

Faculty of Nursing, prince of Songkla University
Course Syllabus

Section 1: General Description

1. Code and Course Title : 641-933 Measurement in Nursing Research
2. Credit : 2(1-2-3) Lecture/Discussion 15 hours
Lab/Practice/Presentation 30 hours
Self study 45 hours
3. Program : Doctor of Philosophy Program in Nursing Science
(International Program)
4. Course Coordinator : Asst. Prof. Dr. Umaporn Boonyasopun
Coordinator Assistant : Assoc. Prof. Dr. Busakorn Punthmatharith
5. Semester/Year/Academic Year: 2/1/2018
6. Classroom : Room 3203, Duangvadee Sungkabol Building, 2nd floor
: Tuesday 9 a.m.-12 N.
Thursday, 9 a.m.-12 N. (Self-Study)

Section 2: Course Objectives

1. Course Objectives
After completion of this course, students will be able to
1.1 Explain theories and principles of measurement, instrumentation, and evaluation of research instruments.
1.2 Discuss the issues of validity and reliability and their importance to a measurement.
1.3 Analyze a provided data-set using scale development procedures.
1.4 Analyze ethical issues related to measurement in nursing.
1.5 Develop a scale development proposal based of selecting nursing concept.
2. Objectives of a Course Revision
2.1 To fulfill the requirement of the higher educational standards by making revision of teacher, allocating more time to some topics and adjusting evaluation criteria according to previous year course evaluation.

Section 3: Course Description and Design

1. Course Description
Principle and theory of measurement; research instrument development and evaluation quality of instrument; critique research instrument; validity and reliability of instrument; selection of instrument; measurement of outcomes in researching on related nursing phenomenon
2. Number of Hours per Semester

Lecture /Discussion	Lab	Self-Study	Field Practice	Tutorial
15	30	45	-	-

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3. Number of Hours per Week for Consultation

This course will provide 1 hour/week only for the student who needs consultation. This information will inform to the student in the course orientation session. The student must make appointment with the course coordinator in advance.

Coordinator	E-mail	week	Date	Time
Asst. Prof. Dr. Umaporn Boonyasopun	uboonyasopun@yahoo.com	1-9	Tuesday	8.00-9.00 a.m.
Assoc. Prof. Dr. Busakorn Punthmatharith	p.busakorn@gmail.com	10-18	Tuesday	8.00-9.00 a.m.

Section 4: Learning Outcomes

1. Morality and Ethics

Demonstrate leaderships in promoting morality and professional ethics in writing nursing instrumentation research proposal and all academic works (LO 1.3)

2. Knowledge

Critical analyze nursing measurement issues and trends by using updated nursing and other related knowledge. (LO. 2.2)

Design a scale development proposal based of selecting nursing concept using measurement theories, measurement frameworks, and nursing instrumentation procedure (LO.2.3)

3. Cognitive Skills

Create new nursing measurement knowledge by integrating nursing and eastern wisdom concepts using measurement theories, measurement frameworks, and scale development procedure. (LO 3.1)

4. Interpersonal Skills and Responsibility

Demonstrate creative, open-minded and scholarly discussion skills regarding measurement in nursing research. (LO 4.1)

5. Numerical Analysis, Communication and Information Technology Skills

Demonstrate ability in analyzing and utilizing the numerical data and statistics used for the scale development and evaluation. Demonstrate effective presentation of research proposal using information technology. (LO 5.1)

Section 5: Course Plan and Evaluation

5.1 Course Plan (Schedule)

Week/Date	Time (Duration)	Topics	Teaching/Learning	Lecturer
1/Tuesday Jan 8, 2019	1.00-1.30 p.m. (L0.5)	Course orientation	Discussion	Asst. Prof. Dr. Umaporn Boonyasopun Assoc. Prof. Dr. Busakorn Punthmatharith
	1.30-3.30 p.m. (L2)	Introduction to measurement in nursing	Discussion	Asst. Prof. Dr. Umaporn

