

LDR 745 Applied Analysis

Term: Fall 2019

Time: Hybrid Delivery Format

Professor Contact Information

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Course Description

LDR 745 Applied Analysis 3 hours

In this course, students analyze statistical findings in research. Course content covers topics of collection, organization, and summarization of data; basic probability; probability distributions; sampling distributions; confidence intervals; tests of hypotheses; chi square; and correlations. Hypothesis-testing procedures, including homogeneity of variance, analysis of variance, and tests of selected other parameters, are studied. A thorough study of common sampling distributions, multiple correlation and regression, and nonlinear relationships will be presented.

Prerequisite Studies

EDUC 640 Quantitative Research and EDUC 645 Qualitative Research or equivalent

Diversity in the Oakland City University School of Education

The School of Education is committed to a core set of values that are reflected in a culture that promotes development of personal and professional integrity and engagement for the benefit of our society. As an academic community, the faculty and staff of the School of Education values:

- Diversity in all of its manifests
- Respect for the individual and deviating perspectives that challenge us
- Collaboration
- Creativity in thought and action

To further the mission of diversity in the School of Education, SOE has a primary goal that:

Encourages and supports an environment which presents and values diversity defined in accordance with the CAEP cross-cutting theme as differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographic area.

The SOE is dedicated to preparing educators who value diversity in all its forms, differentiate instruction to accommodate diverse student populations, and interact with others in a professional and ethical manner. The SOE utilizes multiple indicators on clinical evaluations, dispositions assessments, and alumni and employer surveys to evaluate performance related to diversity.

Course Objectives

The course is designed to introduce statistics, statistical analysis, and implications to empirical and action research.

The student will develop and/or demonstrate a knowledge and understanding of the skills involved in the objectives and outcomes as presented and develop a positive attitude and values regarding the following as they apply to the specific objective and candidate outcome:

- Basic statistical procedures in qualitative and quantitative research and their application to action research for both the internship action research practicum and dissertation research procedures;
- Functions, values, and processes of creating a powerful research question that will frame and shape the action research project;
- Collecting, organizing, and analyzing data to be applied effectively in solving a school district problem, situation, or issue;
- Ethical issues and dilemmas surrounding educational and organizational research and practice;
- Use of the statistical packages, including SPSS; and
- Research findings as affected by the variables used researcher bias, sampling techniques, test validity, and test reliability.

Upon successful completion of this course students should be able to:

1. acutely focus on effective teaching and learning, possesses a deep and comprehensive understanding of best instructional practices, and continuously promotes activities that contribute to the academic success of all students. (IDOE Standard 2, ELCC Standards 2, 7)
2. develop a district wide culture of achievement aligned to the district's vision of success for every student. (IDOE Standard 5, ELCC Standards 1, 2, 7)

Instructional Design

Students will explore statistical procedures and methods of analysis through course readings, lectures and presentations, group discussions, in-class simulations, and small group projects. The nature of the course content does not lend itself readily to the online delivery format; therefore, the professor will identify two Saturdays during the semester (one on the main campus, one at the Plainfield Center) for students to meet face-to-face with the professor. This meeting is designed to provide time for questions, group work, or class instruction. *Attendance at the meetings is optional.*

Barger-Richardson Learning Resource Center

The Barger-Richardson Learning Resource Center is the student gateway to library resources at Oakland City University through www.oak.edu/library/Discover.html or coming to campus (605 W. Columbia Street, Oakland City, IN 47660). To ask questions or make comments about library services please call (812) 749-1269 or visit www.oak.edu/library/Ask.html.

Required Course Materials

The following resources are required in the completion of course learning activities.

Textbooks

Gay, L.R., Mills, G.E., & Airasian, P. (2014). Educational Research. 12th edition. Pearson. ISBN 9780132613170 (9th, 10th, and 11th editions acceptable).

* This text will also be used for LDR 810 and LDR 820s.

