



SANTA ANA COLLEGE

COURSE OUTLINE OF RECORD

CATALOG ENTRY

Discipline	Mathematics
Course Number	319
Course Title	Quantitative Research Methods for Healthcare Professionals
Former Title	
Units	4
Lecture Hours	72
Scheduled Laboratory Hours	None
Arranged Laboratory Hours (TBA)	None
Total Semester Contact Hours	72

COURSE IDENTIFICATION NUMBER(S) (C-ID)

REQUISITES

Prerequisite

Limitation on enrollment: Student must be admitted to the Occupational Studies program

MATH 219 with a minimum grade of C
or
MATH 219H with a minimum grade of C
or
PSYC 210 with a minimum grade of C

Corequisite

None

Recommended Preparation

None

CATALOG DESCRIPTION

This course will develop skills and tools for understanding and performing quantitative research in healthcare sciences. The focus of the course will be on statistical research methods prevalent in healthcare sciences: including principles of experimental design, appropriate sampling, and running quantitative tests to determine the validity of claims.

Classification Code	Y
Transfer Code	C-Not transferable
SAM Priority Code	E - Non-Occupational

Repeatability	NR - Non-Repeatable
TOPS Code	1701.00 - Mathematics, General
Topics Course	No
Open Entry/Exit	No
Grading Options	Letter Grade or P/NP

Department Chair Approval Date: 12/05/16 by: Monica Zarske
 Divison Chair Approval Date: 12/05/16 by: Monica Zarske
 Curriculum and Instruction Council Chair Approval Date: 12/05/2016 by: Brian Sos
 Last Revision Date:

COURSE OBJECTIVES

1. Formulate conclusions based upon the study being conducted and the results of statistical tests.
2. Identify and analyze possible confounding variables and their impact upon causality.
3. Identify and analyze possible lurking variables and understand their impact upon causality.
4. Interrogate a sampling and experimental design for its ability to make causative claims.
5. Formulate a basic experimental and sampling design based upon a question.
6. Interpret test statistics and p-values from chi-squared tests for independence, matched pairs, ANOVA, Wilcoxon signed test, and linear regression.
7. Analyze scholarly articles in the health sciences.

COURSE CONTENT

(Include major topics of the course, time required, and what the student is expected to learn.)

A. Introduction to statistical parameters and data analysis

1. Brief review of following topics:
 - a. categorical and quantitative variables
 - b. Normal Distribution
 - c. t-Distribution
 - d. Chi-Squared Distribution
 - e. F-Distribution

2. Measures of center and spread and their relationship to drawing conclusions about causation.

B. Introduction and training in software packages

1. Introduce key statistical software package for assessing descriptive statistics, creating graphs, tables and charts
2. Assessing if requirements for conducting tests were accomplished
3. Conducting quantitative tests relevant to making causative claims.

C. Advanced Sampling Methods and principles of randomness

1. Sampling design to eliminate bias.
2. Assessing if studies have possible bias based upon their sampling design.

D. Experimental Design for Categorical variables

1. Developing appropriate experimental design for making causative claims about categorical variables.
2. The following experimental designs will be discussed in depth:
 - a. Boxed Design
 - b. Matched Pairs Design
 - c. Control

E. Contingency and Tests for Independence

1. Determining when chi-squared tests are appropriate.
2. Understand the meaning of independence of variables.
3. Determining if specific requirements for running the chi-squared test are met.
4. Running the chi-squared test using software.
5. Interpreting the results of chi-squared test.

F. Matched Pairs

1. Determining when matched pairs tests are appropriate.
2. Determining if specific requirements for running the matched pairs test are met.
3. Running the matched pairs test using software.
4. Interpreting the results of matched pairs test.

G. ANOVA

1. Determining when ANOVA is appropriate.
2. Understand the relationship between the results of ANOVA and the F-distribution.
3. Determining if specific requirements for running the ANOVA are met.
4. Running ANOVA test using software.
5. Interpreting the results of ANOVA.
 - a. One-Way
 - b. Two-Way

H. Non-parametric methods

1. Discussion of tests for data sets or populations that do not meet the conditions of normality, including but not limited to tests for small samples.

