

Appendix A: Module Handbook



UNDERGRADUATE PROGRAM OF GEOLOGICAL ENGINEERING
FACULTY OF EARTH SCIENCE AND TECHNOLOGY
INSTITUT TEKNOLOGI BANDUNG

2017

Geology Compulsory Courses 4th Year

Module name:		Management and Economy of Minerals			
Module level, if applicable		4 th Year			
Code, if applicable		GL-4102			
Semester(s) in which the module is taught		First Semester			
Person responsible for the module		Prof. Dr. Ir. Eddy A. Subroto			
Lecturer		Prof. Dr. Ir. Eddy A. Subroto			
Language		Indonesian			
Relation to curriculum		Compulsory course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture and seminars	150	2	Lecture and discussion	Lectures: 2(hour) x 14 (meeting)	28
				Preparation and Follow up 4(hour) x 14 (self-learning)	56
Group projects	150	1	Case studies and report writing	Practical: 1(hour) x 12 (meeting)	12
				Preparation and Follow up: 2(hour) x 12 (self-preparation)	24
Total Workload		120 hours			
Credit points		3 CU			
Requirements according to the examination regulations		Minimum attendance at lectures is 80% (according to ITB regulation). Final score is evaluated based on assignment and group case study reports (20%), mid semester exam (40%), and end semester exam (40%)			
Recommended prerequisites		-			
Related Course		-			
Module objectives/intended learning outcomes		Program learning outcome(s): Knowledge and skill. Students are hoped to have knowledge and skill in creating a self-business idea and have basic intuition about entrepreneurship.			
Content		This course is designed for discussing the principle and basic concept of management and economy of mineral and oil and gas business. Discussion in management will cover knowledge about the development in management theory. For economics, discussion will be directed to the industrial mineral (plus) in Indonesia including oil and gas business, coals, metal and non-metal minerals. Discussion will also cover bank interest concept, cash flow, investment rate of return, depreciation, taxation, inflation and deflation, and estimation.			
Study and examination requirements and forms of examination		Paper test, group paper (proposal) writings, and presentation			
Media employed		Text books, slides (power points), and films			

Reading list	<p>Newman, D.G. (1988) Engineering Economic Analysis. Edisi ketiga, Binarupa Aksara, Jakarta.</p> <p>Gitman, L.J. (2006) Principles of Managerial Finance. Robertson Scientific Edisi kesebelas, Pearson International Edition, Boston, USA.</p>
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Module name:		Geological Law and Regulation			
Module level, if applicable		4 th year			
Code, if applicable		GL4103			
Semester(s) in which the module is taught		7 th Semester			
Person responsible for the module		Prof. Ir. Lambok M. Hutasoit, M.Sc., Ph.D.			
Lecturer		Dr. Rendy Dwi Kartiko, S.T., M.T.; Dr. R. Sukhyar; Dr. Andang Bachtiar; and Zardi Dahlius, M.T.			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Teaching, Discussion, Debate	80	2	Discussion, Debate, Exercise	Lectures: 2 hours x 14 times	28
				Preparation and Follow up 4 hours x 14 times	56
Total Workload		84 Hours			
Credit points		2 Credits			
Requirements according to the examination regulations		Minimum attendance at lectures is 80% (according to ITB regulation). Final score is evaluated based on assignment and presence (20%), mid semester exam (40%), and end semester exam (40%))			
Recommended prerequisites		1. General Hydrogeology (prerequisite) 2. Petroleum Geology (prerequisite) 3. Mineral Deposits (prerequisite)			
Related Course		1. Coal Geology (Co-requisite) 2. Environmental Geology (Co-requisite)			
Module objectives/intended learning outcomes		Students have basic knowledge on laws and regulation related with geology in Indonesia, which will be useful for career development in the country			
Content		<p>Concept of managements systems based on the Constitution which regulates natural resources. This is the basis for regulations on geological natural resources such as mineral deposits, energy, water, and land.</p> <p>Some aspects discussed in this course are:</p> <ol style="list-style-type: none">1. Introduction to Law2. State controlling rights mandated by The Constitution3. Natural resources management system4. Law and Regulation related with ground water resources5. Hydrocarbon (petroleum) Law and Regulation6. Debate related with law and geological issue in Oil and Gas7. Law related with spatial planning and land ownership8. Debate related with land law and spatial planning9. Government perspective on natural resources law11. Mineral industry law and regulation11. Debate related with industry law and regulation12. Renewable energy law and regulation (hydro power, geothermal)13. Environmental law and regulation			

