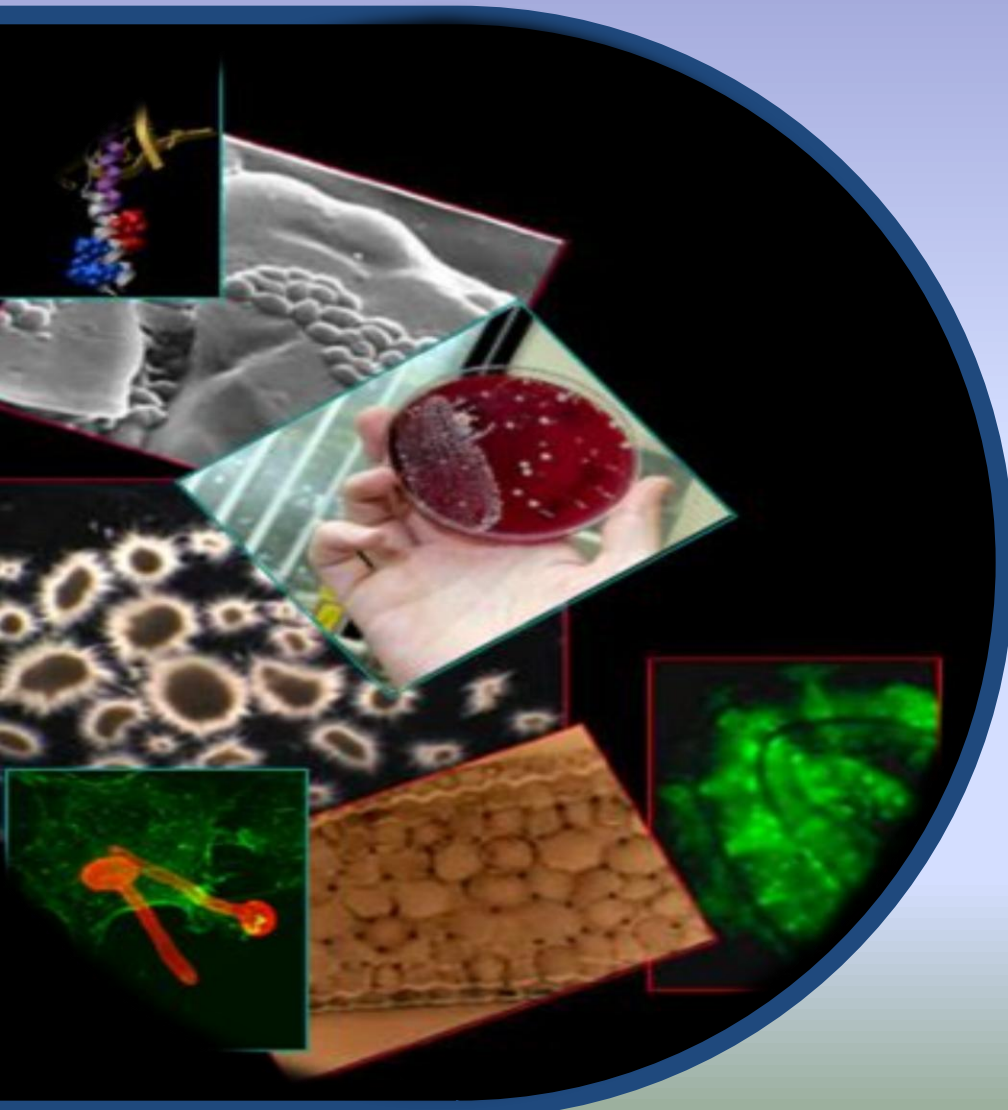


BIOTECHNOLOGY LABORATORY



Joni Kusnadi
Aji Sutrisno
Mochamad Nurcholis
Feronika Heppy S.

