

**SATUAN ACARA PERKULIAHAAN (SAP)
PROGRAM STUDI TEKNIK GEOLOGI
FAKULTAS TEKNIK**

MIKROPALEONTOLOGI

UPT-PUSTAK-UNDP
No. Daft.: 0234/BA/FT/c1
Tgl. : 27-7-'09

**UNIVERSITAS DIPONEGORO
SEMARANG**

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 12

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the bathymetry and paleoecology from the benthic foraminifera.

B. BASIC STUDY : The Bathymetry and Paleoecology of Benthic Foraminifera

C. SUB BASIC STUDY :

- Biostratigraphy of benthic foraminifera
- The determination of paleoecology from benthic foraminifera

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the biostratigraphy of benthic foraminifera in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Bathymetry zone of Bandy (1967) • Determination of bathymetry and paleoecology from benthic foraminifera. 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 11

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the biostratigraphy of planctonic foraminifera and determinate the age of lithology from planctonic foraminifera.

B. BASIC STUDY : The Biostratigraphy of Planctonic Foraminifera

C. SUB BASIC STUDY :

- Biozonation of planctonic foraminifera
- The determination of geological age from planctonic foraminifera

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the biostratigraphy of planctonic foraminifera in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Biozonation of Blow (1969) • Biozonation of Postuma (1971) • Biozonation of Bolli & Saunders (1985) • Determination of geological age from each biozonations. 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 10

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontologygeological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the classifications of foraminifera.

B. BASIC STUDY : The Classification of Foraminifera

C. SUB BASIC STUDY :

- The non-taxonomist classification of foraminifera

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the classification of foraminifera test in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • The non-taxonomist classification of foraminifera - Planctonic foraminifera - Benthic foraminifera 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

Giving question directly to individual or in post test format

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 9

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontologygeological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the classifications of foraminifera.

B. BASIC STUDY : The Classification of Foraminifera

C. SUB BASIC STUDY :

- The taxonomist classification of foraminifera

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the classification of foraminifera test in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • The taxonomist classification of foraminifera • Subordo Allogromina • Subordo Textulariina • Subordo Miliolina • Subordo Fusulinina • Subordo Rotaliina 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 8

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the morphology of foraminifera test

B. BASIC STUDY : The Morphology of Foraminifera Test

C. SUB BASIC STUDY :

- Septa and suture
- Aperture
- Ornament

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the morphology of foraminifera test in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • The differences between septa and suture, the shape of suture. • The shape, position and amount of aperture • The ornament in foraminifera test (keel, punctate etc) 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 7

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could recognize and describe the foraminifera test

B. BASIC STUDY : Introduction of Foraminifera Test

C. SUB BASIC STUDY :

- The size of foraminifera test
- The composition of foraminifera test
- The shape and arrangement of foraminifera test

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining foraminifera test in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • The size of Foraminifera • The composition of foraminifera test • The shape and arrangement of foraminifera test 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

· Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 6

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain about the life of foraminifera, anatomy and the functions of the organ of foraminifera.

B. BASIC STUDY : Foraminifera

C. SUB BASIC STUDY :

- The life of foraminifera
- The anatomy of foraminifera
- The functions of the organ of foraminifera

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining foraminifera in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • The life of Foraminifera • The anatomy of foraminifera • The functions of the organ of foraminifera 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
TIME : 2 X 50 minutes
COURSE : 5

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontologygeological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain about foraminifera, the taxonomy, the history of foraminifera research.

B. BASIC STUDY : Foraminifera

C. SUB BASIC STUDY :

- General sight of foraminifera
- The taxonomy of foraminifera
- The history of foraminifera research

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining foraminifera in general 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none">• Observing• Giving questions	<ul style="list-style-type: none">• OHP• LCD• White board
Presentation	Explaining : <ul style="list-style-type: none">• Foraminifera• Taxonomy of foraminifera• The history of foraminifera research	<ul style="list-style-type: none">• Observing• Asking and answering, discussions	<ul style="list-style-type: none">• OHP• LCD• White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none">• Observing• Asking and answering	<ul style="list-style-type: none">• OHP• LCD• White board

E. EVALUATION

Giving question directly to individual or in post test format

E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 4

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontologygeological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the microfossils of plant kingdom.