I. Experimental Design for Quantitative Variables

1. Developing appropriate experimental design for making causative claims about quantitative variables.
2. The following experimental designs will be discussed in depth:
 - a. Control
 - b. Lurking Variables and Confounders
 - c. Interactions and parsimony

J. Linear Regression

1. Discussing relationships between multiple quantitative variables.
2. The following topics will be covered.
 - a. Validity
 - b. Residuals and assumptions of the regression model

- c. Simple Linear Regression
- d. Multiple Linear Regression and Multiple Variables
- e. Effect Size and Interpretation of results

K. Survival Analysis

1. Development of survival analysis studies.
2. Understand the underlying reasons for survival analysis and their relationship to health professions.
3. Interpret results from survival analysis studies.

COURSE MATERIALS

Required texts and/or materials.(Include price and date of publication.)

Required:Scott, I., Mazhindu, D., . *Statistics for Healthcare Professionals: An Introduction*, 2nd ed. SAGE Publications, 2014, ISBN: 1446208931.

or

Required:Munro, B., . *Statistical Methods for Health Care Research*, 6 ed. Lipincott, Williams, & Wilkins, 2012, ISBN: 1451187947.

or

Required:Polgar, S., Thomas, S.,. *Introduction to Research in the Health Sciences*, 6th ed. Churchill Livingstone, 2013, ISBN: 0702041947.

or

Required:Hurley, W., Denegar, C.R., Hhertel, J.,. *Research Methods: A Framework for Evidence-Based Clinical Practice*, ed. Lipincott, Williams, & Wilkins, 2010, ISBN: 0781797683.

Recommended readings and/or materials:

None

Other:

None

WHAT METHODS WILL BE EMPLOYED TO HELP STUDENTS LEARN?

Class Discussions

Lecture

Other (Specify):

Collaborative Learning

WHAT LEARNING ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?

List activities and hours for each. (Must include reading and writing activities.)

Reading assignments are required and may include but are not limited to the following:

- Textbooks
- American Journal of Occupational Therapy and other leading journals for the health sciences
- Other journal articles associated with experimental design and causation

Writing Assignments are required and may include but are not limited to the following:

- Critiques and analysis of journal articles
- Class Project
- Development of experimental design for health care research
- Summary of findings for research projects
- - Problem Sets
 - Data set investigation
 - Data set write-ups

Application of problem solving/critical thinking/ synthesis

- Individual and small group learning activities
- Analysis of data and research results based upon collected and furnished data set