	14. Natural hazard law and regulation
Study and examination requirements and forms of examination	Mid-term, Final term, and Oral test
Media employed	Slide Projector
Reading list	<p>Indonesian regulation and books, such as:</p> <ol style="list-style-type: none"> 1. The Indonesian Constitution 2. Oil and Gas Law (Law No. 22 Year 2001) 3. Conservation and environment management Law (Law No. 32 Year 2009) 4. Disaster management Law (Law No. 24 Year 2007) 5. Spatial planning Law (Law No. 26 Year 2007) 6. Mineral and coal mining Law (Law No. 4 Year 2009) 7. Indonesian mineral committee code (Year 2011) 8. Local government Law (Law No. 23 Year 2014) 9. Geothermal Resources Law (Law No. 21 Year 2014) 10. WH Rodgers, Energy and Natural Resources Law, 1983 11. ADB, Environmental Consideration in Energy Development, 1991 12. Daud Silalahi, Regulations on Water Resources and Environment Management, 2002

Module name:		Environmental Geology			
Module level, if applicable		4 th year			
Code, if applicable		GL 4121			
Semester(s) in which the module is taught		Semester 7			
Person responsible for the module		Dr. Ir. Budi Brahmantyo, M.Sc			
Lecturer		Dr. Ir. Budi Brahmantyo, M.Sc			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Discussion	Attendance time	28
				Preparation and follow up	56
Practical Course	80	1	Report	Attendance time	12
				Preparation and follow up	24
Total workload		120 hours			
Credit points		3 CU			
Requirements according to the examination regulations		Minimum attendance at lectures is 80% (according to ITB regulation). Final score is evaluated based on assignment and practical course report (20%), mid semester exam (40%), and end semester exam (40%).			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		<p>Students are able to:</p> <ol style="list-style-type: none"> 1. Understand the role of geology in the ecosystem and how its role in structuring the built environment and the natural environment. 2. Understand geology as the carrying capacity, constraints and limitations of environmental regulation. 3. Understanding the impact of development and workflow impact analysis. 4. Understand environmental problems derived from aspects of geological resources (rocks, minerals, soil, land, water, energy resources, morphology, geological structure, processes and geological phenomena) and how to handle of the problem. 			
Content		<p>Environmental Geology gives geological knowledge to learn interaction between Earth with its geological aspects (rocks, minerals, soils, waters, energy resources, morphology, geological structures, geological processes and phenomena) and living creature, especially man. It gives how the role of geological resources as potency, constraint and limitation in environmental planning, spatial arrangement and regional development which change our resources. It gives also the impact of geological processes to human live such as geological hazards and disasters, disposal waste and pollution, environmental law and assessment, and ended up by study cases including spatial analyses by using scoring and weighting criteria.</p> <p>Some aspects that will be discussed in this course:</p> <ol style="list-style-type: none"> 1. Earth as an ecosystem 			

	<ol style="list-style-type: none"> 2. Geological elements ((landscape, rock, mineral, soil, water resources) in life system 3. Energy use 4. Water resources problems 5. Geological hazards 6. Geological assessment on area with high pollution and disposal area 7. Environmental law and geological role for environmental assessment
Study and examination requirements and forms of examination	Paper Test
Media employed	Papers, maps, white board, computers, projector.
Reading list	<ol style="list-style-type: none"> 1. Montgomery, C., 1992, Environmental Geology (3rd Ed.), Wm.C. Brown Publ., Dubuque, USA. 2. Howard, A.D., dan I. Remson, 1978, Geology in Environmental Planning, McGraw-Hill Inc., New York. 3. Raharjo, M., 2007, Memahami Amdal, Graha Ilmu, Yogyakarta.

