GARIS BESAR PROGRAM PENGAJARAN
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

UNIVERSITAS DIPONEGORO
SEMARANG

GARIS BESAR PROGRAM PENGAJARAN
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

GEOLOGI STRUKTUR

UNIVERSITAS DIPONEGORO
SEMARANG

GARIS BESAR PROGRAM PELAJARAN

JUDUL MATA KULIAH : GEOLOGI STRUKTUR

NOMOR KODE/SKS : TKG 114P/ 3

DESKRIPSI SINGKAT : Geologi Struktur membahas tentang bentuk arsitektur kerak bumi, hubungan antar satuan-satuan batuan yang membentuk kerak bumi dan gejala-gejala geologi yang menyebabkan terjadinya perubahan-perubahan bentuk pada batuan.

TIU : Setelah mengikuti mata kuliah ini, diharapkan mahasiswa mampu untuk menjelaskan tentang berbagai struktur geologi dan aplikasi dalam pekerjaan geologi.

No	TIK	Pokok Bahasan	Sub Pokok Bahasan	Estimasi Waktu	Sumber Kepustakaan
1.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat dapat menjelaskan pengertian Geologi Struktur , hubungannya dengan tektonik, struktur geologi , dan tampilan struktur geologi secara geometris, minimal 80	1. Pendahuluan 2. Struktur Geologi	Definisi- definisi Hubungan geologi struktur dengan tektonik Struktur geologi dan tampilannya secara geometris	2 X 50 menit 1 x tatap muka	1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Departemen Teknik Geologi Institut Teknologi, Bandung. 2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 3. Mc.Clay, Ken.,1987, *The Mapping of Geological*

	% benar.				*Structures*, 1st ed., John Wiley & Sons, New York 4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.
2.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat dapat menjelaskan gaya dan hubungannya dengan sifat-sifat batuan, minimal 80 % benar.	Gaya dan Hubungannya dengan sifat-sifat batuan	1. Gaya 2. Tegangan dan regangan batuan (stress and strain) 3. Sifat batuan terhadap gaya 4. Pengertian mengenai sumbu-sumbu regangan, tegangan dan elips tegangan 5. (stress ellipsoid) dalam struktur 6. Teori mengenai pembentukan rekahan	4 X 50 menit 2 x tatap muka	Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Departemen Teknik Geologi Institut Teknologi, Bandung. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press,

			dalam batuan		Cambridge.
3.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat dapat menjelaskan tentang kekar dan klasifikasinya serta aplikasinya dengan pekerjaan geologi, minimal 80 % benar.	Kekar (Joints),vein dan stylolites	1. Pengelompokan kekar 2. Vein dan Stylolites 3. Hubungan kekar terhadap prospeksi minyak 4. Hubungan kekar terhadap eksplorasi air tanah 5. Analisa kekar dalam eksplorasi mineral 6. Aspek-aspek struktur kekar dalam proyek-proyek teknik sipil 7. Kekar dalam masalah pembuatan terowongan	6 X 50 menit 3 x tatap muka	1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Depaertemen Teknik Geologi Institut Teknologi, Bandung. 2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 3. Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York 4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.
4.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat	Sesar (Faults)	1. Pendahuluan 2. Istilah-istliah penting yang berhubungan	4 X 50 menit 2 x tatap	1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Departemen Teknik Geologi Institut

	menjelaskan tentang sesar (faults), klasifikasi dan dasar klasifikasinya serta hubungan sesar dengan aktivitas batuan beku, minimal 80 % benar.		dengan gejala sesar 3. Pengelompokan (klasifikasi) sesar 4. Dasar-dasar klasifikasi sesar 5. Hubungan sesar dengan aktivitas batuan beku	muka	Teknologi, Bandung. 2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 3. Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York 4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.
5.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat dapat menjelaskan lipatan, unsur dan klasifikasinya, minimal 80 % benar.	Lipatan dan gejala perlipatan (Fold and Folding)	1. Pendahuluan 2. Unsur- unsur struktur lipatan 3. Pengelompokan (klasifikasi) lipatan 4. Lipatan dalam aplikasi eksplorasi minyak bumi	6 X 50 menit 3 x tatap muka	1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Departemen Teknik Geologi Institut Teknologi, Bandung. 2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 3. Mc.Clay, Ken.,1987, *The*

					Mapping of Geological Structures, 1st ed., John Wiley & Sons, New York 4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.
6.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat melakukan pemetaan struktur geologi , minimal 80 % benar.	Pemetaan struktur geologi	1. Peralatan pemetaan 2. Proyeksi stereografis 3. Cara Pengukuran struktur 4. Peta lapangan dan foto udara 5. Catatan lapangan 6. Simbol-simbol struktur 7. Orientasi Sampel 8. Gambar lapangan 9. metode-metode pemetaan struktur geologi	4 X 50 menit 2 x tatap muka	1. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 2. Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York 3. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.

7.	Setelah mengikuti kuliah ini mahasiswa Teknik Geologi Semester III dapat menerapkan teori dengan kondisi di lapangan, minimal 80 % benar.	Studi kasus di Lapangan	1. Pengukuran retakan, strike/dip lapisan batuan 2. Identifikasi sesar di lapangan dan pengukurannya 3. Analisis Statistik	2 X 50 menit 1 x tatap muka	1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Depaertemen Teknik Geologi Institut Teknologi, Bandung. 2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi 3. Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York 4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.

