

Course #	Course Title	Text/Ref.	Call #	Title	Author / Editor	Publisher	Note
I111E	Algorithms and Data Structures (E)	Text	C42.1/ A	<a href="#">Theory of Algorithms (in Japanese)→アルゴリズム論</a>	T. Asano, K. Wada, T. Masuzawa	Ohm Publishing Co. , 2003	
		Text	C42.1/ U	<a href="#">First Course in Algorithms Through Puzzles</a>	R. Uehara	Springer, 2019	<a href="#">Only available from JAIST network</a> <a href="https://doi.org/10.1007/978-981-13-3188-6">https://doi.org/10.1007/978-981-13-3188-6</a>
I212E	Analysis for Information Science (E)	Ref.	C53.1/ O	<a href="#">Signals and Systems [2nd ed.]</a>	A. Oppenheim, A. Willsky, and S. Nawab	Prentice Hall, 1997	
I213E	Discrete Signal Processing (E)	Ref.	C54.2/ C	<a href="#">Linear system theory and design [International 4th ed.]</a>	Chi-Tsong Chen	Oxford University Press, 2013	
		Ref.	C53.1/ O	<a href="#">Discrete-Time Signal Processing [3rd ed.]</a>	Alan V. Oppenheim and Ronald W. Schafer	Pearson/Prentice-Hall, 2010	
I214E	System Optimization (E)	Ref.	412.6/ G	<a href="#">A Gentle Introduction to Optimization</a>	B. Guenin, J. Könemann, L. Tuncel	Cambridge University Press, 2014	
		Ref.	412.6/ B	<a href="#">Introduction to Linear Optimization</a>	D. Bertsimas and J. N. Tsitsiklis	Athena Scientific, 1997	
I218E	Computer Architecture (E)	Text	C31.3/ P	<a href="#">Computer Organization and Design : The Hardware/Software Interface : MIPS edition [6th ed.]</a>	David A.Patterson and John L.Hennessy	Morgan Kaufmann, 2021	
I219E	Software Design Methodology (E)	Ref.	C42.3/ B	<a href="#">The Unified Modeling Language User Guide [2nd ed.]</a>	G. Booch, et al.	Addison-Wesley, 2005	
		Ref.	C42.3/ R	<a href="#">The Unified Modeling Language Reference Manual [2nd ed.]</a>	J. Rumbaugh, et al.	Addison-Wesley, 2005	
		Ref.	C42.3/ F	<a href="#">UML Distilled : A Brief Guide to the Standard Object Modeling Language [3rd ed.]</a>	M. Fowler	Addison-Wesley, 2004	
		Ref.	C45.2/ D	<a href="#">Design Patterns: Elements of Reusable Object-Oriented Software</a>	E. Gamma, et al.	Addison-Wesley, 1995	
		Ref.	C33.1/ A	<a href="#">The Java Programming Language [4th ed.]</a>	K. Arnold, et al.	Addison-Wesley, 2006	
I235E	Game Informatics (E)	Ref.	C51/ Y	<a href="#">Artificial Intelligence and Games</a>	Georgios N. Yannakakis and Julian Togelius	Springer, 2018	<a href="#">Only available from JAIST network</a> <a href="https://doi.org/10.1007/978-3-319-63519-4">https://doi.org/10.1007/978-3-319-63519-4</a>
		Ref.	C42/ H/ 1	<a href="#">Handbook of Digital Games and Entertainment Technologies (v. 1)</a>	Ryohei Nakatsu, Matthias Rauterberg, Paolo Ciancarini (Eds.)	Springer, 2017	
		Ref.	C42/ H/ 2	<a href="#">Handbook of Digital Games and Entertainment Technologies (v. 2)</a>	Ryohei Nakatsu, Matthias Rauterberg, Paolo Ciancarini (Eds.)	Springer, 2017	
		Ref.	C51/ C	<a href="#">Chips Challenging Champions : Games, Computers and Artificial Intelligence</a>	Jonathan Schaeffer and Jaap van den Herik (Eds.)	Elsevier, 2002	
I238E	Theory of Advanced Algorithms (E)	Ref.	-	Distributed Algorithms 2020	Juho Hirvonen and Jukka Suomela	-	<a href="#">Available on the web</a> <a href="https://iukkasuomela.fi/da2020/">https://iukkasuomela.fi/da2020/</a>
I239E	Machine Learning (E)	Ref.	C53.3/ B	<a href="#">Pattern recognition and machine learning</a>	Christopher M. Bishop	Springer, 2006	
		Ref.	C51.3/ M	<a href="#">Machine Learning: A Probabilistic Perspective (Adaptive Computation and Machine Learning) [4th printing]</a>	Kevin P. Murphy	MIT press, 2012	
		Ref.	C51.3/ G	<a href="#">Deep Learning</a>	Ian Goodfellow and Yoshua Bengio and Aaron Courville	MIT press, 2016	
		Ref.	C51.3/ G	<a href="#">Hands-On Machine Learning with Scikit-Learn ,Keras and Tensorflow [3rd ed.]</a>	Aurélien Géron	O'Reilly, 2022	
I416	Parallel Processing	Ref.	C31.3/ H	<a href="#">Computer Organization and Design : The Hardware/Software Interface [5th ed.]</a>	David A.Patterson and John L.Hennessy	Elsevier, 2014	
		Ref.	C42.4/ P	<a href="#">Parallel Programming with MPI</a>	Peter Pacheco	Morgan Kaufmann,1997	
I432	Theory of Discrete-State Systems	Text	C45.3/ H /	<a href="#">形式的モデル化：離散事象／実時間／ハイブリッドシステムのモデル化と解析</a>	平石邦彦	森北出版, 2019	
		Ref.	C54 / C /	<a href="#">Introduction to Discrete Event Systems</a>	C. G. Cassandras and S. Lafortune	Kluwer Academic, 1999	
		Ref.	C45.2/ C /	<a href="#">Model Checking</a>	E. M. Clarke, Jr., O. Grumberg and D. A. Peled	The MIT Press, 1999	
		Ref.	C61 / A /	<a href="#">Principles of Cyber-Physical Systems</a>	R. Alur	The MIT Press, 2015	
I468	Modeling of Dynamics	Ref.	412.2/ R	<a href="#">Mathematical Methods for Physics and Engineering [3rd ed.]</a>	Ken F. Riley, Mike P. Hobson, Stephen J. Bence	Cambridge University Press, 2006	
		Ref.	M01/ S	<a href="#">The Six Core Theories of Modern Physics</a>	Charles F. Stevens	MIT Press, 1995	
I628E	Information Processing Theory (E)	Ref.	C21.2/ H	<a href="#">Handbook for CTFers</a>	Nu1L Team	Springer, 2022	<a href="#">Only available from JAIST network</a> <a href="https://doi.org/10.1007/978-981-19-0336-6">https://doi.org/10.1007/978-981-19-0336-6</a>
		Ref.	C31.9/ A	<a href="#">Practical binary analysis</a>	Dennis Andriess	No Starch Press, Inc. , 2019	
		Ref.	C21.2/ S	<a href="#">Practical Malware Analysis</a>	Michael Sikorski, Andrew Honig	No Starch Press, 2012	
		Ref.	C21.2/ S	<a href="#">The Art of Computer Virus Research and Defense</a>	Peter Szor	Addison Wesley, 2005	

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		Ref.	C41/ W	<a href="#">The Formal Semantics of Programming Languages</a>	Glynn Winskel	MIT Press, 1993	