Module name:		Coal Geology			
Module level, if applicable		4 th year			
Code, if applicable		GL 4151			
Semester(s) in which the module is taught		First semester			
Person responsible for the module		Dr. Ir. Dardji Noeradi			
Lecturer		Dr. Ir. Dardji Noeradi			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture and group discussion and presentation	80	2	Lecture and discussion	Lectures: 2 x 14	28
				Preparation and Follow up x 14	456
Total Workload		84 hours			
Credit points		2 CU			
Requirements according to the examination regulations		Minimum attendance at lectures is 80% (according to ITB regulation). Final score is evaluated based on assignment and practical course report (20%), mid semester exam (40%), and end semester exam (40%).			
Recommended prerequisites		1. Sedimentology (prerequisites) 2. Principle of Stratigraphy 3. General Geochemistry 4. Structural Geology 5. Subsurface Geology			
Module objectives/intended learning outcomes		Students are able to understand what is meant by coal. Include the process of occurrence, the environment of precipitation, quality, until processing of coal			
Content		This lecture will discussed about factors that contribute to the occurrence of coal deposits, coal formation, the process from plants to peat until become coal, parameters of coal quality and its qualification, coal exploration methods and its geological model, the classification of coal resource and reserve, coal preparation, and possibilities of coal utilization and its environmental impact. Some aspects that will be discussed in this course: 1. Coal formation 2. Coal depositional environment 3. Coal quality 4. Coal classification 5. Coal exploration 6. Coal preparation and utilization 7. Coal and environmental impact			
Study and examination requirements and forms of examination		Paper Test			
Media employed		Presentation Slides			

Reading list	<ol style="list-style-type: none"> 1. Speight, J.G., 1994, The Chemistry And Technology Of Coal, Marcel Dekker. 2. Peters, W.C., 1978, Exploration Mining and Geology, John Wiley & Sons 3. Stach, E., et al., 1975, Coal Petrology, Gebruder Borntraeger. 4. Diessel, C.F.K., 1992, Coal-Bearing Depositional Systems, Springer-Verlag
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Module name:		Final Project A			
Module level, if applicable		4 th year			
Code, if applicable		GL 4098			
Semester(s) in which the module is taught		Every semester			
Person responsible for the module		Head of Study Program			
Lecturer		-			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Independent project	-	15 hours	Consultation and colloquium	15 x 14	210
Total Workload		210			
Credit points		5 CU			
Requirements according to the examination regulations		Passing minimum 139 CU prior to defense			
Recommended prerequisites		1. Field Geology (Prerequisite)			
Module objectives/intended learning outcomes		Students are able to conduct geological mapping of an area and research topics in accordance with the proposal, prepare a report and present it final project defense.			
Content		<p>Final Project Type A is an activity of writing his thesis on the results of geological mapping of an area with base map scale between 1: 10,000 and 1: 25,000 with minimum map area (50 X 50) cm². The resulting map contains a minimum of three (3) lithologies mapped, excluding alluvial. Besides the discussion about the general geology (geomorphology, stratigraphy, structural geology), students can also suggest topics, especially from the region, for example, stratigraphy/ biostratigraphy, structural analysis, geochemical, petrogenesis, mineralization or any other that may be considered as a scientific contribution. The field research is generally supported by laboratory analysis, such as petrography, micro-paleontology, sedimentology and geochemistry.</p> <p>Final A project must apply field geology methodologies, resulting in a product such as a map of the track, geomorphological map, geological map, a geological cross section along with the stratigraphic column, in the same attachment lab analysis. The final project must be worthy of publication, so that no confidential matters.</p> <p>The final project is complemented by a presentation of the results of his research in a colloquium forum, after the data processing, laboratory, and sectional maps and other diagrams required has been completed.</p> <p>The final project is presented at trial undergraduate exam after the thesis has been completed, after administrative and academic requirements are met.</p>			
Study and examination		Comprehensive test			

requirements and forms of examination	Colloquium Defense
Media employed	Presentation slides, maps, manuscript
Reading list	All related references