STANDARDS OF ACHIEVEMENT

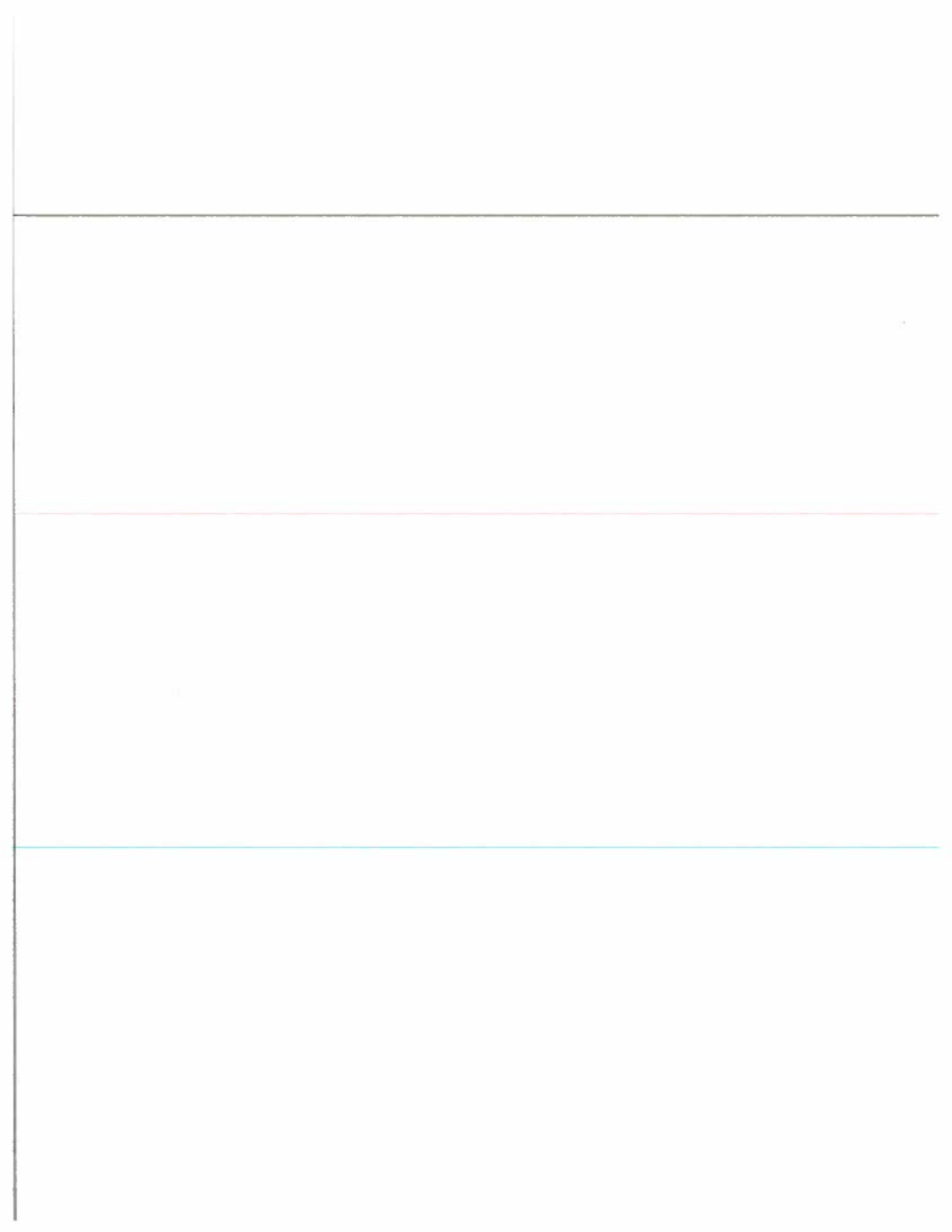
List graded activities.

- | | |
|---------------------|--------|
| • Exams and quizzes | 35-50% |
| • Written homework | 10-20% |
| • Project | 10-20% |
| • Final | 15-25% |

How will student learning be assessed? (Multiple measures must be used.)**Student Learning Outcomes:**

1. Students will be able to analyze journal articles and studies in the health sciences that utilize quantitative data.
2. Students will be able to formulate research questions, determine an effective plan for collecting data, and establish an experimental protocol for testing those questions.
3. Students will be able to determine if an experiment or study has sufficient evidence to determine statistical significance and/or causality.

Supplemental Forms	
New Course Proposal Form	
Course Title	MATH 319 - Quantitative Research Methods for Healthcare Professionals
Supplemental Forms Last Saved	
New Course Proposal Form Last Saved: , at By	
Approval Dates	
Curriculum and Instruction Council Chair: 12/05/2016 Department Chair: 12/05/2016 Division Dean: 12/05/2016	





SANTA ANA COLLEGE

COURSE OUTLINE OF RECORD

CATALOG ENTRY

Discipline	Communication Studies
Course Number	307
Course Title	Health Communication
Former Title	
Units	3
Lecture Hours	54
Scheduled Laboratory Hours	None
Arranged Laboratory Hours (TBA)	None
Total Semester Contact Hours	54

COURSE IDENTIFICATION NUMBER(S) (C-ID)

REQUISITES

Prerequisite

Limitation on Enrollment: Student must be admitted to the Occupational Studies program.

CMST 101 with a minimum grade of C
 or
 CMST 101H with a minimum grade of C
 or
 CMST 102 with a minimum grade of C
 or
 CMST 103 with a minimum grade of C
 or
 CMST 103H with a minimum grade of C
 or
 CMST 145 with a minimum grade of C

Corequisite

None

Recommended Preparation

None

CATALOG DESCRIPTION

Course is designed to advance knowledge of health communication theory, research and practice while providing solid foundation for understanding importance, value and impact of health communication upon patients, families, caregivers and healthcare team-members.

