| | Universitas Negeri Surabaya<br>Faculty of Engineering,<br>Undergraduate Study Program, Fashion Design Education | Document Code |
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## SEMESTER LEARNING PLAN

| Courses | | CODE | Course Family | Credit Weight | | | SEMESTER | Compilation Date |
|---|---|---|---|---|---|---|---|---|
| Textile Science | | 8321202047 | Design & Textiles | T=2 | P=0 | ECTS=3.18 | 2 | July 17, 2024 |
| AUTHORIZATION | | SP Developer | | Course Cluster Coordinator | | | Study Program Coordinator | |
| | | Ma'rifatun Nashikhah, SPd., M.Pd. | | Inty Nahari, S.Pd., M.Ds. | | | Imami Arum Tri Rahayu, S.Pd., M.Pd. | |

| Learning model | Case Studies |
|---|---|

| Program Learning Outcomes (PLO) | **PLO study program that is charged to the course** | |
|---|---|---|
| | PLO-5 | Have a professional attitude as an educator and practitioner in the field of fashion design which includes discipline, honesty, responsibility and cooperation. |
| | PLO-7 | Skilled in designing teaching tools and applying them in learning in the field of fashion design |
| | PLO-10 | Skilled in designing, carrying out research, analyzing and implementing research results in the field of fashion education and fashion skills competency |
| | **Program Objectives (PO)** | |
| | PO - 1 | Students have knowledge and understanding of Textile Science concepts by utilizing learning resources and ICT |
| | PO - 2 | Students have the ability to apply Textile Science in selecting materials for making clothing and various types of fabric construction |
| | PO - 3 | Students are able to analyze clothing making materials and practice making simple fabric constructions |
| | PO - 4 | Students have a responsible attitude in their own work and can be given responsibility for achieving work results in accordance with assessment standards |
| | **PLO-PO Matrix** | |

| P.O | PLO-5 | PLO-7 | PLO-10 |
|---|---|---|---|
| PO-1 | | | |
| PO-2 | | | |
| PO-3 | | | |
| PO-4 | | | |

**PO Matrix at the end of each learning stage (Sub-PO)**

| P.O | Week | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| PO-1 | | | | | | | | | | | | | | | | |
| PO-2 | | | | | | | | | | | | | | | | |
| PO-3 | | | | | | | | | | | | | | | | |
| PO-4 | | | | | | | | | | | | | | | | |

| Short Course Description | This course is an understanding of the concept of textile science in the field of clothing as well as an introduction to the origin of fabric fibers, various types of fabric construction, various types of fabric according to textile materials. The discussion begins with the classification of the origin of fabric fibers from natural and artificial (synthesis). The discussion is deepened by understanding various types of fabrics, lining materials, lining materials according to textile materials and also understanding basic woven construction in clothing making and textile care/refining. In implementing lectures during the Covid-19 pandemic, learning is carried out online through several platforms such as Google Classroom, Google Meet, Google Form, WAG (Whatsapp Group), YouTube and others that are appropriate to the learning material. |
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| References | **Main :** |

1. Kusrianto, Adi. 2017. Pengetahuan Bahan Tekstil. Surabaya: Adi Kusrianto Literary Agent
2. Harris, jennifer. 2010. 5000 years of textiles. London: British Museum
3. Siti, S dan Juhrah, S. 2009. Ilmu Tekstil. Surabaya: Unesa University Press
4. Kadolph, Sara J.2007. Textiles. New Jersey: Pearson Education. Inc.
5. Humpries, Mary. 2004. Fabric Glossary. New Jersy: Pearson Prentice Hall
6. Siegert, Dorothy L. 1982. Modern Textile. New York: John Wiley& Sons
7. Hartanto, Sugiarto & Watanabe, Shigeru.1980. Teknologi Textil. Jakarta: Dainippon gitakarya Printing.
8. Soeprijono,P. dkk. 1973. Serat-Serat Tekstil. Bandung: ITT