Module name:		Final Project B			
Module level, if applicable		4 th year			
Code, if applicable		GL 4099			
Semester(s) in which the module is taught		Every semester			
Person responsible for the module		Head of Study Program			
Lecturer		-			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Independent project	-	9 hours	Consultation and colloquium	9 x 14	126
Total Workload		126			
Credit points		3 CU			
Requirements according to the examination regulations		Passing minimum 141 CU prior to defense			
Recommended prerequisites		1. Field Geology (prerequisites)			
Module objectives/intended learning outcomes		Students are able to conduct geological mapping of an area and research topics in accordance with the proposal, prepare a report and present it final project defense.			
Content		<p>Final Project B is an activity of writing a thesis from the primary data, which can be taken from the field or from a specific activity of an agency that is not confidential. These activities may be related to the field of oil and gas, mining, engineering and the environment.</p> <p>This final project should discuss the geological connection with specific topics that are taken according to the data used. The final project is complemented by a presentation of the results of his research in a colloquium forum, after the data processing, laboratory, and sectional maps and other diagrams required has been completed.</p> <p>Final Project B must implement geological synthesis, resulting in a product in the form of a map of GL. The data used are primary data or raw data that has not been interpreted. The final project must be worthy of publication, so that no confidential matters</p> <p>The final project was presented in the trial exam after the undergraduate thesis completed, with administrative and academic requirements are met.</p>			
Study and examination requirements and forms of examination		Comprehensive test Colloquium Defense			
Media employed		Presentation slides, maps, manuscript			

Reading list	All related references
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Compulsory Courses Organized by Other Faculty or Units

Module name:		General Geophysics			
Module level, if applicable		2 nd year			
Code, if applicable		TG 2211			
Semester(s) in which the module is taught		Every Semester			
Person responsible for the module		Geophysical Engineering Study Program			
Lecturer		Geophysical Engineering Study Program			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture and group discussion and presentation	80	2	Lecture and discussion	Lectures: 2 x 14	28
				Preparation and Follow up 4 x 14	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Practical 20% Mid Semester Exam 35% Final Semester Exam 45%			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		Students able to understand the basic theory and the application of geophysics			
Content		Students are expected to know how to obtain physical parameter and earth interior structures based on geophysical methods.			
Study and examination requirements and forms of examination		Paper test			
Media employed		Power point presentation			
Reading list		Butler, R.F., <i>Paleomagnetism: Magnetic Domains to Geologic Terranes</i> , Blackwell Scientific, 1992. Fowler, C.M.R., <i>The Solid Earth</i> . Cambridge University Press (2nd edition), 2005. Kearey, P., dan F.J. Vine, <i>Global Tectonics</i> . Blackwell Scientific Publications, 1990. Ludman, A., dan N.K. Coch, <i>Physical Geology</i> , McGraw-Hill, Inc., 1982. Plummer, C.C., D. McGeary, dan D.H. Carlson, <i>Physical Geology</i> , McGraw-Hill, Inc., 2001. Skinner, B.J., dan S.C. Porter, <i>The Dynamic Earth : an Introduction to Physical Geology</i> , John Willey & Sons, Inc., 2000. Tachyudin Taib, MI, Diktata Kuliah Geofisika Umum, 2000. Widiyantoro, S., <i>Fisika dan Struktur Interior Bumi</i> , ISBN : 978-979-1241-06-9. Penerbit: Badan Meteorologi dan Geofisika, Jakarta,			