B. BASIC STUDY : Microfossils of Plant Kingdom

C. SUB BASIC STUDY :

- Microfossils of plant kingdom
- The various of plant kingdom
- The characteristics of each plant kingdom
- Paleocology and biostratigraphy of plant kingdom

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the microfossils of plant kingdom 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Microfossils of plant kingdom • The various of Microfossil of plant kingdom • The characteristics of each microfossil of plantkingdom • Paleocology and biostratigraphy of microfossil of plant kingdom 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 3

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain the microfossils of incertae sedis.

B. BASIC STUDY : Microfossils of Incertae sedis

C. SUB BASIC STUDY :

- Microfossils of Incertae sedis
- The various of Incertae sedis
- The characteristics of each Incertae sedis
- Paleoecology and biostratigraphy of Incertae sedis

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the microfossils of Incertae sedis 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Microfossils of Incertae sedis • The various of Microfossil of Incertae sedis • The characteristics of each microfossil of Incertae sedis • Paleoecology and biostratigraphy of microfossil of Incertae sedis 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 2

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

B. BASIC STUDY : The various of Microfossil (Animals, Incertae sedis, Plants)

C. SUB BASIC STUDY :

- Microfossils of Animal kingdom
- The various of Microfossil of animal kingdom
- The characteristics of each microfossil of animal kingdom
- Paleocology and biostratigraphy of microfossil of animal kingdom

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the various of microfossils 2. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Microfossils of Animal kingdom • The various of Microfossil of animal kingdom • The characteristics of each microfossil of animal kingdom • Paleocology and biostratigraphy of microfossil of animal kingdom 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Closing	1. Resume lecture material 2. Post test 3. Giving general description of next lecture	<ul style="list-style-type: none"> • Observing • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

	<p>contain microfossil sampling</p> <ul style="list-style-type: none"> • The methods of sample preparation • The observation and determination of microfossil • The use of microfossil in geology 		
Closing	<ol style="list-style-type: none"> 1. Resume lecture material 2. Post test 3. Giving general description of next lecture 	<ul style="list-style-type: none"> • Observing and • Asking and answering 	<ul style="list-style-type: none"> • OHP • LCD • White board

E. EVALUATION

Giving question directly to individual or in post test format

F. REFERENCES

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

LECTURE PROGRAM UNIT (LPU)

LECTURE : MICROPALAEONTOLOGY
 CODE NUMBER/SKS : TKG 130P/ 2, IN LABORATORY : 1 SKS
 TIME : 2 X 50 minutes
 COURSE : 1

A. PURPOSE

1. GENERAL INSTRUCTIONAL PURPOSE (GIP)

After accomplish this lecture, students could explain about micropaleontology the scopes of micropaleontology geological and the use of micropaleontology in the geological field.

2. PARTICULAR INSTRUCTIONAL PURPOSE (PIP)

Students could explain definition of micropaleontology, the presence of microfossil in rocks, the methods of rock contain microfossil sampling, the observation and determination of microfossil, and the application of microfossil in the geological field.

B. BASIC STUDY : Introduction

C. SUB BASIC STUDY :

- Definition
- The scopes of Micropaleontology
- The presence of microfossils in rocks
- The methods of rock contain microfossil sampling
- The methods of sample preparation
- The observation and determination of microfossil
- The use of microfossil in geology

D. CLASS ACTIVITY

Phase	Study Activity	Student Activity	Media
Introduction	1. Explaining the scope of Micropaleontology 2. Explaining the use of studying Micropaleontology 3. Explaining the competence of GIP and PIP	<ul style="list-style-type: none"> • Observing • Giving questions 	<ul style="list-style-type: none"> • OHP • LCD • White board
Presentation	Explaining : <ul style="list-style-type: none"> • Definition • The scopes of Micropaleontology • The presence of microfossils in rocks • The methods of rock 	<ul style="list-style-type: none"> • Observing • Asking and answering, discussions 	<ul style="list-style-type: none"> • OHP • LCD • White board