GARIS BESAR PROGRAM PENGAJARAN
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

GEOLOGI FISIK

UNIVERSITAS DIPONEGORO
SEMARANG

GARIS BESAR PROGRAM PENGAJARAN(GBPP)

1. Identitas mata kuliah

Judul Mata Kuliah : **GEOLOGI FISIK**
Kode: TKG 105 P, Teori : 2 SKS; Praktikum/tugas: 1 SKS

2. Kedudukan Mata Kuliah: Wajib

a. prasyarat untuk: geomorfologi
b. memerlukan prasyarat dari: tidak ada

3. Deskripsi singkat: silabus

Konsep geologi, batasan geologi dan pengembangannya, struktur lapisan bumi; unsur, mineral, batuan dan jenisnya, bentang alam dan klasifikasinya, proses dan energi yang mempengaruhi perubahan bumi; siklus geologi dan batuan; geokronologi dan stratigrafi; managemen lingkungan fisik bumi.

4. Tujuan Instruksional Umum

Memahami bumi sebagai material fisik, kimia dan biologis; susunannya serta energi yang membentuknya. Mengetahui cara-cara mengeksplorasi dan mengeksploitasi bumi sebagai sumberdaya alam dan lingkungan fisik yang senantiasa berubah; mengetahui konsep dan hukum yang mengatur perubahan bentuk bumi dan materialnya.

5. Referensi*

Flint & Skinner,1984, ***Physical Geology***, John Wiley & Sons,Inc, New York, London.
Longwell & Flint, ***Introduction to Physical Geology***, John Wiley & Sons,Inc, New York, London.
J.A.Katili , ***Geologi sejarah***, Pustaka Ilmu, Jakarta
A.K. Lobeck, ***Geomorphology, An Introduction to the study of landscapes***, Mc graw Hill Book Company,Inc, New york, london.
IAGI,19, ***Sandi Stratigrafi Indonesia***, IAGI, Jakarta
R.W. Van Bemmelen,1970, ***The Geology of Indonesia***, Martinuz Nijhof, Netherland.
Geology Team of Laboratory Staff , ***Geology Work Book***, Cahaya Pers, Semarang.
Soetoto,1996 , ***Geologi Fisik***, Laboratorium Geodinamik Teknik Geologi UGM, Yogyakarta

No.	Tujuan Instruksional Khusus	Pokok Bahasan	Sub pokok bahasan	Estimasi waktu	Sumber Referensi
1	Mempelajari lingkup geologi fisik dan dinamik, batasan dan kaitan dengan ilmu lain	Lingkup materi ilmu kebumian	Batasan Konsep Lingkup materi. Cabang ilmu Hidrosfer,atmosfer,litosfer Biosfer.Teori big bang,kabut, uniformitarianism	1x tatap muka	Lihat Referensi*
2	Mengetahui materi pembentuk bumi dan proses perubah (jenis energi) bumi	Material pembentuk bumi Jenis Energi Tata surya	Jenis material, unsur,mineral, Lapisan bumi, Energi panas, kinetic,gravity,em.kimia, Proses dan perubahannya	1x tatap muka	Lihat Referensi*
3	Mengetahui:mineral, tanah, batuan, unsur dan energi perubahnya	Mineral dan batuan	Jenis mineral, jenis unsur, min.p.bat, proses eksogenik dan endogenik, contoh dilapangan.	1x tatap muka	Lihat Referensi*
4	Mengetahui energi dan proses dan media perubah	Proses, materi dan energi	Siklus geosinklin,siklus geomorfologi, siklus batuan	1x tatap muka	Lihat Referensi*
5	Membedakan jenis materi dan prosesnya	Jenis batuan dan genesa	Batuan beku Batuan sedimen Batuan metamorf Batuan piroklastik	1x tatap muka	Lihat Referensi*
6	Mengenali bentuk lahan dan prosesnya	Klasifikasi Bentuk lahan	Klasifikasi orde 1,2 dan 3. Genesa b.lahan Media air,angin & es, Peta top dan geomorfologi	1x tatap muka	Lihat Referensi*

UJIAN TENGAH SEMESTER (Materi dari pokok bahasan 1-6) 24 OKTOBER 2005					
7	Mengenali struktur geologi	Jenis struktur geologi dan aplikasinya	Jenis struktur geologi Manfaat dan bahayanya	1x tatap muka	Lihat Referensi*
8	Mengenali hidrosfer	Sumberday a air	Air laut dan pantai Air permukaan di darat Air bawah tanah	1x tatap muka	Lihat Referensi*
9	Mengenali lapisan dan fosil	Stratigrafi dan paleontolog i	Formasi, korelasi, pengawetan fosil, tipe lokasi	1x tatap muka	Lihat Referensi*
10	Mengetahui umur bumi	Geokronol ogi	Kisaran umur dan kolom geologi, umur mutlak dan relatif	1x tatap muka	Lihat Referensi*
11	Mengetahui peran Manusia thd bumi	Bahaya geologi, eksploitasi bumi	Jenis bahaya geologi Bumi sebagai sumberdaya	1x tatap muka	Lihat Referensi*
12	Memahami cara mengekplorasi dan eksploitasi bumi dengan seimbang	Manageme n Lingkunga n fisik	Bumi sebagai sistem Hukum keseimbangan Membangun secara lestari	1x tatap muka	Lihat Referensi*

GARIS BESAR PROGRAM PENGAJARAN (GBPP)
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

MIKROPALEONTOLOGI

UNIVERSITAS DIPONEGORO
SEMARANG

GENERAL GUIDELINES OF LECTURE PROGRAM

ENTITLE OF LECTURE : MICROPALEONTOLOGY

CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS

BRIEF DISCRIOTION : Micropaleontology is the study of the microfossils, included foraminifera and nanofossil, and the use of studying the microfossils to determine the biostratigraphy and paleoecology.

GENERAL INSTRUCTIONAL PURPOSE (GIP) : After accomplish this lecture, students can explain and describe fossil microscopically.