Classification Code	Y
Transfer Code	C-Not transferable
SAM Priority Code	E - Non-Occupational
Repeatability	NR - Non-Repeatable
TOPS Code	1506.00 - Speech Communication
Topics Course	No
Open Entry/Exit	No
Grading Options	Letter Grade or P/NP

Department Chair Approval Date: 10/17/16 by:Lance Lockwood
 Divison Chair Approval Date: 10/19/16 by:Brian Kehlenbach
 Curriculum and Instruction Council Chair Approval Date: 12/05/2016 by:Brian Sos
 Last Revision Date:

COURSE OBJECTIVES

At the conclusion of this course, the student should be able to:

1. Analyze communication and health theories to help explain the delivery of health care.
2. Research, analyze and write about health communication issues.
3. Identify variables (i.e. culture, technology, perception, nonverbal norms) that affect communicating in health care contexts.
4. Evaluate communication behaviors in health care relationships, healthcare groups and healthcare organizations.

COURSE CONTENT

(Include major topics of the course, time required, and what the student is expected to learn.)

Part I: Principles of Communication

- A. Review the basic principles of the communication process.
- B. Identify components of therapeutic communication.
- C. Formulate a definition of communication and examine the five steps of the communication process.
- D. Review components of nonverbal communication.
- E. Critically assess proper nonverbal communication skills for the healthcare professional.
- F. Define verbal communication and identify the purposes of using clear language for effective verbal communication with patients and other healthcare professionals.
- G. Develop skills for listening and paraphrasing with patients and staff.
- H. Identify empathetic responses appropriate to patients.
- I. Discover appropriate means of questioning patients.
- J. Appraise Do's and Don'ts of verbal communication.

Part II: Clinical Communication Skills

- A. Formulate appropriate professional communicative behaviors with regards to discovering roadblocks to therapeutic interactions with patients and healthcare professionals.
- B. Formulate and illustrate appropriate communication behaviors with colleagues and with supervisors.
- C. Demonstrate knowledge of HIPAA – The Health Insurance Portability and Accountability Act – as it applies to interactions with non-patients.
- D. Build a repertoire of acceptable questions and interviewing techniques to assist in pinpointing chief complaint(s) or present illness.
- E. Distinguish differences in questioning adults, adolescents and children.
- F. Discuss guidelines for appropriate patient interviewing including assessing the need to meet ethical and/or legal constraints.
- G. Adapt communication to a patient’s ability to understand their need for care based on the patient’s health literacy.
 - 1. language barriers
 - 2. complications due to visual impairment, deafness or hearing loss, advanced age or delirium and/or dementia.
- H. Compile a formula for managing strategies and resources for patient education.
- I. Compare and contrast cultural differences in approaches to healthcare including understanding our multicultural and ethnically diverse populations.
- J. Define “cultural competence” as it applies to communication skills and be able to demonstrate “nonverbal competence” in the cross-cultural environment.
- K. Identify cultural and regional disparities in treatment and access to healthcare.
- L. Examine tips for communicating with limited-English-speaking patients.
- M. Determine when it is time for the trained medical interpreter.
- N. Examine the National Standards on Culturally and Linguistically Appropriate Services (CLAS).

Part III: Administrative Communication Skills

- A. Definition of Telehealth
- B. Role of the internet on health care relations
 - 1. providers to patients
 - 2. patients to patients
 - 3. colleagues to colleagues
- C. Choosing appropriate communication channels based on context.
 - 1. telecommunication, email, text messaging, social media
- D. Maintenance of client confidentiality using electronic communication
- E. Professional Writing for the Health Care Professional
 - 1. Integration of a professional writing style into everyday communication with patients

and professionals.

COURSE MATERIALS

Required texts and/or materials.(Include price and date of publication.)

Required:Moss, B.. *Communication Skills in Health and Social Care*, 3 ed. Los Angeles: Sage Publishing, 2015, ISBN: 9781473912762. \$115.00

or

Required:Wright,B.. *Communication Skills: Challenges, Importance for Health Care Professionals and Strategies for Improvement*, 1 ed. Hauppauge, NY: NOVA Science Publishing, 2016, ISBN: 1634855655. \$82.00

or

Required:du Pre,A. . *Communicating about Health*, 5 ed. Oxford: Oxford University Press, 2016, ISBN: 9780190275686. \$83.00

or

Required:Pagano, M.P.. *Health Communication for Healthcare Professionals: An Applied Approach*, 2 ed. New York: Springer Publishing Company, 2017, ISBN: 9780826125170. \$85

Recommended readings and/or materials:

None

Other:

None

WHAT METHODS WILL BE EMPLOYED TO HELP STUDENTS LEARN?