Week/Date	Time (Duration)	Topics	Teaching/ Learning	Lecturer
		- Measurement theories and principles - Measurement frameworks Norm & Criterion-referenced measurement		
2/Tuesday Jan 15, 2019	9.00-11.00 a.m. (L2)	- Selecting and evaluation of nursing instruments - Psychometric measurement	Discussion	Asst. Prof. Dr. Umaporn
	11.00 a.m.-12.00 N. (L1)	- Physiological measurement	In class Exercise	Asst. Prof. Dr. Wipa Sae-sia
3/Tuesday Jan 22, 2019	9.00 a.m.-12.00 N. (P3)	Assignment I: Reliability and validity	Exercise	Asst. Prof. Dr. Sopen Chunuan
4/Tuesday Jan 29, 2019	9.00 a.m. -12.00 N. (P3)	Consultation on a Research Proposal paper (1)	Practice/ Discussion	Asst. Prof. Dr. Umaporn/ Assoc. Prof. Dr. Busakorn
5/Tuesday Feb 5, 2019	9.00 a.m.-12.00 N. (L3)	- Scale development in nursing - Issues in nursing measurement	Discussion	Asst. Prof. Dr. Sopen Chunuan
6/Tuesday Feb 12, 2019	9.00 - 11.00 a.m. (L2)	Factor analytic strategies - Types of factor analysis: Exploratory factor analysis (EFA)	Discussion	Asst. Prof. Dr. Umaporn
7/Tuesday Feb 19, 2019		Makha Bucha Day		
8/Tuesday Feb 26, 2019	9.00 a.m. -12.00 N. (P3)	Assignment II: Exercise on scale development/ethical issues in measurement	Exercise	Asst. Prof. Dr. Sopen
9/Tuesday March 5, 2019	9.00 a.m. -12.00 N. (P3)	Assignment III: Computer lab on EFA	Exercise	Asst. Prof. Dr. Umaporn
10/Tuesday March 12, 2019	9.00 a.m. -12.00 N. (P3)	Consultation on a Research Proposal paper (2)	Practice/ Discussion	Asst. Prof. Dr. Umaporn/ Assoc. Prof. Dr. Busakorn
11/Tuesday March 19, 2019	9.00 a.m. -12.00 N. (P3)	Consultation on a Research Proposal paper (2) continue	Practice/ Discussion	Asst. Prof. Dr. Umaporn/ Assoc. Prof. Dr. Busakorn
12/Tuesday March 26, 2019	9.00 - 11.00 a.m. (L2)	Factor analytic strategies - Types of factor analysis: Confirmatory factor analysis (CFA)	Discussion	Dr. Noodchanath Kongchouy
13/Tuesday April 2, 2019	9.00 a.m. -12.00 N (P3)	Assignment IV: Computer lab on CFA	Exercise	Dr. Noodchanath

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Week/Date	Time (Duration)	Topics	Teaching/ Learning	Lecturer
14/Tuesday April 9, 2019	9.00 - 10.00 a.m. (L1)	Instrumentation in Cross-Cultural Research	Discussion	Asst. Prof. Dr. Sopen
	10.00 -11.00 a.m. (L1)	Outcome measurement in nursing practice, nursing education, and nursing administration	Discussion	Asst. Prof. Dr. Sopen
14/Tuesday April 9, 2019		Submit proposal paper for presentation		
15/Tuesday April 16, 2019		Songkran Festival Day		
16/Tuesday April 23, 2019	9.00 a.m.-12.00 N (P3)	Presentation of research proposal	Students' presentation/ Discussion	Asst. Prof. Dr. Umaporn Assoc. Prof. Dr. Busakorn
17/Tuesday April 30, 2019	9.00 a.m.-12.00 N (P3)	Presentation of research proposal (continued)	Students' presentation/ Discussion	Asst. Prof. Dr. Umaporn Assoc. Prof. Dr. Busakorn
18/Tuesday May 7, 2019	9.00 a.m.- 12.00 N (P3)	Presentation of research proposal (continued)	Students' presentation/ Discussion	Asst. Prof. Dr. Umaporn Assoc. Prof. Dr. Busakorn
	12.00 N-12.30 p.m. (L0.5)	Course evaluation and reflection	Discussion	Asst. Prof. Dr. Umaporn Assoc. Prof. Dr. Busakorn
18/Tuesday May 10, 2019		Final paper due		

5.2 Evaluation Plan of the Learning Outcomes

Learning Outcome	Methods of Evaluation	Week	Weight (100)
1.3, 4.1, 5.1	Assignments I (2-3 students/group)	3	- Assignments I = 10%
1.3, 2.2, 3.1, 4.1, 5.1	Assignments II (2-3 students/group)	8	- Assignments II = 15%
1.3, 2.2, 3.1, 4.1, 5.1	Assignments III (individual)	9	- Assignments III= 15%
1.3, 2.2, 3.1, 4.1, 5.1	Assignments IV (individual)	13	- Assignments IV= 15%
1.3, 2.2, 2.3,3.1, 4.1, 5.1	A research proposal presentation	16 - 18	15%

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Learning Outcome	Methods of Evaluation	Week	Weight (100)
1.3, 2.2, 2.3, 3.1, 4.1, 5.1	A research proposal paper	4, 10, 11, 14, 16-18	25%
2.2, 2.3, 3.1, 4.1	Discussion	1, 2, 4-6, 10-12, 14, 16-18	5 %

Note. Students can request for disclosure of an unexpected or a surprised mark/grade within the next following semester only.

