		Document Code
	Universitas Negeri Surabaya **Faculty of Education,** **Special Education Masters Study Program**	

SEMESTER LEARNING PLAN

Courses		CODE		Course Family		Credit Weight			SEMESTER	Compilation Date
READ WRITE ICT BRAILLE		8611702035		Compulsory Study Program Subjects		T=2	P=0	ECTS=4.48	2	March 6, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	....	....	Prof. Dr. Siti Masitoh, M.Pd.

Learning model	**Case Studies**

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**
	Program Objectives (PO)
	PO - 1 Understanding ICT-based Braille Reading and Writing
	PLO-PO Matrix

P.O
PO-1

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																

Short Course Description	Discussion about the development of information and communication technology in the design, utilization and management of braille writing instruments and the Mibee Braille Converter Version 4 (MBC4) program in braille format, both mathematics, Indonesian, reading and writing Braille Arabic letters and English, typing word marks , tusing signs of parts of words and sibra for visually impaired students.

References	**Main :**

1. Yayasan Mitra Netra ,(2004). Program Mibee Braille Conventer 4 (MBC 4) . Jakarta.
2. Yayasan Mitra Netra, (2004). Petunjuk Penggunaan Mibee Braille Conventer 4 (MBC 4) . Jakarta.
3. Muhammad Shohib, (2012). Pedoman Membaca dan Menulis Alqur'an Braille. Jakarta : Badan Litbang dan Diklat Kementerian Agama RI.
4. Didi Tarsidi, 2010. Belajar Braille . Bandung, Universitas Pendidikan Indonesia Sekolah Pasca-Sarjana .
5. Didi Tarsidi, 2010. Modul Pembelajaran Sistem Tulisan Singkat Braille dan Bahasa Inggris . Bandung, FIP –UPI.
6. Sharon E Smaldino, dkk, 2005. Instructional Technology and Media For Learning . Ohio, By Pearson Education, Inc.
7. Barbara B.Seels, dkk, 1994. Instructional Technology : The Definition and Domains Of the Field . Washington, DC, The Publication Sales Department.
8. Menteri Pendidikan Nasional, 2000. Sistem Braille Indonesia Bidang Kimia. Jakarta : Depdikbud.
9. Menteri Pendidikan Nasional, 2001. Sistem Braille Indonesia Bidang Matematika. Jakarta : Depdikbud.
10. Menteri Pendidikan Nasional, 2001. Sistem Braille Indonesia Bidang Fisika. Jakarta : Depdikbud.

	Supporters:

Supporting lecturer	Dr. H. Pamuji, M.Kes.

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	Understand competencies, descriptions, sequences of ICT-based braille reading and writing course material	1.Explaining competencies, descriptions, sequences of ICT-based braille reading and writing course material 2.Understand competencies, descriptions, sequences of ICT-based braille reading and writing course material	**Criteria:** 1.4: mention and explain the 4 CPs correctly 2.3: only mention and explain correctly the 3 CPs 3.2: name and explain correctly 2 CP 4.1: mention and explain 1 CP 5.0: did not answer **Form of Assessment** : Participatory Activities	ScientificCollaborative 2 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Didi Tarsidi, 2010. Braille and English Short Writing System Learning Module. Bandung, FIP –UPI.*	3%
2	Understand the theory of instructional technology and braille learning strategies as well as tools for reading and writing braille	Explains instructional technology and braille learning strategies as well as tools for reading and writing braille	**Criteria:** 1.4: mention and explain 5 types of learning correctly 2.3: only mention and explain correctly 3 types of learning 3.2: correctly mention and explain 2 types of learning 4.1: mention and explain 1 type of learning 5.0: did not answer. 6.4: explain the 3 tools used to read and write braille correctly. 7.3: explain the 2 tools used to read and write braille correctly. 8.2: explain 1 phenomena and problems of learning ATN correctly using the tools to read and write braille correctly. 9.1: explain wrong. **Form of Assessment** : Participatory Activities	Collaborative Scientific 3 X 50		**Material:** Explains instructional technology and strategies for learning braille as well as tools for reading and writing braille **Reader:** *Muhammad Shohib, (2012). Guide to Reading and Writing the Braille Qur'an. Jakarta: Research and Development and Training Agency of the Ministry of Religion of the Republic of Indonesia.*	2%

