Advanced Reliability Engineering	1	2.0	1, 2	Spring-AB	Wed5,6	3B406	K. Yamamoto
01CM121	Advanced Earthquake Engineering	1	2.0	1, 2	Spring-AB	Fri3,4	3B406	G. Shoji, Y. Sakai
01CM125	Advanced Composite Structural Engineering	1	2.0	1, 2	Spring-AB	Mon1,2	3B401	T. Kanakubo
01CM127	Structural Design Methodology	1	2.0	1, 2	Autumn-AB	Thu1,2	3B401	A. Yasojima
01CM128	Advanced Geotechnical Engineering	1	2.0	1, 2	Spring-AB	Mon3,4	3A214	T. Matsushima
01CM129	Disaster Information	1	2.0	1, 2	Autumn-AB	Fri1,2	3B304	G. Shoji, Y. Kawamura

Courses in Solid Mechanics, Material Engineering Field

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM201	Advanced Solid Mechanics	1	2.0	1, 2	Spring-AB	Tue3,4	3B302	T. Kameda, A. Matsuda

01CM211	Advanced Computational Mechanics	1	2.0	1, 2	Autumn-AB	Mon3,4	3B303	T. Matsushima, Y. Shintaku
01CM221	Structure Design of Nuclear Plant	1	2.0	1, 2	Autumn-AB	Tue5,6	3B402	A. Matsuda
01CM222	Strength and Fracture of Solids	1	2.0	1, 2	Autumn-AB	Fri1,2	3B406	M. Kawai
01CM223	Micromechanics	1	2.0	1, 2	Spring-AB	Thu5,6	3L207	M. Kawai, T. Matsuda

Courses in Fluid, Environmental Engineering Field

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM301	Advanced Fluid Mechanics 1	1	2.0	1, 2	Spring-AB	Thu1,2	3B303	S. Takewaka, N. Shirakawa
01CM302	Advanced Fluid Mechanics 2	1	2.0	1, 2	Autumn-AB	Thu4,5	3B302	N. Shirakawa, H. Kyotoh
01CM311	Advanced Dynamics of Compressible Flow	1	2.0	1, 2	Autumn-AB	Wed5,6	3B303	S. Yokota
01CM312	Computational Fluid Dynamics	1	2.0	1, 2	Autumn-AB	Fri3,4	3B402	Y. Abe, S. Tanaka
01CM323	Environmental Fluid Engineering	1	2.0	1, 2	Spring-AB	Fri5,6	3B302	N. Shirakawa, M. Denda, H. Kyotoh, S. Takewaka

Courses in Thermo-Fluid, Energy Engineering Field

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM401	Energy System Engineering	1	2.0	1 • 2	Spring-AB	Tue1,2	3B303	K. Okajima, M. Ishida
01CM403	Engineering of Electromagnetic Energy	1	2.0	1, 2	Autumn-AB	Fri1,2	3B302	T. Fujino, T. Takahashi
01CM411	Transport Phenomena	1	2.0	1, 2	Spring-AB	Fri1,2	3B302	M. Nishioka
01CM412	Thermo-Fluids Measurement Techniques	1	2.0	1, 2	Spring-AB	Thu3,4	3B303	H. Monji, K. Shimamura
01CM427	Multiphase Flow Engineering	1	2.0	1, 2	Autumn-AB	Wed3,4	3A304	H. Monji, A. Kaneko, T. Kanagawa
01CM428	Advanced Space-Development Technology	1	1.0	1, 2	Autumn-C	Intensive		S. Matsumoto, H. Sugita, T. Mizutani
01CM435	Advanced Space Exploration Engineering Workshop 2019	2	2.0	1, 2	Spring-AB, Autumn-AB	Fri7		T. Kameda

01CM440	Renewable Energy Engineering	2	2.0	1, 2	Autumn-AB	Wed1,2	3B303	H. Aki
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Other Courses

Course number	Course name	Course Type	Number of credits	Application year	Semester	Day	Classroom	Instructor
01CM901	Topics in Engineering Mechanics and Energy I	1	1.0	1・2	Spring-C	Intensive		Y. Hozumi, M. Fukushima
01CM904	Topics in Engineering Mechanics and Energy IV	1	1.0	1, 2	Autumn-B	Intensive		H. Ohashi
01CM905	Topics in Engineering Mechanics and Energy V	1	1.0	1, 2	Autumn-AB	Intensive		H. Yoshida
01CM907	Topics in Engineering Mechanics and Energy VII	1	1.0	1, 2	Summer Vacation	Intensive		S. Sakakida
01CM909	Topics in Engineering Mechanics and Energy IX	1	1.0	1, 2	Autumn-A	Intensive		K. Ichikawa
01CM911	Internship	3	1.0	1, 2	Whole year			S. Takewaka
01CM920	Topics in Engineering Mechanics and Energy X	1	1.0	1, 2	Spring-C	Intensive		Y. Onda J. Takahashi
01ZZ603	Basis and practical training of machine works	0	1.0	1 - 5	Spring-C, Summer Vacation	Intensive		S. Hori H. Monji