Case Studies

Class Discussions

Group Study & Exercises

Guest Speakers

Handouts

Instructor Demonstrations

Lecture

Media Presentations

Oral Presentations

Portfolios

Reading Assignments

Research Projects

Simulations

Writing Projects & Reports

WHAT LEARNING ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?

List activities and hours for each. (Must include reading and writing activities.)

1. Interview healthcare professionals, write report, and prepare oral presentation to share findings.
2. Read textbook and journal articles.
3. Write peer and self-evaluations.
4. Research, write and compose major group project.
5. Write reaction paper(s) regarding guest speaker(s).

TOTAL 108 hours

STANDARDS OF ACHIEVEMENT

List graded activities.

Exams (100 points): Four (4) Exams are worth 25 points each. Exams are written essays which require evaluation, analysis, application and identification of topics related to content of text and lectures.

Communicator's Portfolio (30 points): Students will maintain a three-ring binder of all handouts, self/peer and guest speaker evaluations, surveys, interviews and personal journaling.

Interview of Healthcare Provider and Individual Presentation of Findings (50 points).

Small Group Presentation: (100 points) Students—working in a small group—will select, research, explain and demonstrate appropriate and culturally sensitive communication behaviors in various health care environments.

Total Points Possible: 280

Grading scale:

252-280 = A

224-251 = B

196-223 = C

168-195 = D

0-167 = F

How will student learning be assessed? (Multiple measures must be used.)

Written assignments will be critiqued by the instructor (via use of a rubric) for completion, organization, grammatical accuracy, and application of learned theories or skills.

Oral presentations will be critiqued by the instructor (via use of a rubric) for organization, clarity and command of speech, and correct demonstration of appropriate communication skills.

Peer evaluation(s) will be a component of the individual and small group presentations.

Self-monitoring and evaluation(s) will be mandatory for every individual and small group presentation.

Supplemental Forms	
Requisite Approval Form	
Type of Requisite	<p>Standard co/prerequisites Admission into Occupational Studies Baccalaureate degree program. Communication Studies 101, 102, 103 or 145 Sequential within and across disciplines Course in communication or computational skills as co/prerequisites or courses other than another skills course</p> <ol style="list-style-type: none"> 1. the extent to which students who are or have taken the prerequisite course believe it is necessary 2. a comparison of the faculty member's appraisal of students for the course to whether the students had met the prerequisite 3. a comparison of the students' performance at any point in the course with whether the student had completed the proposed prerequisite 4. a comparison of student performance in the course to their scores on assessment instruments in the manner required to validate an assessment instrument and cut scores for the course in question
Content Review	<p>Involvement of faculty with appropriate expertise Consideration of course objectives set by relevant department(s). The curriculum review process should be done in a manner that is in accordance with accreditation standards Be based on a detailed course syllabus and outline of record, tests, related instructional materials, course format, type and number of examinations, and grading criteria. Specification of the body of knowledge and/or skills which are deemed necessary at entry and/or concurrent with enrollment Identify and review the prerequisite or corequisite which develops the body of knowledge and/or measures skills identified. Matching of the knowledge and skills in the targeted course and those developed or measured by the prerequisite or corequisite Maintain documentation that the above steps were taken.</p>
New Course Proposal Form	
Course Title	CMST 307 - Health Communication
Course part of new major	<p>Yes Explain: This course is part of the new Occupational Therapy Assistant (OTA) BS program.</p>
Intended for Transfer	<p>Yes Major Requirement</p>
Part of Associate Degree	<p>Yes Elective</p>
Supplemental Forms Last Saved	
Requisite Approval Form Last Saved: Tuesday , Nov 15, 2016 at 8:14 AM By Monica Zarske	
New Course Proposal Form Last Saved: Thursday , Oct 13, 2016 at 8:20 PM By Lance Lockwood	
Approval Dates	
<p>Curriculum and Instruction Council Chair: 12/05/2016 Department Chair: 10/17/2016 Division Dean: 10/19/2016</p>	