LECTURERS : Ir. Hadi Nugroho, Dipl. EGS , MT./ Fahrudin, ST

No.	Particular Instructional Purpose (PIP)	Basic Study	Sub Basic Study	Time (minutes)	References
1	2	3	4	5	6
1	Students could explain definition of micropaleontology, the presence of microfossils in rock and the methods of sampling the rocks contain microfossils.	Introduction	- Definition - Scoupes of micropaleontology - The presence of microfossil in rocks - Methods of sampling	2 x 50 minutes (1 meeting)	1. Bolli, Sanders, and Nielsen, Perch, 1985, *Plankton Stratigraphy*, Cambridge Univ.Press. 2. Haq, B.U, and Bursma, A., 1975, *Introduction to Marine Micropaleontolog,*, Elsevier. 3. Murray, J.W., 1973, *Distribution and Ecology of Living Foraminiferids,* Crane & Russer. 4. Rahardjo, Wartono, 1996, *Diktat Kuliah MikroPaleontologi*, Jurusan Teknik Geologi Fakultas Teknik UGM, Yogyakarta

2	Students could explain the various of microfossils (animals, incertae sedis and plants)	The various of microfossils	- Microfossil of animal kingdom - Microfossil of incertae sedis - Microfossil of plant kingdom	6 x 50 minutes (3 meetings)	1. Bolli, Sanders, and Nielsen, Perch, 1985, *Plankton Stratigraphy*, Cambridge Univ.Press. 2. Haq, B.U, and Bursma, A., 1975, *Introduction to Marine Micropaleontolog,*, Elsevier. 3. Murray, J.W., 1973, *Distribution and Ecology of Living Foraminiferids,* Crane & Russer. 4. Rahardjo, Wartono, 1996, *Diktat Kuliah MikroPaleontologi*, Jurusan Teknik Geologi Fakultas Teknik UGM, Yogyakarta
3	Students could explain about foraminifera (the history of research, the classification, and the paleoecology of foraminifera).	Foraminifera	- General study of foraminifera - The history of foraminifera research - The life of foraminifera - Classification The paleoecology of foraminifera	16 x 50 minutes (8 meetings)	1. Bolli, Sanders, and Nielsen, Perch, 1985, *Plankton Stratigraphy*, Cambridge Univ.Press. 2. Haq, B.U, and Bursma, A., 1975, *Introduction to Marine Micropaleontolog,*, Elsevier. 3. Murray, J.W., 1973, *Distribution and Ecology of Living Foraminiferids,* Crane & Russer. 4. Rahardjo, Wartono, 1996, *Diktat Kuliah MikroPaleontologi*, Jurusan Teknik Geologi Fakultas Teknik UGM, Yogyakarta
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E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENSI

1. Bolli, Sanders, and Nielsen, Perch, 1985, *Plankton Stratigraphy*, Cambridge Univ.Press.
2. Haq, B.U, and Bursma, A., 1975, *Introduction to Marine Micropaleontology,* Elsevier.
3. Murray, J.W., 1973, *Distribution and Ecology of Living Foraminiferids,* Crane & Russer.
4. Rahardjo, Wartono, 1996, *Diktat Kuliah MikroPaleontologi*, Jurusan Teknik Geologi Fakultas Teknik UGM, Yogyakarta
5. Pringgoprawiro, Harsono dan Kapid, Rubiyanto ; 2000, *FORAMINIFERA : Pengenalan Mikrofosil dan Aplikasi Biostratigrafi,* Penerbit ITB, Bandung.
6. Cushman, J.A. , 1959, *Foraminifera, their classification and economic use,* Harvard University Press.
7. Hedley, R.H. and Adams, C.G. , 1978, *Foraminifera,* Academic Press, San Francisco

GARIS BESAR PROGRAM PENGAJARAN (GBPP)
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

PALEONTOLOGI

UNIVERSITAS DIPONEGORO
SEMARANG

GENERAL GUIDELINES OF LECTURE PROGRAM

ENTITLE OF LECTURE : **PALEONTOLOGY**
CODE NUMBER/SKS : **TKG 116P/2 SKS,TASK/PRACTICE : 1 SKS**
BRIEF DISCRIPTION : This lecture discuss paleontology and usage in geology tasks, fossil and usage, learning some animal phylum such as protozoa phylum, porifera phylum, coelenterate phylum, bryozoan phylum, brachiopod phylum, mollusc phylum, arthropod phylum and echinoderm phylum.

GENERAL INSTUCTIONAL PURPOSE (GIP) : After accomplish this lecture, students could explain about paleontology fossil and how to descript it in megascopic.

LECTURERS : **Ir. Hadi Nugroho Dipl. EGS, MT dan Najib, S.T**

REFERENCES

1. Clarkson, E.N.K., 1979, Invertebrate Paleontology and Evolution, George Allen & Unwin, Boston.
2. Corliss, J.o., Forest, J., Key, K.H.L, and Wright, C.W., 1985, International Code of Zoological Nomenclature, Univ. of California Press, Los Angeles.
3. Shrock, R.R., 1953, Principles of Invertebrate Paleontology, 2nd Edition, Mc.Graw Hill, New York
4. Sukandarrumidi, 1999, Diktat Kuliah Paleontologi, Jurusan Teknik Geologi Fakultas Teknik UGM, Yogyakarta
5. Premonowati, Murwanto, H., 1991, Paleontologi Umum, Fakultas Teknik Geologi, UPN Veteran, Yogyakarta