	2007.
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Module name:		Islamic Religion and Ethics			
Module level, if applicable		2 nd year			
Code, if applicable		KU2061			
Semester(s) in which the module is taught		1st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture	Lecture	28
				Preparation and Follow Up	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Minimum attendance 80% (10% of final score) Mid semester exam (30%) Semester exam (30%) Soft skill training (30%)			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		<p>Students believe the truth of Islamic teachings as stated in the holy book of the Qur'an and the Sunnah of the Prophet Muhammad. Having a strong tawhid to Allah.</p> <p>Diligently perform worship, especially the five-time prayer that serves to prevent immorality and can give birth to praiseworthy behaviors such as honest, trustworthy, and responsible.</p> <p>Appearing Islamic noble character, to Allah, to humans and to the environment.</p> <p>Able to maintain the harmony of life among religious people and able to cooperate in the midst of a pluralist society.</p> <p>Able to use Islamic values in the life of society, nation and state.</p> <p>Able to show performance as a khalifah on earth whose activities are beneficial for the people.</p> <p>Able to use Islamic values in the development of science, technology and art.</p>			
Content		<p>(1). The relationship between the natural laws dan religion laws</p> <p>(2). The standing position and the function of human being</p> <p>(3). The holistic of Islam</p> <p>(4). Alqur'an as the first reference of Islam</p> <p>(5). Al-Sunnah as the second of Islam references</p> <p>(6). Ijtihad : the methodology of Islamic justice laws</p> <p>(7).The ethics toward Allah and his misinger</p> <p>(8). The function of ritual</p> <p>(9). The ethics of human relationship</p> <p>(10). The ethic of science, technology and art development</p> <p>(11). The Ethics of politic activities</p> <p>(12). Madany Society/ Civil Society</p>			

	(13). The principles of Islamic banking.
Study and examination requirements and forms of examination	Paper test, Mentoring
Media employed	Power point, student mentoring. (mentoring is field monitoring by religious assistants to know the students' ability to attend religious lectures in reading Alqur'an, Salat and other amaliyah)
Notes	Student must choose according to their religion
Reading list	<ul style="list-style-type: none"> • Quraissy Shihab, Tafsir Al-Misbah: Pesan, Kesan dan Keserasian Alqur'an, Lentera Hati, Ciputat Tangerang, 2002. • Miftah Faridl, Pokok-pokok Ajaran Islam, Pustaka Salman ITB, Bandung, 2000. • Asep Zaenal Ausop, Quranic Character Building: Mewujudkan Muslim yang Berkarakter Qur'ani, Grafindo, Bandung, 2013. • Hamdan Manshur, dkk, Material Instruksional Pendidikan Agama Islam untuk Perguruan Tinggi Umum, Direktorat Pendidikan Tinggi Islam, Depag, 2006. • Munawar Khalil, Kembali kepada Alqur'an dan Sunnah, Bulan Bintang, Jakarta, 1973. • Cecep Alba, Tasawuf dan Tarekat : Dimensi Esoteris Ajaran Islam, Rosda Karya, Bandung, 2012.

Module name:		Protestant and Protestant Ethics			
Module level, if applicable		2 nd year			
Code, if applicable		KU2062			
Semester(s) in which the module is taught		1st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture	Lecture	28
				Preparation and Follow Up	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Attendance minimum 80 % (Assessment requirements) Mid semester exam: 25 % Semester exam: 25 % Retreat : 25 % Assignment : 25 %			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		Students understand and able to realize the basic values of Christian doctrine based on the authority of the truth of God's Word written in the Bible. The students have awareness of nation and state in applying science, technology and art that he master. This is reflected in ethics, good morality, noble and noble and high integrity. Students as alumni can later show their identity based on the teachings of religion that have been studied. They make the noble values of Christianity as the views and lifestyle of their profession. They make the teachings of religion as the foundation of life in behaving in the context of Indonesian society is very diverse in the tribe, language, culture and mindset. Thus they have a spirit of togetherness, keeping the harmony and mentality of builders in the pluralistic Indonesian society.			
Content		Lordship of Christ, The Doctrine of Salvation, Worship and the authority of the Word God, Growing in Christ (Colossians 2:6-7), Faith, God's will and leadership, Trials, Suffering and Victory in Christ, Occult, Character, Ethics, Relationships Pre Marriage, Pornography , Love, Life Purpose.			
Study and examination requirements and forms of examination		Paper test, mentoring, retreat			
Media employed		Mentoring, Retreat, Quite time (Personal worship)			
Notes		Student must choose according to their religion			
Reading list		1. Dr.Dorothy Irene Marx,' Agama dan Etika Protestan, 2000. 2. Dr. J. Verkuyl, 'Etika Kristen, Ras, Bangsa, Gereja dan Negara.			