| Supporters: | |
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| Supporting lecturer | Dr.Sn. Inty Nahari, S.Pd., M.Ds.<br>Ma'rifatun Nashikhah, S.Pd., M.Pd. |
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| Week- | Final abilities of each learning stage (Sub-PO) | Evaluation | | Help Learning, Learning methods, Student Assignments, [ Estimated time] | | Learning materials [ References ] | Assessment Weight (%) |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Indicator | Criteria & Form | Offline ( *offline* ) | Online ( *online* ) | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| 1 | Students can explain the concept of Textile Science | 1.Explain the concept of textile science in the field of clothing 2.Describe the science of textiles in the field of clothing 3.Analyzing the role of textile science in the fashion sector | **Criteria:** TOTAL 100<br>**Form of Assessment** : Test | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | Synchronous learning via video conference Vinesa/ Google Classroom: 1. Discussion on agreeing on the lecture contract 2. Lecture explaining the RPS for the course 3. Discussion of the concept of textile science in the field of clothing 2 X 50 | **Material:** Textile Science concepts **Bibliography:** *Kadolph, Sara J. 2007. Textiles. New Jersey: Pearson Education. Inc.* | 2% |
| 2 | understand the origin of natural fabric fibers including cotton, hemp, pineapple and jute etc | 1.Explain the meaning of natural fiber 2.Identify various types of natural fibers (plants & animals) 3.Analyze the characteristics of various natural fibers (plants & animals) 4.Explain the use of textiles with natural fibers | **Criteria:** TOTAL 100<br>**Form of Assessment** : Participatory Activities | Class learning: 1. Lecture explaining the material 2. Questions and answers related to the 2 X 50 material | | **Material:** natural origin of fabric fibers. **Reference:** *Kadolph, Sara J. 2007. Textiles. New Jersey: Pearson Education. Inc.* | 8% |
| 3 | Students can analyze the characteristics of the origin of fabric fibers from artificial (synthesis) | 1.• Explain the meaning of artificial fiber (synthesis) 2.• Identify various types of artificial fibers (synthesis) 3.• Analyze the characteristics of various artificial fibers (synthesis) 4.• Explain the use of artificial textiles (synthesis) | **Criteria:** The score is given to the answer to the question according to the answer key (attached) Total 100<br>**Form of Assessment** : Test | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | Synchronous learning via Vinesa/Google Classroom video conference: 1. Lecture explaining the material 2. Questions and answers related to the material 3. 2 X 50 quiz | **Material:** artificial fabric fibers (synthesis) **Reference:** *Kusrianto, Adi. 2017. Textile Material Knowledge. Surabaya: Adi Kusrianto Literary Agent* | 5% |

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| **4** | Understand fabric construction from a basic plain cross weave | • Explain the meaning of plain cross basic weave, Analyze the character of plain cross, Explain the use of textiles with plain cross, Make fabric construction from plain basic weave | **Criteria:** TOTAL 100 **Form of Assessment** : Test | Learning in class: 1. Lecture explaining the material 2. Assignment to make fabric construction from plain basic weave 2 X 50 | | **Material:** fabric construction from plain weave. **Reference:** Kadolph, Sara J. 2007. Textiles. New Jersey: Pearson Education. Inc. | 7% |
| **5** | Students can identify fabric construction from basic plain weave, twill, satin | • Explain the meaning of twill cross basic weave, Analyze the characteristics of twill cross, Explain the use of textiles with twill cross, Make fabric construction from twill basic weave | **Criteria:** TOTAL 100 | Learning in class: 1. Lecture explaining the material 2. Assignment to make fabric construction from 2 X 50 twill basic weave | | | 7% |
| **6** | Students can identify fabric construction from basic plain weave, twill, satin | • Explain the meaning of basic satin cross weave, Analyze the characteristics of satin cross, Explain the use of textiles with satin cross, Make fabric construction from basic satin weave | **Criteria:** TOTAL 100 | Learning in class: 1. Lecture explaining the material 2. Assignment to make fabric construction from 2 X 50 satin basic weave | | **Material:** fabric construction from a basic satin weave. **Reference:** Humpries, Mary. 2004. Fabric Glossary. New Jersey: Pearson Prentice Hall | 7% |
| **7** | Students can identify fabric construction from Nonwoven (without woven) | • Explaining Nonwoven fabric (without woven), Analyzing the characteristics of Nonwoven fabric (without woven), Explaining the use of textiles | **Criteria:** The score is given to the answer to the question according to the answer key (attached) Total 100 **Form of Assessment** : Test | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | Synchronous learning via Vinesa/Google Classroom video conference: 1. Lecture explaining the material 2. Questions and answers related to the material 2 X 50 | **Material:** nonwoven fabric construction **Reader:** Harris, Jennifer. 2010. 5000 years of textiles. London: British Museum | 8% |
| **8** | UTS | | **Criteria:** Total 100 | 2 X 50 | | | 0% |
| **9** | Students can identify various types of fabric according to textile materials | 1. explain the various types of fabric according to textile materials 2. explains the application of various fabrics according to textile materials in clothing 3. identify and differentiate various types of fabric according to textile materials | **Criteria:** Total 100 **Form of Assessment** : Test | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | Synchronous learning via Vinesa/Google Classroom video conference: 1. Lecture explaining the material 2. Questions and answers related to the material 2 X 50 | **Material:** various types of fabric according to textile materials. **Reference:** Humpries, Mary. 2004. Fabric Glossary. New Jersey: Pearson Prentice Hall | 5% |