3	Understand the theory of instructional technology and braille learning strategies as well as tools for reading and writing braille	Explains instructional technology and braille learning strategies as well as tools for reading and writing braille	**Criteria:** 1.4: mention and explain 5 types of learning correctly 2.3: only mention and explain correctly 3 types of learning 3.2: correctly mention and explain 2 types of learning 4.1: mention and explain 1 type of learning 5.0: did not answer. 6.4: explain the 3 tools used to read and write braille correctly. 7.3: explain the 2 tools used to read and write braille correctly. 8.2: explain 1 phenomena and problems of learning ATN correctly using the tools to read and write braille correctly. 9.1: explain wrong. **Form of Assessment** : Participatory Activities	Collaborative Scientific 3 X 50		**Material:** Explains instructional technology and braille learning strategies as well as tools for reading and writing braille. **Reference:** *Didi Tarsidi, 2010. Learning Braille. Bandung, Indonesian University of Education, Postgraduate School.*	2%
4	Constructing braille alphabet writing into simple words and sentences using a reglet and stylus	Describe the braille alphabet into simple words and sentences using a reglet and stylus	**Criteria:** 1.4: explain the 3 tools used to read and write braille correctly. 2.3: explain the 2 tools used to read and write braille correctly. 3.2: explain 1 phenomena and problems of learning ATN correctly using the tools to read and write braille correctly. 4.1: explain wrong. **Form of Assessment** : Participatory Activities, Portfolio Assessment	1. Scientific2. Collaborative 3 X 50		**Material:** Describe Braille alphabet writing into simple words and sentences using a reglet and stylus. **Reader:** *Sharon E Smaldino, et al, 2005. Instructional Technology and Media For Learning. Ohio, By Pearson Education, Inc.*	2%
5	Constructing mathematical braille writing in recognizing number symbols, decimals, fractions and arithmetic operations using A4 reglet and stylus, as well as translating braille writing into visual writing	· Composing mathematical braille writing to recognize number symbols · Composing mathematical braille writing in decimal numbers and fractions Transferring braille writing to visual writing and vice versa	**Criteria:** 4: the results of each individual's exposure to writing braille and translating braille into sighted writing **Form of Assessment** : Participatory Activities, Portfolio Assessment	1. Scientific2. Collaborative 3 X 50		**Material:** Constructing mathematical braille writing in recognizing number symbols, decimals, fractions and arithmetic operations using an A4 reglet and stylus, as well as translating braille writing into careful writing. **Reference:** *Didi Tarsidi, 2010. Learning Braille. Bandung, Indonesian University of Education, Postgraduate School.*	2%

			Criteria/Form of Assessment			Materials/Reference	
6	Constructing mathematical braille writing in recognizing number symbols, decimals, fractions and arithmetic operations using A4 reglet and stylus, as well as translating braille writing into visual writing	· Composing mathematical braille writing to recognize number symbols · Composing mathematical braille writing in decimal numbers and fractions Transferring braille writing to visual writing and vice versa	**Criteria:** 4: the results of each individual's exposure to writing braille and translating braille into sighted writing **Form of Assessment**: Participatory Activities	1. Scientific2. Collaborative 3 X 50		**Materials:** · Composing mathematical braille writing to recognize number symbols · Composing mathematical braille writing in decimal numbers and fractions Transferring braille writing to sight writing and vice versa **Reference:** *Didi Tarsidi, 2010. Braille and English Short Writing System Learning Module. Bandung, FIP –UPI.*	2%
7	Constructing mathematical braille writing in recognizing number symbols, decimals, fractions and arithmetic operations using A4 reglet and stylus, as well as translating braille writing into visual writing	· Composing mathematical braille writing to recognize number symbols · Composing mathematical braille writing in decimal numbers and fractions Transferring braille writing to visual writing and vice versa	**Criteria:** 4: the results of each individual's exposure to writing braille and translating braille into sighted writing **Form of Assessment**: Participatory Activities, Portfolio Assessment	1. Scientific2. Collaborative 3 X 50		**Material:** Constructing mathematical braille writing in recognizing number symbols, decimals, fractions and arithmetic operations using an A4 reglet and stylus, as well as translating braille writing into careful writing. **Reference:** *Didi Tarsidi, 2010. Learning Braille. Bandung, Indonesian University of Education, Postgraduate School.*	2%
8	UTS	UTS	**Criteria:** UTS **Form of Assessment**: Test	UTS 3 X 50		**Material:** All materials 1-7 **Reference:** *Mitra Netra Foundation, (2004). Instructions for Using Mibee Braille Conventer 4 (MBC 4). Jakarta.*	10%
9	· Understand braille learning using the Mibee Braille Converter version 4 program on the computer Applying MBC 4 in mathematics	· Applying the MBC 4 program by using a keyboard on 6 letters to write braille · Combining 6 letters on the keyboard to write braille as a way of learning the mathematics of addition, subtraction and multiplication Combining 6 letters on the keyboard to write braille as a way of studying the field of mathematics geometry	**Criteria:** 1.4: correct content and systematics 2.3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3.2: the content is partially correct, and partially correct systematically 4.1: partially correct and partially systematic OR partially correct and incorrect in content. **Form of Assessment**: Project Results Assessment / Product Assessment	1.Scientific2. Collaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Sharon E Smaldino, et al, 2005. Instructional Technology and Media For Learning. Ohio, By Pearson Education, Inc.*	5%