	3. Billy Graham' Roh Kudus' Kuasa Allah dalam Hidup Anda.
	4. Dr. Charles C. Ryrie, "Teologi Dasar 1, 2010 dan Teologi Dasar 2, 2010.
	5. Les Parrott Ph.D, High-Maintenance, Relationships, 2000.

Module name:		Catholicism and Catholic Ethics			
Module level, if applicable		2 nd year			
Code, if applicable		KU2063			
Semester(s) in which the module is taught		1st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture	Lecture	28
				Preparation and Follow Up	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Assignment (15%), Mentoring/Seminar (25%), Mid Semester Exam (25%) and Semester Exam (35%)			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		<p>Students become religious Indonesian human (Homo Religiosus) who can realize the basic values of Religion and Catholic Ethics in everyday life in a pluralistic society, by applying science, technology, and art mastered, in order to increase human dignity in the spirit of love And truth.</p> <p>Guiding and delivering students to: Mastering the religion and able to make it as a source of values and guidelines for life and the foundation of thinking and behaving in applying the knowledge and profession mastered Be intellectual capital who believe and cautious and noble character. Be 100% Indonesians and 100% Catholics.</p>			
Content		Students get materials on twelve universal values, religion and belief - religiosity, revelation and faith, the ten commandments – guides to human life, Christian morality, safety of the actualization of God's kingdom, the church challenges, the social doctrine of the Catholic Church, important themes in the church social teachings, dialectics of faith and its practices, pluralism and dialogs.			
Study and examination requirements and forms of examination		Paper test, mentoring, seminar presence			
Media employed		Power point, mentoring			
Notes		Student must choose according to their religion			
Reading list		Konferensi Wali Gereja Indonesia, Iman Katolik, Buku Informasi dan Referensi, Yogyakarta: Kanisius, 1996.			
		Hardiwardoyo, Purwa, Al. Dr., Moral dan Masalahnya, Yogyakarta: Kanisius, 1990.			
		Konferensi Wali Gereja Indonesia, Kompendium Katekismus Gereja Katolik,			

Module name:		Hindu Ethics and Religion			
Module level, if applicable		2 nd year			
Code, if applicable		KU2064			
Semester(s) in which the module is taught		1st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture	Lecture	28
				Preparation and Follow Up	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Presence, mid exam, final exam			
Recommended prerequisites		-			
Module objectives/intended learning outcomes		The desired outcome after the student completing this course is: So that they can make themselves as fully human immoral and not be the object of technology, but as subjects. Because the technology products that contain values, culture, morality, work patterns, behavior and production patterns. In order for them to be able to transform the technology by considering many factors, especially the impact that will arise from the product of the technology.			
Content		Students learn materials on socio-technology, Hindu theology, the nature of human beings, Hindu ethics, science, technology and art in the Hindu perspective, religious harmony, the Hindu laws, society, culture as an expression, experiences of Hindu religion, Hindu in political life.			
Study and examination requirements and forms of examination		Paper test, Pura visitation			
Media employed		Field Practicum in Pura and discussion			
Notes		Student must choose according to their religion			
Reading list		<ul style="list-style-type: none"> Pudja, G., Sudharta, Tjokorda Rai. (1977). Manawadharma Sastra (Manu Dharma Sastra). Jakarta: Dirjen Bimas Hindu dan Budha Departemen Agama RI. 			
		<ul style="list-style-type: none"> Pudja, G., Sudharta, Tjokorda Rai. (1977). Manawadharma Sastra (Manu Dharma Sastra). Jakarta: Dirjen Bimas Hindu dan Budha Departemen Agama RI. 			
		<ul style="list-style-type: none"> Drs. Punyatmadja, Ida Bagus Oka. (1984). Pancha Sraddha. Jakarta: Dirjen Bimas Hindu dan Budha, Yayasan Dharma Sarathi 			
		<ul style="list-style-type: none"> Prof. Moehadi. (1986). Materi Pekat Sejarah Indonesia. Jakarta: Tarumika 			
		<ul style="list-style-type: none"> Prof. Mantra, Ida Bagus. (1989). Tata Susila Hindu Dharma. Jakarta: 			