| 10 | Students can identify various types of interlining and lining materials. | • Explain the meaning of interlining materials, Analyze various types of interlining materials, Explain the use of various interlining materials in clothing | **Criteria:** Total 100 <br><br> **Form of Assessment** : Test | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | Synchronous learning via Vinesa/Google Classroom video conference: 1. Lecture explaining the material 2. Questions and answers related to the material 2 X 50 | **Material:** various interlining materials and lining materials. **Reference:** *Humpries, Mary. 2004. Fabric Glossary. New Jersey: Pearson Prentice Hall* | 5% |
|---|---|---|---|---|---|---|---|
| 11 | Understand the various types of lining materials | 1. Explain the meaning of lining material 2. Explain the various types of lining materials 3. Explain the use of various types of lining materials in clothing | **Criteria:** Total 100 | Discussion Group Presentation (online Learning & problem based learning) 2 X 50 | | | 0% |
| 12 | Students can identify the construction of knitted fabrics and examples of applications of knitted fabrics | • Explain the meaning of knitted fabric • Analyze various types of knitted fabric • Explain the use of various knitted fabrics | **Criteria:** Total 100 <br><br> **Form of Assessment** : Test | Learning in class: 1. Lecture explaining the material 2. Questions and answers related to the material (Phase 1-2 PBL) 1. Orientation to the problem (after giving an explanation in class, students are given problems related to the next material) 2. Organizing students to learn ( students are given directions to find sources according to existing material) 2 X 50 | | **Material:** knitted fabric **Reference:** *Humpries, Mary. 2004. Fabric Glossary. New Jersey: Pearson Prentice Hall* | 0% |
| 13 | Students can identify dyes and dyes in textile finishing fabrics and test textile fibers | 1. able to explain the meaning of dyes and coloring in fabric 2. able to identify various dyes and coloring substances in fabric 3. able to distinguish dyes and dyes in fabric | **Criteria:** Total 100 <br><br> **Form of Assessment** : Practice / Performance | Learning in class: Phase 3 PBL: 1. Carrying out an investigation (the problem raised at the previous meeting becomes a provision for students to carry out an investigation) 2 X 50 | | **Material:** dyes and coloring in fabrics **Reference:** *Hartanto, Sugiarto & Watanabe, Shigeru.1980. Textile Technology. Jakarta: Dainippon gitakarya Printing.* | 10% |

| 14 | Students can identify dyes and dyes in textile finishing fabrics and test textile fibers | • Explain how to test fiber types using a burning test • Explain how to test fibers using a chemical test • Be able to identify textile fibers using a burning test | **Criteria:** Total 100<br><br>**Form of Assessment** : Practice / Performance | Classroom learning:<br><br>(Phase 4 PBL)<br>1. Develop and present the results of the work (each student who successfully solves the problem, presents the results) 2 X 50 | | **Material:** textile fiber test **Reference:** *Soeprijono, P. et al. 1973. Textile Fibers. Bandung: ITT* | 0% |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | Students can implement Textile Science theory in the manufacture and care of clothing materials and evaluate them independently | 1. Explain the meaning of textile material care 2. Explain the characteristics of textile material care3. Identify the various types of care for textile materials 4. Applying textile material care to everyday clothing | **Criteria:** Total 100<br><br>**Form of Assessment** : Test | Classroom learning:<br><br>(Phase 5 PBL)<br>1. Analyze and evaluate the problem solving process 2 X 50 | Synchronous learning via Vinesa video conference/ Google Classroom: (Phase 5 PBL)<br>1. Analyze and evaluate the problem solving process 2 X 50 | **Material:** care of textile materials **Reference:** *Humpries, Mary. 2004. Fabric Glossary. New Jersey: Pearson Prentice Hall* | 0% |
| 16 | UAS | | **Criteria:** Total 100 | 2 X 50 | | | 0% |

**Evaluation Percentage Recap: Case Study**

| No | Evaluation | Percentage |
| --- | --- | --- |
| 1. | Participatory Activities | 8% |
| 2. | Practice / Performance | 10% |
| 3. | Test | 32% |
| | | 50% |

**Notes**
1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.