Prior to beginning your dissertation, all candidates MUST apply for Institutional Review Board (IRB) approval. Information and application forms are found on the OCU website at: <https://www.oak.edu/forms/institutional-research-request>

Resources

Data files are provided by the professor. The files are used to conduct the various descriptive and inferential statistical procedures for instruction and student practice. Additional information will be provided for each file as the course unfolds. **Please check your myoak email for professor communication.**

Suggested Reading

In addition to the required text, the student is encouraged to explore other scholarly works in the course subject area (e.g., monographs, journals, theses, dissertations, etc.). Many of these types of works can be found online and provide the most current snapshot of the state of the art in the course subject matter. Examples of analyses found in OCU library databases or other appropriate cites may be helpful.

Tentative Course Outline

The topics in this course will be explored according to the following learning schedule.

Unit	Lesson Title and Topics	Learning Activities Schedule
1 Weeks 1-2	Chapter 1 Chapter 12	Introduction to Educational Research Descriptive Statistics
2 Weeks 3-5	Chapter 6 Chapter 13	Selecting Measuring Instruments Inferential Statistics
3 Weeks 6-8	Chapter 8 Chapter 14	Correlational Research Qualitative Data Collection
4 Weeks 9-12	Chapter 19 Chapter 20	Mixed Methods Research Action Research
5 Weeks 16-18	Chapter 21 Chapter 22	Preparing a Research Report Evaluating a Research Report

*Ed D courses are offered in one of two methods. Fall and spring courses are offered in 8-week or 16-week online formats. Summer courses are offered in five-day sessions. Therefore, each course is designed to appropriately accommodate a five or eight unit model of organized instruction. All courses earn 3 semester credit hours.

Course Assignments and Assessments

The following assignments and assessments must be completed to pass the course.

Assignments and Program Assessments	Grade Value
Participation and Attendance	25 points
Discussion	25 points
Leadership Plan	50 points
Capstone Project	50 points
Total	150 points

Participation and Attendance

Regular class attendance is expected. Because of the nature of class sessions and required interactions, there are no excused absences. In case of an emergency, make-up work will be required, and a penalty will be deducted from the final grade for absence.

Learning Outcome: Upon successful completion of this learning activity students should be able to acquire a working knowledge of the purpose, design, methods, and application of qualitative research (ELCC #1, #4; IDOE #2, #5)

Discussion Forums (online/hybrid formats only)

Students must participate in the current online Discussion Forum(s) each week of the course—discussion participation cannot be made-up during a later week. A grade will be assigned each week reflecting the quality of participation in the online Discussion Forum(s) during the week the topic or question was posted.

- Initial postings should be *concise* and evidence interaction with course content as appropriate to the topic or question—long rambling posts are discouraged. Therefore, please follow the *4x4 Rule for Online Discussions* in creating messages as much as possible: each message should be no more than 4 paragraphs long, with no more than 4 sentences per paragraph. Messages should not span multiple consecutive posts.
- Responses to others' postings should also follow the *4x4 Rule*, show respect for alternate view points, and include course content as appropriate. Do not simply post statements of personal opinion or a simple sentence of agreement or disagreement with a message posted. Instead, tell specifically why you agree or disagree with a post and support your statement with an example from the course content when appropriate.
- Discussion points can only be earned in a Unit when it is the current Unit—proactive or retroactive posts do not count toward the minimum points required

Learning Outcome: Upon successful completion of this learning activity students should be able to evaluate classmate postings, synthesize the postings with their own position, and increase their understanding of the topic (ELCC #1, #4; IDOE #2, #5).

Assignments

These assignments are designed to measure student performance according to ELCC, IDOE, and program standards. Please refer to assignment rubrics for specific standard alignment.

Readings Discussion (Program Assessment #1):

Read selected chapters in the Gay text related to statistical procedures and analysis, action research, and research reports. You will also be directed to participate in discussions, problems solving activities, and suggested website activities.

Leadership Plan - Internship Study Design (Program Assessment #2): This assignment is combined with the Capstone project for the fall 2019 semester.