No.	Particular Instructional Purpose (PIP)	Basic Study	Sub Basic Study	Time estimation	Refer - ence(s)
1	2	3	4	5	6
1	Students could explain paleontology explanation, clasify and given name method	Introduction	- Definition - Paleontology scope - Classification and taxonomy - abbreviation, latin terminology and explanation - given name method	1x Course 2 x 50 minutes	1,2,3,4,5
2	Students could explain organism life and its influence factors	Life of organism	- Organism life manner - Sexual organism - Water environment - Ecological factors	1x Course 2 x 50 minutes	1,2,3,4,5
3	Students are able to excuse fossil from formed requirement until its usage	Fossil and its process	- Determination of fossil - Fossil formed requirement - Basic fossil formed - Kind and fossil process - Fossil Usage	1x Course 2 x 50 minutes	1,2
4	Students are able to excuse	Protozoa Phylum	- Protozoa classification - Systematic description	2 x Course	1,2,3,4,5

	protozoa phylum and its clasification		of big foraminifera	4 x 50 minutes	
5	Students could explain porufera phyllum and its claasification	Porifera Phylum	- General characteristic of organism - Porifera phylum classification	2 x Course 4 x 50 minutes	1,2,3,4,5
	MID SEMESTER EXAMINATION (LECTURE 1-7)				
6	Students are able to excuse Coelenterate phylum and its classification	Coelenterate Phylum	- General characteristic of Coelenterate phylum - Robert R. Shrock classification - Moore & Lalicker classification	2 x Course 4 x 50 minutes	1,2,3,4,5
7	Students could explain Brachiopod Phylum and its classification	Brachiopod Phylum	- General characteristic of Brachiopod phylum - Robert R. Shrock classification - Moore & Lalicker classification	2 x Course 4 x 50 minutes	1,2,3,4,5
8	Students could explicate Mollusc Phylum and its classification	Mollusc Phylum	- General characteristic of Mollusc phylum - Mollusc Phylum class and its classification	2 x Course 4 x 50 minutes	1,2,3,4,5
9	Students could explicate relation between stratigraphic and fauna in Sangiran	Case Study : Sangiran Jawa Tengah	- Introduction - Geologic overview - Fauna in Sangiran	1 x Course 2 x 50 minutes	1,2,4,5
	FINAL SEMESTER EXAMINATION				

GARIS BESAR PROGRAM PENGAJARAN (GBPP)
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

METODA GEOLOGI LAPANGAN

UNIVERSITAS DIPONEGORO
SEMARANG

GENERAL GUIDELINES OF LECTURE PROGRAM

ENTITLE OF LECTURE : **FIELD GEOLOGY METHOD**
CODE NUMBER/SKS : **TKG 122P/2 SKS,TASK/PRACTICE : 1 SKS**
BRIEF DISCRIPTION : This lecture discuss observation method, measurement, determining geology indication in the field and how to make field reports.

GENERAL INSTUCTIONAL PURPOSE (GIP) : After accomplish this lecture, students could explain about observation method in the field.

LECTURERS : **Ir. Wahju Krisna Hidajat, MT dan Najib, S.T**

REFERENCES

1. Compton, R.R., 1985, Geology In The Field, John Wiley & Sons, New York.
2. Lahee, P.H.j, 1996, Field Geology, 6th Edition, Mc. Graw Hill Book Company, New York.
3. Tucker, M.E., 1982, The Field Description of Sedimentary Rocks, Halsted Press, a division of John Willey & Sons, New York
4. Thorpe, R.S.,Brown, G.C., The Field Description of Igneous Rocks, Halsted Press, a division of John Willey & Sons, New York

No.	Particular Instructional Purpose (PIP)	Basic Study	Sub Basic Study	Time estimation	Refer - ence(s)
1	2	3	4	5	6
1	Students could explain general geology in the field, geology map and mapping geology, reconnaissance and geology accupation in the field	Introduction	- Scope of geology in the field - mapping geology - reconnaissance - geology accupation in the field	1x Course 2 x 50 minutes	1,2
2	Students could explain use the tool in sampling and recording, loup usage, hammer and	Introducing tools and how use it	- Using tool in sampling and recording - loup usage, hammer and compass of geology	1x Course 2 x 50 minutes	1,2

	compass of geology				
3	Students are able to excuse observation in the field, interpretation, field note, drawing and photograph in the field, dip and strike measurement, lineament measurement, finding fossil and how to take it, taking hand spacement as well	Field Procedure	- observation in the field - interpretation - field note - drawing and photograph in the field - dip and strike measurement - lineament measurement - Finding fossil and how to take it - taking hand spacement as well	1x Course 2 x 50 minutes	1,2
4	Students are able to excuse texture of sedimentary rock, igneous rock and metamorf rock, given name of it	Rock identification in the field	- texture of sedimentary rock, igneous rock and metamorf rock - How to given name of it	1x Course 2 x 50 minutes	1,2,3,4
5	Students could explain pass and compass, rocks contact, rock correlation, Mapping of structural geology and mapping of outcrop	Mapping of rock unit and structure	- pass and compass - rocks contact - rock correlation - mapping of stuctural geology and mapping of outcrop	1x Course 2 x 50 minutes	1,2
6	Students are able	Geology	- Mapping preparation	1x Course	1,2

	to explicate topography map and usage in field interpretation	mapping base on topography map	- Determining stations in the field - Outcrop corelation - Making vertical section	2 x 50 minutes	
MID SEMESTER EXAMINATION (LECTURE 1-6)					
7	Students are able to explain topography form towards geology symptoms	Topography and relation with geology symptoms	- Topography expresses fold structure - Topography forms relate fault structure - Topography forms relate horst, graben and basin structure - inlier and outlier outcome of fault erosion - Topography as evident of fault present - Relation between fault with erosion and topography	2x Course 4 x 50 minutes	1,2
8	Students are able to explain preparness making of stratigraphy section, devide and section description, measurement with jacob stuff, measurement with compass and eyes, method compass and clinometer	Stratigraphic section	- preparness making of stratigraphy section - devide and section description - measurement with jacob stuff - measurement with compass and eyes - method compass and clinometer	2 x Course 4 x 50 minutes	1,2