	Dharma Sarathi
	• Drs. Pendit, Nyoman S. M.Ag (1989). Bhagawadgita. Jakarta: Daya Proza Press
	• Drs.Punyatmadja, I B. Oka. (1989). Panchasradha. Jakarta: Yayasan Dharma Sarati
	• Mantik, Agus S. (1992). Upanisad Utama. Jakarta: Yayasan Dharma Sarathi
	• DR. Wiana, I Ketut. (1995). Yajna dan Bhakti Dari Sudut Pandang Hindu. Denpasar: Pustaka Manikgeni
	• DR. Titib, I Made. (1998). Veda Sabda Suci Pedoman Praktis Kehidupan. Surabaya: Paramita
	• Krisna, Tjokorde Raka. (2004). Esensi Nilai Agama Hindu dalam Kebudayaan

Module name:		Buddhist Ethics and Religion			
Module level, if applicable		2 nd year			
Code, if applicable		KU206			
Semester(s) in which the module is taught		1st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture	Lecture	28
				Preparation and Follow Up	56
Total Workload		84			
Credit points		2 CU			
Requirements according to the examination regulations		Attendance 10%, Mid Semester Exam 30%, Semester Exam 35% and Tutorial 25%			
Recommended prerequisites					
Module objectives/intended learning outcomes		<p>After following this course students have:</p> <p>belief in One God, the noble qualities of deity.</p> <ul style="list-style-type: none"> - Values of morality and humanity. - Loyalty to the nation and state and to support world peace - Tolerance towards others in social and academic relationships - Logical thinking, critical and creative. - Honesty and internalization of positive attitudes - Active communication - Entrepreneurial spirit 			
Content		<p>Life of Buddha, historical development of Buddhism in Indonesia, God the Almighty, Nibbana, the sublime nature of deity (Brahma Vihara) and the nature of Evil (Catur Mara), Tipitaka holy book, Truth, Ehipassiko, Kalama Sutta, Saddha Tri Ratna, Buddhist Pancasila, Four Noble Truths, Meditation and Levels of Purity, Sigalovada Sutta, Dasa Raja Dharma, Tilakkhana, Pancakhanda, paticca Samuppada, Punarbhava, Natural Life, Law of Karma</p>			
Study and examination requirements and forms of examination		Paper test			
Media employed		Power point, tutorial			
Notes		Student must choose according to their religion			
Reading list		<ul style="list-style-type: none"> • Sumedha Widyadharma (Maha Pandita Sasanacariya). Agama Buddha dan Perkembangannya di Indonesia. Tangerang : P.C. Mapanbudhi. 1995. • Utomo, B. B. Buddha di Nusantara. Jakarta : Buddhist Education Centre. 2010. • Tipitakadhara Mingun Sayadaw. Riwayat Agung Para Buddha, buku 1. Terjemahan : Anggara, I. Jakarta : GiriMangala publications 			

