


 FPMIPA UPI	SILABUS	No. Dok. : FPMIPA-SE-SL-18 Revisi : 00 Tanggal : 19 Januari 2011 Halaman : 1 dari 3
	Basic Technology Education SE306 - 2 credits 4th semester IPSE	
Dibuat Oleh :  (Dr. Didi Teguh Chandra)	Diperiksa Oleh :  (Dr. Diana R)	Disetujui Oleh :  (Dr. phil. Ari Widodo)


Description

Basic Technology Education (BTE) is the study about technology as well as influence on the individual, the community, the environment, and the process of culture by acknowledging the potential for the student's individual to develop the reasoning capacity, the solution to the problem, creativity to design and explained it with various equipment and material. Basic Technology Education makes use of the potential for the student, the content of technology and the experience that contribute to the growth and the development of humankind. Therefore technological education become the foundation and the fundamental study for everyone although the aim of education and career of someone. Competence that it is hoped in this program are: knowing and adapting the importance of technology, use the equipment, material, the process and the concepts of technology safely and efficiently, honestly, work hard, creative etc. Nearby same could apply the creative capacity, treats the power or energy that influenced the future, to be wise consumer. The method that used in this lecture is problem solving and the system approach through discussions in the group and class. The assignments for student are making paper about the study of technology as well as the technological product that will be presented in front of the class as well as discussed. The assignment is one of the information that will be evaluated nearby Quiz, Middle and final examination.

Syllabus

1. Identity of Course

- a. Name : Basic Technology Education (BTE)
- b. Code : SE 306
- c. Semester Credit Unit : 2
- d. Grade : 2nd on grade, on 4th emester
- e. Classification : Concentration Competences Courses
- f. Program : IPSE-FPMIPA UPI/S1
- g. Statue : compulsory
- h. Prerequisite : -
- i. Lecturer(s) : 1). Dr.Didi Teguh Chandra, M.Si
2). Drs.Parsaoran Siahaan, M.Pd
3). Arif Hidayat, M.Si.

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2. Goal

After finishing these lectures students are expected to have the insight and knowledge about education and technology as well as the ability and skills sufficient in designing, implementing and managing the education of basic technology.

3. Content

The main learning material of Basic Technology Education (BTE) consisting of basic technical skills, processing various materials, continuation and strengthening of systems, energy conversion, the principles of technology, system technology, electrical installation housing, technology control, planning and applied technology. This material covered in the 6 areas of technology including: energy technology, production technology, transportation and navigation technology, construction technology, biotechnology, and information and communication technology, that were developed from 3 domains are: Technology and the Society, the handling of technology product, Design and Development Technology. All of them was based by 3 pillars namely: material, energy, and information.

4. Learning Activities

Approach : Contextual Teaching and Learning
Methods : problem solving, lecture, discussion
Media : Power Point

5. Assessment

The evaluation instruments consist of assignment, process and technological product, Quiz, Middle and Final Examination and also based on lecturer's policy.

6. Meeting's Agenda

Week	Courses description
Week-1	Introduction, Description and Syllabus
Week-2	Concept Analysis of Basic Technology Education Program I
Week-3	Concept Analysis of Basic Technology Education Program II
Week-4	Concept Analysis of Basic Technology Education Program III
Week-5	Paper Analysis of basic skills of technology
Week-6	Paper Analysis of basic skills of technology " Technology For All America" I
Week-7	Implementation of Basic Technology in Indonesia I
Week-8	Basic Technology Education for RSBI School
Week-8	Products of Technology(Testing the product)
Week-9	Innovation in Basic Technology Education
Week-10	Designing Innovation
Week-11	Mid Test
Week-12	Innovation in BTE and in making design
Week-13	Presentation-Design Innovation I



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Week-14	Presentation-Design Innovation II
Week-15	Product of Design Innovation
Week-16	Final Examination

7. References

- Duffy, T.M. & Jonassen, D. (Eds.), (1992). *Constructivism and the technology of instruction: A conversation*. Hillsdale NJ: Lawrence Erlbaum Associates.
- Joyce B. Et al. (1992), *Models of Teaching*. Boston: Allyn and Bacon
- Jonassen, D., Mayes, T., & McAleese, R. (1993). A manifesto for a constructivist approach to uses of technology in higher education. In T.M. Duffy, J. Lowyck, & D.H. Jonassen (Eds.), *Designing environments for constructive learning* (pp. 231–247). Heidelberg: Springer-Verlag.
- Sund, R.B. and Trowbride, L.W (1973). *Teaching Science by Inquiry in the Secondary School*, (2nd edition). Ohio: Charles E. Merrill Publishing Company.
- Weber, Ruud. (1997). *Basic Technology Education (BTE) Curriculum Indonesia*, Educaplan, Kennisspecialisten, Enschede, The Netherlands,