Food Science Department
Agricultural Technology Faculty
Brawijaya University

2013

COURSE SYLLABUS

- Credit : 3(0-3)
- Semester : 6
- Course format: Lecture and laboratory work, 3 hours per week, 14 weeks
- Pre-requisite : Food Microbiology, Practical of Food Microbiology, Introduction of Biotechnology
- Number of students : 25 divided into 6 groups

COURSE CONTRACT



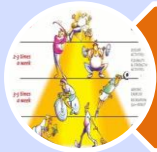
Come on time



Silent your cell phone



Manage your tasks & assignment



Actively participate



Read, Read more and more



Think creatively

Score Grading



Pre lab : 10%



Post test : 10%



Laboratory Activity : 10%



Laboratory Report : 30%



Middle Test : 20%



Final Test : 20%

STUDENT GROUPING

- Students are divided into 9 groups, each group consist of 4 students.
- 4 students in each group will work as a team to conduct laboratory work.
- Each group must share the data among them, equally in the laboratory work.
- Look at laboratory manual about the sequence and schedule of your laboratory work for each laboratory session.

LABORATORY RULES

- **Attendance** in all laboratory work is compulsory. For legitimate excuses, one may attend laboratory session in another group.
- Each student must **use laboratory coats** during laboratory work sessions.
- For advance preparation in laboratory work, each student must **summarize** analytical procedures in the form of flowchart and **complete the pre lab** (work sheets).

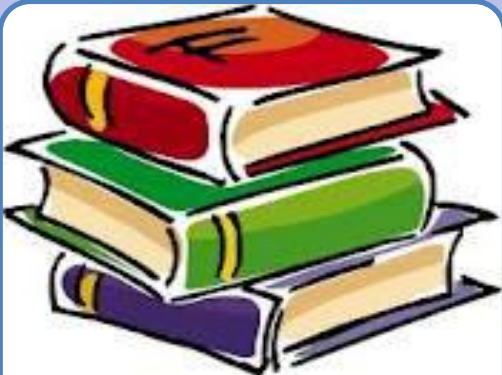
COURSE TOPICS

Week	Topics	Lecturer
1	Course Contract & Introduction	AJS
2	Isolation & Identification of bacteria	MNC
3	Isolation & Enzyme Activity Test	FHS
4	DNA genom & plasmid Isolation	AJS
5	Polymerase Chain Reaction	JKN
6	DNA Electrophoresis	JKN
7	Plasmid Transformation	AJS
Middle Test		

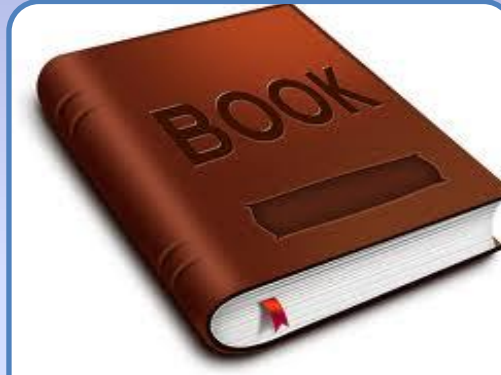
COURSE TOPICS

Week	Topics	Lecturer
8	Lab. work : Isolation & Identification of Bacteria	MNC
9	Lab. work : Isolation & Enzyme Activity Test	FHS
10	Lab. work : DNA Genom Isolation	AJS-MNC
11	Lab. work : DNA Plasmid Isolation	AJS-MNC
12	Lab work : Polymerase Chain Reaction	JKN-FHS
13	Lab. work : DNA Electrophoresis	JKN-FHS
14	Lab. work : Plasmid Transformation	AJS-MNC
Final Test		

REFERENCES



Sambrook &
Russel



Spencer &
de Spencer



Roberts &
Greenwood

REFERENCES

- Sambrook, J. and D.W. Russell. 2001. **Molecular Cloning A Laboratory Manual Vol 1. 3rd ed.** Cold Spring Harbor Laboratory Press: Cold Spring Harbor, New York.
- Spencer, J.F.T and A.L.R de Spencer. 2001. **Food Microbiology Protocols : Methods in Biotechnology.** Humana Press. Totowa, New Jersey.
- Roberts, D and M. Greenwood. 2003. **Practical Food Microbiology, Third Edition.** Blackwell Publishing. Oxford.

T h a n k s