9	Students are able to explicate map of geology	Map of Geology	- Definition - Pattern, line anf symbol - Rock boundaries - Relation between topography and map of geology - Rock categorizing in geology map - Profil section usage in making of map geology - Map geology explanation - Data needed in map geology	1 x Course 2 x 50 minutes	1,2
10	Students could explain structural geology symptoms in the field	Determination of rock deformation	- Early form of deformation - Determining direction and stress - Acquainting structure in the field	2 x Course 4 x 50 minutes	1,2,3
11	Students could explain the field outcome in report, picture, diagram, report design and format of final report	Making final report	- Making the field outcome in report, - picture, diagram - report design and format of final report	1 x Course 2 x 50 minutes	1,2

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GEOLOGI STRUKTUR

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SEMARANG

GENERAL GUIDELINES OF LECTURE PROGRAM

ENTITLE OF LECTURE : STRUCTURAL GEOLOGY

CODE NUMBER/SKS : TKG 114P/ 2, IN LABORATORY : 1 SKS

BRIEF DISCRIOTION : Structural geology is the study of the architecture of the earth in so far as it is determined by earth movement, and it is closely related to many other branches of geology, and field work the solution of the structural problem is often only one phase of a broader investigation.

GENERAL INSTRUCTIONAL

PURPOSE (GIP) : After accomplish this lecture, students could explain about geological structures and apply in jobs.

LECTURERS : Ir. Wahyu Krisna, MT./ Fahrudin, ST

REFERENCES

1. Asikin, S., 1979, *Dasar- Dasar Geologi Struktur*, Departemen Teknik Geologi Institut Teknologi, Bandung.
2. Billings, M.P., 1982, *Struktural Geology*, 3rd ed., Prentice Hall, New Delhi
3. Mc.Clay, Ken.,1987, *The Mapping of Geological Structures*, 1st ed., John Wiley & Sons, New York
4. Price, N.J., and cosgrove, J.W., 1990, *Analysis of Geological Structures*, Cambridge University Press, Cambridge.

No	Particular Instructional Purpose (PIP)	Basic Study	Sub Basic Study	Time (minutes)	References
1.	Students could explain definition of structural geology, relations structural geology with plate tectonic and geometries of structural.	1. Introduction 2. Geological structures	1. Definitions 2. Relations structural geology with plate tectonic 3. geometries of structural	2 X 50	1,2,3,4
2.	Students could explain force and relations with feature of rocks.	Force and relations with feature of rocks.	1. Force 2. Stress and strain rocks 3. Feature of rocks toward force 4. Strain ellipsoid and principle stress 5. Theory about genesa of frectures in rocks	4 X 50	1,2,3,4
3.	Students could explain about joints, classifications and aplications for jobs.	Joints, veins and stylolites	1. Types of joints 2. Veins and Stylolites 3. Relations of joint with oil prospect. 4. Relations of joint with groundwater explorations. 5. Analysis of joints at minning and civil project. 6. Joints in tunnel problem.	6 X 50	1,2,3,4

4.	Students could explain about faults, classifications and relations faults with igneous rocks.	Faults	1. Definitions 2. Classification and description of faults. 3. Relations faults with igneous rocks.	4 X 50	1,2,3,4
5.	Students could explain about folds, feature and classifications.	Fold and Folding	1. Definitions 2. Fold types 3. Analysis and classification of folds 4. Fold in apply of oil explorations.	6 X 50	1,2,3,4
6.	Students could made mapping of geological structures.	Mapping of geological structures	1. Equipment 2. Stereographic projections 3. How to measure structures 4. The field map and aerial photographs 5. Field notebook 6. Map symbols 7. Methode of mapping of geological structures.	4 X 50	1,2,3,4
7.	Students are able applied theory with field conditions.	Case study in field.	1. Measure frecture, strike/dip 2. Identification fault at filed and measuring. 3. Statistic Analysis.	2 X 50	1,2,3,4

GARIS BESAR PROGRAM PENGAJARAN (GBPP)
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK

GEOFISIKA

UNIVERSITAS DIPONEGORO
SEMARANG

GENERAL GUIDELINES OF LECTURE PROGRAM

SUBJECT TITLE : GEOPHYSICS

CODE NUMBER/ CREDIT POINT : TKG 124P/ 3

BRIEF DESCRPTION : Geophysics focused on the controls of method and data processing about gravitation and magnetic, resistivity and seismic velocity in rocks

General Instructional Purpose (GIP) : After completing this subject, Geological Engineering Students will able to understand about the characteristic of earth that can be developed for natural raw resources exploration activities.

Lectures : Ir. Sudaryo Broto, MT and Thomas Triadi Putranto, ST

No	Particular Instructional Purpose (PIP)	Topic	Sub Topic	Time Estimation	References
1.	After completing this course, geological engineering students can explain about geophysics definitions, relation between geophysics and geology, geophysical methods and its applications in research, with minimal at least 80% correct.	1. Introduction 2. Geophysical exploration methods	1. Geophysical definition 2. Relation between geology and geophysics 3. Varieties of geophysical methods	2 X 50 minutes 1 x course	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., McGraw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and Engineering Geophysics*, Cambridge University Press.