Section 6: Learning Resources

6.1 Required Textbooks/books

- DeVellis, R. F. (2017). *Scale development: Theory and application*. London: Sage.
- Frank-Stromborg, M. (2004). *Instruments for clinical nursing research*. Norwalk: Appleton & Lange.
- Hair, J. F., Black, W. C., Babin, B. J. & Anderson R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Munro, B. H. (2013). *Statistical methods for health care research* (6th ed.). Philadelphia: Wolters Kluwer Health /Lippincott Williams & Wilkins.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Strickland, O. L., & DiIorio, C. (2003). *Measurement of nursing outcomes: Vol. 2. Client outcomes and quality of care* (2nd ed.). New York: Springer Publishing Company.
- Waltz, C. F., Strickland, O. L., & Lenz, E. R., (2010). *Measurement in nursing and health care research* (4rd ed.). New York: Springer Publishing Company.

6.2 Suggested Books and Other Resources:

6.2.1 Books

- Grove, S. K., Gray, J. R. & Burns, N. (2015). *Understanding nursing research; Building on evidence based practice* (6th ed.) St. Louis, MO: Saunders/Elsevier.
- Polit, D. F., & Beck, C. T. (2014). *Essentials of nursing research: Appraisal evidence for nursing practice* (8th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Traub, R. E. (1994). *Reliability for social sciences: Theory and applications*. CA: Sage.
- Waltz, C. E., & Strickland, O. L. (1988). *Measuring client outcomes*. New York: Springer Publishing Company.

6.2.2 Journal

- Nursing measurement
- Nursing Research
- Research in Nursing and Health

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Guideline for Research Proposal Paper Measurement in Nursing Research (641-933)

Instruction:

Each student is required to develop a research proposal related to nursing measurement using the processes of instrumentation and psychometric evaluation. A selected nursing concept of interest must be identified. DeVellis' processes of instrument development [DeVellis, R.F. (2017). *Scale development: Theory and application*. London: Sage] must be used as a guideline for your proposal development.

The required paper need no more than 15 pages with single space. References must be given in the additional pages. Your writing must be precise, concise and clear. You are required to demonstrate your ability in planning and developing research proposal guided by following topics:

1. Background and significant of the problem
2. Objectives
3. Research question
4. Conceptual framework
5. Measurement framework
6. Definition of terms
7. Significance of the study
8. Research methodology
 - 8.1 Development of instrument
 - 8.2 Psychometric evaluation
9. References
10. Appendix
 - 10.1 Inform consent
 - 10.2 Instruments
 - 10.3 Time table
 - 10.4 Budget

Due dates:

- **Jan 29, 2019** Presentation of Title
- **March 12, March 19, 2019** Presentation of proposal 1st draft
- **April 9, 2019:** 2nd Draft Proposal paper due. Two copies of the paper will be required: one for the course coordinator, and the other for course coordinator assistance. Forty minutes will be allowed for each presentation and 15-20 minutes will be provided for discussion
- **May 10, 2019:** Final research proposal paper submission.

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Consequences of Academic Misconduct (Plagiarism)

The report paper will be checked the similarities of contents using Turnitin program. Course coordinators have a practice guideline for the students' academic misconduct (plagiarism) or unethical academic working according to the consensus of the graduate committees, faculty of nursing at the meeting 10/2012 on October 11, 2012 as in the following:

1. Be warned for misconducting in the first time

When the reader reviews a student's submitted paper draft and sees plagiarism, the student will be warned.

2. Reduce score 20% for misconducting in the second time and receive grade "B"

When the reader reviews the submitted final paper and sees plagiarism, score of the paper will be reduced 20%. Furthermore, the student must revise the paper. If the reader does not see plagiarism of the first revised paper, then the student will receive grade B.

3. Reduce score 40% for misconducting in the third time and receive grade "C"

If the reader sees plagiarism of the first revised paper, score of this paper will be reduced 40%. In addition, the student must revise the paper again and if the reader does not see plagiarism of the second revised paper, then the student will receive grade C.

4. Receive "F" (Fail) for misconducting in the fourth time

If the reader sees plagiarism of the second revised paper, the student will receive "F" for the course.

Feedback

According to the consensus of the graduate committee in the meeting 2/2017 on February 6, 2017, Faculty of Nursing, the regulations of giving graduate students feedback about their assignments/paper are as follows;

1. The lecturers must give feedback within 1-2 weeks after students have submitted their assignments/paper.

2. The students must submit the last assignments/paper before due date, so that they can be read and reviewed before giving feedback. The students will get feedback after their presentation of the final assignments/paper in class.

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