	<p>dan ehiPassiko foundation. 2009.</p> <ul style="list-style-type: none"> • Tipitakadhara Mingun Sayadaw. Riwayat Agung Para Buddha, buku 2. Terjemahan : Anggara, I. Jakarta : GiriMangala publications dan ehiPassiko foundation. 2009. • Tipitakadhara Mingun Sayadaw. Riwayat Agung Para Buddha, buku 3. Terjemahan : Anggara, I. Jakarta : GiriMangala publications dan ehiPassiko foundation. 2009 : 2407 – 2500. • Abhidhamma 45 jam. Panjika, Jakarta : Tri Sattva Buddhist Centre. 2001. • Samyutta Nikaya (Buku 5). Terjemahan : Anggara, I. Jakarta : DhammaCitta Press. 2010. • Digha Nikaya. Terjemahan : Team Giri Mangala Publication, Team DhammaCitta Press. Jakarta : DhammaCitta Press. 2009. • Upa. Sasanasena Seng Hansen. Ikhtisar Ajaran Buddha. Yogyakarta : Vidyasena Production. 2008. • Sri Dhammananda. Keyakinan Umat Buddha. Terjemahan : Kurniati, I. Jakarta : Yayasan Penerbit Karaniya. 2005. • Ashin Janakabhivamsa. Abhidhamma Sehari-hari. Terjemahan : Jinorasa, A. Jakarta : Yayasan Penerbit Karaniya. 2005. • Cunda J. Supandi. Dhammapada Phali (edisi khusus) : Vidyavardhana Samuha. 2004. • Samyutta Nikaya (Buku 2). Terjemahan : Anggara, I. Jakarta : DhammaCitta Press. 2010. • Digha Nikaya (Khotbah-khotbah panjang Sang Buddha). Terjemahan : Anggara, I. Jakarta : DhammaCita Press. 2009. • Samyutta Nikaya (Buku 1). Terjemahan : Anggara, I. Jakarta : DhammaCitta Press. 2010.
Additional Information	<p>Open discussions and case studies are conducted every week to improve knowledge and understanding. Mentoring activities led by 4 Assistants are also conducted every week to help the understanding of the students.</p>

Module name:		Pancasila and Civic Education			
Module level, if applicable		2 nd year			
Code, if applicable		KU 2071			
Semester(s) in which the module is taught		1 st and 2 nd semester			
Person responsible for the module		Lembaga MKU ITB			
Lecturer		Lembaga MKU ITB			
Language		Indonesian			
Relation to curriculum		Compulsory Course			
Types of teaching and learning	Class Size	Attendance time (hours per week per semester)	Forms of active participation	Workload	
Lecture	80	2	Lecture, presentation and discussion	Lecture	28
				Preparation and Follow Up	56
Total Workload		84 hour			
Credit points		2 CU			
Requirements according to the examination regulations		Assignment: 10% Mid semester exam : 30% Semester exam : 30% Group presentation : 20 %			
Recommended prerequisites					
Module objectives/intended learning outcomes		<p>Students have the ideal of becoming good citizens. Committed on the values of Pancasila in the life of society, nation and state. Has a high sense of nationalism and patriotism. Understand the archipelago in realizing socio-cultural and socio-political order. Motivated to participate in improving law and human rights enforcement. Motivated to contribute to a good, compact and dignified government. Support the creation of a democratic culture. Maintaining the harmony of inter-religious life and being able to work together in a pluralist society.</p>			
Content		<p>(1). Pancasila as the philosophy and basis of the state (2). National identity (3) Politics and strategies (4). Local Region Autonomy (5). Good and clean governance (6). Rights and obligations of citizens (7). Democratic culture (8) Civil Society (9). Rules of law (10). Human rights enforcement (11). Geopolitics (12). Geostrategic</p>			
Study and examination requirements and forms of examination		Paper test, group presentation			
Media employed		Power point			
Reading list		<ul style="list-style-type: none"> Tim Nasional Dosen Pendidikan Kewarganegaraan, Pendidikan Kewarga negaraan : Paradigma Terbaru untuk Mahasiswa, Alfabeta, Bandung, 2010. 			
		<ul style="list-style-type: none"> Ubaidillah dan Abdul Razaq, Pancasila, Demokrasi, HAM dan Masyarakat Madani, Prenada Media Group, Jakarta, 2012. 			
		<ul style="list-style-type: none"> Affan Gaffar, Politik Indonesia: Transisi Menuju Demokrasi, Pustaka Pelajar Offset, Yogyakarta, 2000. 			

	<ul style="list-style-type: none"> • Kaelan, Pendidikan Kewarganegaraan Untuk Mahasiswa, Pustaka Pelajar, 2011.
Additional Information	<p>Pedagogical Strategies and Messages for Teachers: Pedagogical Strategies and Messages for Teachers: KU 2071 Course is a Compulsory Course to be taken by all ITB students. In order for the lecture to draw and run smoothly, lectures should be in the form of discussion, raising the latest issues related to the topic being discussed, so that students are actively involved in understanding the current state of affairs with the state.</p>