2.	After completing this course, geological engineering students can explain about the energy and it relations with rocks properties, with minimal 80% correct.	Gravitation Method and earth gravitation field.	1. Introduction 2. gravitation energy and gravitation acceleration 3. Gravitation constanta 4. Gravitation potential 5. Application of Newton Law for large dimension mass 6. Gravitation formula 7. Gravitation anomaly 8. Isostasy Theory	4 X 50 minutes 2 x courses	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., McGraw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and Engineering Geophysics*, Cambridge University Press.
3.	After completing this course, geological engineering students can measure gravity value with gravimeter and it applications in geology, with 80% correct	Operational and reduction of gravity data	1. Introduction 2. Relation between Gravimeter with drift correction 3. Gravity Survey Method 4. Reduction and gravity measurement and terrain correction	4 X 50 minutes 2 x courses	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., Mc. Graw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and Engineering Geophysics*,

					Cambridge University Press.
4.	After completing this course, geological engineering students can interpret geological subsurface according to magnetic anomaly data, with 80 % correct.	Geomagnetic Survey	1. Introduction 2. Physical Basic about magnetism 3. Magnetic Data Acquisition 4. Quantitative interpretation of magnetic data	4 X 50 minutes 2 x courses	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., Mc. Graw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and Engineering Geophysics*, Cambridge University Press.
5.	After completing this course, geological engineering students can interpret geological subsurface and its lithology according to their resistivity properties and its applications, with 80 % correct.	Geoelectric Survey	1. Introduction 2. Geoelectric Method 3. Interpretation of Resistivity Data 4. Application of resistivity survey	6 X 50 minutes 3 x courses	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., Mc. Graw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and*

					Engineering Geophysics, Cambridge University Press.
6.	After completing this course, geological engineering students can understand geophysical principles to interpret subsurface condition according to seismic method, with 80 % correct.	Seismic Method and Georadar Introduction	1. Introduction 2. Seismic Velocity in Rocks 3. Seismic of Reflection 4. Seismic of Refraction 5. Georadar	8 X 50 minutes 4 x courses	1. Dobrin & Savit, 1988, *Introduction to Geophysical Prospecting*, 4th Ed., McGraw Hill International Edition, New York. 2. Howell, H.F., 1959, *Introduction to Geophysics*, John Willey and Sons, New York. 3. Sharma, P.V., *Environmental and Engineering Geophysics*, Cambridge University Press.

KURIKULUM
FAKULTAS KEDOKTERAN

UNIVERSITAS DIPONEGORO
SEMARANG
2007

LAMPIRAN : KEPUTUSAN REKTOR UNIVERSITAS DIPONEGORO
Nomor :
Tentang :
KURIKULUM PENDIDIKAN DOKTER
PADA FAKULTAS KEDOKTERAN
UNIVERSITAS DIPONEGORO TAHUN 2007

PROGRAM PENDIDIKAN AKADEMIK

NO	Kode mata kuliah	Mata Kuliah	sks	Semester	
				Gasal	Genap
		Mata Kuliah Pengembangan Kepribadian [1]			
1.	MPK101	Pendidikan Agama	3	X	X
2.	MPK102	Pendidikan Kewarganegaraan	3	X	X
3.	MPK103	Bahasa Indonesia	3	X	X
4.	MPK104	Bahasa Inggris [2]	3	x	X
5.	MBB106	Ilmu Sosial & Budaya Dasar	2	X	X
6.	MSN107	Statistika	0	X	
7.	MWU108	Olah Raga	2	X	
8.	MWU109	Kewirausahaan		X	X
9.	MWU110	Teknologi Informasi	1	X	X
10.	KUO101	Etika & Hukum Kedokteran		X	X
		Mata Kuliah Keilmuan dan Ketrampilan [3]			
1.	KUO102P	Biologi Kedokteran	4	X	
2.	KUO103P	Fisika Kedokteran	3	X	
3.	KUO104P	Kimia Kedokteran	3	X	
4.	KUO105P	Anatomi I	3		X
5.	KUO205P	Anatomi II	3	X	
6.	KUO106P	Histologi I	2		X
7.	KUO206P	Histologi II	2	X	
8.	KUO107P	Fisiologi I	4		X
9.	KUO207P	Fisiologi II	4	X	
10.	KUO108P	Biokimia I	3		X
11.	KUO208P	Biokimia II	3	X	
12.	KUO109P	Mikrobiologi I	3		X
13.	KUO209P	Mikrobiologi II	2	X	
14.	KUO110P	Parasitologi I	2		X
15.	KUO210P	Parasitologi II	3	X	
16.	KUO111P	Patologi Anatomi I	3		X
17.	KUO211P	Patologi Anatomi II	4	X	
18.	KUO112P	Patologi Klinik I	3		X
19.	KUO212P	Patologi Klinik II	3	X	