10	· Understand braille learning using the Mibee Braille Converter version 4 program on the computer Applying MBC 4 in mathematics	· Applying the MBC 4 program by using a keyboard on 6 letters to write braille · Combining 6 letters on the keyboard to write braille as a way of learning the mathematics of addition, subtraction and multiplication Combining 6 letters on the keyboard to write braille as a way of studying the field of mathematics geometry	**Criteria:** 1.4: correct content and systematics 2.3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3.2: the content is partially correct, and partially correct systematically 4.1: partially correct and partially systematic OR partially correct and incorrect in content. **Form of Assessment**: Project Results Assessment / Product Assessment	1.Scientific2. Collaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Barbara B. Seels, et al, 1994. Instructional Technology: The Definition and Domains of the Field. Washington, DC, The Publication Sales Department.*	5%
11	Applying MBC 4 in the field of Arts, Culture and Crafts (SBDP)	Describe the images used in the field of Arts, Culture and Crafts (SBDP) studies	**Criteria:** 1.4: correct content and systematics 2.3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3.2: the content is partially correct, and partially correct systematically 4.1: partially correct and partially systematic OR partially correct and incorrect in content. **Form of Assessment**: Project Results Assessment / Product Assessment	· Collaborative Scientific 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Sharon E Smaldino, et al, 2005. Instructional Technology and Media For Learning. Ohio, By Pearson Education, Inc.*	10%
12	· Applying MBC 4 in the field of reading and writing the Qur'an Applying MBC 4 in the field of English	· Describe in the field of reading and writing the Koran using a 6-point keyboard on MBC 4 computer. Describe in the field of English using a 6-point keyboard on MBC 4	**Criteria:** 1.4: correct content and systematics 2.3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3.2: the content is partially correct, and partially correct systematically 4.1: partially correct and partially systematic OR partially correct and incorrect in content **Form of Assessment**: Project Results Assessment / Product Assessment	1. Scientific2. Collaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Didi Tarsidi, 2010. Braille and English Short Writing System Learning Module. Bandung, FIP –UPI.*	10%

13	· Applying MBC 4 in the field of reading and writing the Qur'an Applying MBC 4 in the field of English	· Describe in the field of reading and writing the Koran using a 6-point keyboard on MBC 4 computer. Describe in the field of English using a 6-point keyboard on MBC 4	**Criteria:** 1. 4: correct content and systematics 2. 3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3. 2: the content is partially correct, and partially correct systematically 4. 1: partially correct and partially systematic OR partially correct and incorrect in content **Form of Assessment**: Project Results Assessment / Product Assessment	1. Scientific2. Collaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reader:** *Muhammad Shohib, (2012). Guide to Reading and Writing the Braille Qur'an. Jakarta: Research and Development and Training Agency of the Ministry of Religion of the Republic of Indonesia.*	10%
14	· Applying MBC 4 in the field of physics Applying MBC 4 in the field of chemistry	· Describe in the field of physics using a 6-point keyboard on the MBC 4 computer program Describe in the field of chemistry using a 6-point keyboard on the MBC 4 computer program	**Criteria:** 1. 4: correct content and systematics 2. 3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3. 2: the content is partially correct, and partially correct systematically 4. 1: partially correct and partially systematic OR partially correct and incorrect in content. **Form of Assessment**: Project Results Assessment / Product Assessment	ScientificCollaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Didi Tarsidi, 2010. Braille and English Short Writing System Learning Module. Bandung, FIP –UPI.*	10%
15	· Applying MBC 4 in the field of physics Applying MBC 4 in the field of chemistry	· Describe in the field of physics using a 6-point keyboard on the MBC 4 computer program Describe in the field of chemistry using a 6-point keyboard on the MBC 4 computer program	**Criteria:** 1. 4: correct content and systematics 2. 3: the content is correct, there are deficiencies in the systematics, OR the systematic content is correct 3. 2: the content is partially correct, and partially correct systematically 4. 1: partially correct and partially systematic OR partially correct and incorrect in content. **Form of Assessment**: Project Results Assessment / Product Assessment	ScientificCollaborative 3 X 50		**Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reference:** *Didi Tarsidi, 2010. Learning Braille. Bandung, Indonesian University of Education, Postgraduate School.*	10%

| 16 | SUMATIVE EXAMINATION | SUMATIVE EXAMINATION | Criteria: SUMATIVE EXAMINATION **Form of Assessment**: Test | SUMATIVE TEST 3 X 50 | | **Material:** · Understanding braille learning using the Mibee Braille Converter version 4 program on a computer. Applying MBC 4 in mathematics. **Reader:** *Muhammad Shohib, (2012). Guide to Reading and Writing the Braille Qur'an. Jakarta: Research and Development and Training Agency of the Ministry of Religion of the Republic of Indonesia.* | 15% |

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	12%
2.	Project Results Assessment / Product Assessment	60%
3.	Portfolio Assessment	3%
4.	Test	25%
		100%

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.