NO	Kode mata kuliah	Mata Kuliah	sks	Semester	
				Gasal	Genap
20.	KUO113P	Farmakologi dan Terapi I	3		X
21.	KUO213P	Farmakologi dan Terapi II	3	X	
22.	KUO314P	Farmakologi dan Terapi III	2	X	
23.	KUO115	Gizi Kedokteran I	1	X	
24.	KUO215	Gizi Kedokteran II	2	X	X
25	KUO116	Metodologi Penelitian	2	X	X
		Mata Kuliah Keahlian Berkarya [3]			
1	KUO117	Ilmu Penyakit Dalam	4	X	X
2	KUO118	Ilmu Kesehatan Anak	4	X	X
3	KUO119	Ilmu Bedah	4	X	X
4	KUO120	Ilmu Kebidanan & Penyakit Kandungan	4	X	X
5	KUO121	Ilmu Penyakit Syaraf	2	X	X
6	KUO122	Ilmu Kesehatan THT	2	X	X
7	KUO123	Ilmu Penyakit Mata	2	X	X
8	KUO124	Ilmu Kesehatan Jiwa	2	X	X
9	KUO125	Ilmu Penyakit Kulit & Kelamin	2	X	X
10	KUO126	Ilmu Penyakit Gigi & Mulut	2	X	X
11	KUO127	Ilmu Sinar	2	X	X
12	KUO128	Ilmu Anestesi	2	X	X
13	KUO129	Ilmu Kedokteran Forensik	1	X	X
14	KUO130	Keperawatan	4	X	X
15		Mata Kuliah Elektif [4]	2	X	X
16	KUO131P	Pengalaman Belajar Lapangan I	4	X	X
17	KUO132P	Karya Tulis Ilmiah	4	X	X
18	KUO133P	Ketrampilan Klinik I			
		Mata Kuliah Perilaku Berkarya [3]			
1	KUO134	Ilmu Perilaku Kedokteran	1	X	
2	KUO135	Psikologi Kedokteran	1	X	
		Mata Kuliah Berkehidupan Bermasyarakat [3]			
1	KUO136	Ilmu Kesehatan Masyarakat I	3		X
2	KUO236	Ilmu Kesehatan Masyarakat II	2	X	
3	KUO336	Ilmu Kesehatan Masyarakat III	2		X
JUMLAH SKS KESELURUHAN			**150**		

KETERANGAN:

1) Kelompok Mata Kuliah Pengembangan Kepribadian terintegrasi dengan bahan kajian lain yang kontekstual

2) Bahasa Inggris: Selama masa pendidikan mahasiswa mempelajari beberapa topik berbahasa Inggris yang terintegrasi dengan mata kuliah lain. Mahasiswa juga harus mempunyai skor ***Institutional TOEFL*** minimal 400 sebagai syarat lulus Sarjana Kedokteran (S.Ked).

3) Merupakan kelompok mata kuliah untuk mencapai Standar Kompetensi Dokter (Konsil Kedokteran Indonesia, 2006) yang sebagian diinovasi dengan cara integrasi baik horisontal maupun vertikal sesuai dengan anjuran *WFME (World Federation of Medical Education)*, dengan menerapkan *Student Centred Learning* dan strategi *Problem-Based Learning*.

4) **Mata Kuliah Elektif** yang ditawarkan (masing-masing 2 sks) meliputi:

KUO137	Kedokteran Molekuler
KUO138	Rehabilitasi Medik
KUO139	Kedokteran Olah Raga
KUO140	Manajemen Rumah Sakit
KUO141	Pengobatan Tradisional
KUO142	Elektif yang ditawarkan oleh Institusi Pendidikan Luar Negeri
KUO143	Elektif yang ditawarkan oleh Universitas luar negeri

Semarang,
Rektor,

ttd.

Prof. DR. Dr. Susilo Wibowo, M.med.Sc, SpAnd
NIP. 130 881 984

LAMPIRAN : KEPUTUSAN REKTOR UNIVERSITAS DIPONEGORO
Nomor :
Tentang :
KURIKULUM PENDIDIKAN DOKTER
PADA FAKULTAS KEDOKTERAN
UNIVERSITAS DIPONEGORO TAHUN 2007

PROGRAM PENDIDIKAN PROFESI

NO	Kode mata kuliah	Mata Kuliah	sks
		Mata Kuliah Keahlian Berkarya	
1.	KUO233P	Ketrampilan Klinik II	4
2.	KUO414P	Farmakologi dan Terapi IV	1
3.	KUO217P	Ilmu Penyakit Dalam	4
4.	KUO218P	Ilmu Kesehatan Anak	4
5.	KUO219P	Ilmu Bedah	4
6.	KUO220P	Ilmu Kebidanan & Penyakit Kandungan	4
7.	KUO221P	Ilmu Penyakit Syaraf	2
8.	KUO222P	Ilmu Kesehatan THT	2
9.	KUO223P	Ilmu Penyakit Mata	2
10.	KUO224P	Ilmu Kesehatan Jiwa	2
11.	KUO225P	Ilmu Penyakit Kulit & Kelamin	2
12.	KUO226P	Ilmu Penyakit Gigi & Mulut	1
13.	KUO227P	Ilmu Sinar	2
14.	KUO228P	Ilmu Anestesi	2
15.	KUO229P	Ilmu Kedokteran Forensik	2
16.	KUO230P	Pengalaman Belajar Lapangan II [1)]	4
17.	KUO137P	Kepaniteraan Komprehensif [2)]	4
JUMLAH SKS KESELURUHAN			**46**

KETERANGAN:

1) Menjalin kerja sama dengan Universitas Luar Negeri untuk tujuan *research elective* bagi mahasiswa kedokteran asing tingkat akhir.

2) Menjalin kerja sama dengan Universitas Luar Negeri sebagai program elektif mahasiswa kedokteran asing tingkat akhir

Semarang,
Rektor,

ttd.

Prof. DR.Dr. Susilo Wibowo, M.med.Sc, SpAnd
NIP. 130 881 984

APPENDIX: OFICIAL LETTER OF RECTOR OF DIPONEGORO UNIVERSITY
NUMBER :
RE :
CURRICULUM OF MEDICAL DOCTOR EDUCATION
IN THE FACULTY OF MEDICINE DIPONEGORO UNIVERSITY
YEAR 2007

ACADEMIC EDUCATION PROGRAM

NO	Code of discipline	Discipline of science	Number of credit	Semester	
				Odds	Even
		Professional Development [1]			
1.	MPK101	Religion	3	X	X
2.	MPK102	National Reslience	3	X	X
3.	MPK103	Indonesian language	3	X	X
4.	MPK104	English [2]	3	x	X
5.	MBB106	Socio-Cultural Science	3	X	X
6.	MSN107	Statistic	2	X	X
7.	MWU108	Physical Education	0	X	
8.	MWU109	Entrepreuneurship	2	X	X
9.	MWU110	Information Technology		X	X
10.	KUO101	Bioethics & Medical Law	1	X	X
		Scienctific and Skills [3]			
1.	KUO102P	Medical Biology	4	X	
2.	KUO103P	Medical Physic	3	X	
3.	KUO104P	Medical Chemistry	3	X	
4.	KUO105P	Anatomi I	3		X
5.	KUO205P	Anatomi II	3	X	
6.	KUO106P	Histology I	2		X
7.	KUO206P	Histology II	2	X	
8.	KUO107P	Physiology I	4		X
9.	KUO207P	Physiology II	4	X	
10.	KUO108P	Biochemistry I	3		X
11.	KUO208P	Biochemistry II	3	X	
12.	KUO109P	Microbiology I	3		X
13.	KUO209P	Microbiology II	2	X	
14.	KUO110P	Parasitology I	2		X
15.	KUO210P	Parasitology II	3	X	
16.	KUO111P	Histopathology I	3		X
17.	KUO211P	Histopathology II	4	X	
18.	KUO112P	Clinical Pathology I	3		X
19.	KUO212P	Clinical Pathology II	3	X	

NO	Code of discipline	Discipline of science	Number of credit	Semester	
				Odds	Even
20.	KUO113P	Pharmacology and Therapy I	3		X
21.	KUO213P	Pharmacology and Therapy II	3	X	
22.	KUO314P	Pharmacology and Therapy III	2	X	
23.	KUO115	Nutrition I	1	X	
24.	KUO215	Nutrition II	2	X	X
25	KUO116	Research Methodology	2	X	X
		Teaching & Learning in Skill Practices [3]			
1	KUO117	Internal Medicine	4	X	X
2	KUO118	Paediatric	4	X	X
3	KUO119	Surgery	4	X	X
4	KUO120	Obstetri and Gynecology	4	X	X
5	KUO121	Neurology	2	X	X
6	KUO122	Otorhinolaryngology & Head-Neck Surgery	2	X	X
7	KUO123	Ophtalmology	2	X	X
8	KUO124	Psychiatry	2	X	X
9	KUO125	Dermato-Venerology	2	X	X
10	KUO126	Dental & Oral Medicine	2	X	X
11	KUO127	Radiology	2	X	X
12	KUO128	Anesthesiology	2	X	X
13	KUO129	Medical Forensic	2	X	X
14	KUO130	Nurse Science	1	X	X
15		Elective [4]	4	X	X
16	KUO131P	Community-based Education I	2	X	X
17	KUO132P	Thesis	4	X	X
18	KUO133P	Clinical Skills I	4	X	X
		Group of lectures in skill behaviour [3]			
1	KUO134	Behaviour Science	1	X	
2	KUO135	Medical Psychology	1	X	
		Teaching and Learning in Public Health [3]			
1	KUO136	Public Health I	3		X
2	KUO236	Public Health II	2	X	
3	KUO336	Public Health III	2		X
Total number of credits			**150**		

Notes:

1) Sciences in the group of Professional Development are integrated with other contextual sciences

2) English: Basically English has supported for understanding topics of medical sciences. Students should also have ***Institutional TOEFL*** score minimally 400 as a requirement of Medical Bachelor.

3) As the group of sciences to acquire Standard Competencies of Doctor (Indonesian Medical Council, 2006), which are partly innovated by horizontal and vertical integration as suggested by World Federation of Medical Education (WFME), by implementing Student Centred Learning and Problem-Based Learning strategy.

4) **Elective which offered are:** (2 credits for each topic)

KUO137	Molecular Medicine
KUO138	Medical Rehabilitation
KUO139	Sport Medicine
KUO140	Hospital Management
KUO141	Tradisional Treatment
KUO142	Elective that is offered by overseas institution
KUO143	Elective that is offered by overseas institution

Semarang,
Rector,

sign

Prof. DR. Dr. Susilo Wibowo, M.med.Sc, SpAnd
NIP. 130 881 984

APPENDIX : OFICIAL LETTER OF RECTOR OF DIPONEGORO UNIVERSITY
NUMBER :
RE :
CURRICULUM OF MEDICAL DOCTOR EDUCATION
IN THE FACULTY OF MEDICINE DIPONEGORO UNIVERSITY
YEAR 2007

PROFESSION EDUCATION PROGRAM

NO	Code of Science	Sciences	Number of credit
		Teaching & Learning of Skill Practices	
1.	KUO233P	Clinical Skills II	4
2.	KUO414P	Pharmacology and Therapy IV	1
3.	KUO217P	Internal Medicine	4
4.	KUO218P	Paediatric	4
5.	KUO219P	Surgery	4
6.	KUO220P	Obstetri & Gynaecology	4
7.	KUO221P	Neurology	2
8.	KUO222P	Otorhinolaryngology & Head-Neck Surgery	2
9.	KUO223P	Ophtalmology	2
10.	KUO224P	Psychiatry	2
11.	KUO225P	Dermato-Venerology	2
12.	KUO226P	Dental & Oral Medicine	1
13.	KUO227P	Radiology	2
14.	KUO228P	Anesthesiology	2
15.	KUO229P	Forensic Medicine	2
16.	KUO230P	Community-based Education II [1)]	4
17.	KUO137P	Comprehensive clerkship [2)]	4
Total number of credits			**46**

NOTES:

1) Collaboration with overseas Institution for *research elective* of final year medical students.

2) Collaboration with overseas Institution as an elective program of final year medical students

Semarang,
Rector,
sign

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