In conjunction with your internship action research project, (a typical program evaluation model) prepare a written leadership plan that contains the following:

- . A description of the school district;
 - . A description of the issue, situation or problem to be addressed;
 - . A hypothesis of a solution to the issue, situation or problem;
 - . The objectives of the study;
 - . A timeline;
 - . The resources you will need to conduct the study;
 - . The strategies needed to implement the solution; and
 - . The action research design
1. a needs assessment to include an examination of how and why the situation or problem is occurring (generation of raw data),
 2. a process component that explains in detail the methodology you will undertake to come to a solution (analysis of data-identification and rationale of data sources {what are going to use and why}),
 3. a product component (report) demonstrating all aspects of the redesign or solution (decision-making summary and conclusions based on analysis),
 4. an evaluation component measuring the extent to which the redesign or solution serves to improve the building or district systemically (reflection and evaluation of the analysis (reflection of #3)).

Within this context, the nature of the particular organizational system, what it is capable of doing, and reasons and ways the issue, situation, or problem is taking place should be revealed. Place the final written version in your portfolio.

You will present an oral version, and elicit feedback, of this plan to your classmates as directed by your professor. You should provide your classmates with an outline of your plan.

*Note: This course should prepare you for LDR 810 Doctoral Dissertation Design, and this action research project may become a part of your doctoral dissertation.

Capstone Project (Program Assessment #3):

At the end of the course you will submit a project that incorporates the course objectives. Candidates will generate data set(s), set up spreadsheet or SPSS files, analyze the data, and discuss their findings. The student will select the appropriate descriptive statistics and inferential test for the type of study being conducted. A narrative describing the content and design of the “study” will accompany the data analysis. **The narrative will incorporate information outlined in the Leadership Plan, but tailored to the Capstone study.** The Capstone project will be discussed extensively during class.

The Capstone project will be due the *beginning of the final week of class*. Submit the assignment via email attachment to the professor.

- **Document Formatting** – Assignments must be formatted according to the current edition of the style manual used in the program of study. Basic formatting protocols that should be followed include:
 - * Write in *academic* English.
 - * Use correct spelling and grammar.
 - * Some assignments require a specific form or format—use as directed.
 - * Font size should be 12 point utilizing one of the following fonts: Arial, Calibri (body text), Georgia, Times New Roman, or equivalent.
 - * Be sure to include your name, course number, and contact information in your document as required by formatting guidelines (e.g., on the title page or at the end of the document) or as directed by the instructor.
 - * Use your name, course number, and assignment name as the file name of a document when submitted electronically.
 - * Do not use report covers or notebooks unless directed to do so—staple or binder clip assignment pages together as necessary or as required when submitting hardcopy.

Quizzes and Examinations

Evaluation will be based on attendance, oral and written critiques and investigative reports, presentations, in class discussion and assigned topics, and researched issues and problems related to the course content.

Grading Scale

The University grading system consists of letter grades and grade points. The grading system for graduate programs is as follows:

Graduate Grading System			
Points	Grade	Value	Definition
145-150	A	4.0	Superior
140-144	A-	3.7	Excellent
135-139	B+	3.3	High Average
130-134	B	3.0	Average
125-129	B-	2.7	Low Average

Graduate Grading System			
Points	Grade	Value	Definition
120-124	C+	2.3	Below Average, Counting as Graduate Credit
115-119	C	2.0	Below Average, Counting as Graduate Credit
Below 115	F	0.0	Failure
	I		Incomplete
	WE		Instructor Withdrawal Excessive Absences
	AU		Audit
	EC		Education Continuing, Ed. D
	GP		Graduate in Progress 3-years limit, Ed. D
	W		Withdrawal Official Approval
	WP		Work in Progress

Objectives and Outcomes Matrix and Assignment Rubrics

This course does not contain Ed.S/Ed.D. key assessments.

Bibliography

Students wishing to explore the course content further may wish to consider the following sources. Several of these readings are historic standards in understanding key principles and best practices in the course subject matter.

Bogdan, R. C. & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods* (4th ed.). Boston, MA: Allyn and Bacon.

Calhoun, E. F. (1994). *How to use action research in the self-renewing school*. Alexandria, VA: Association for Supervision and Curriculum Development/ASCD.

Creswell, J. W. (2003). *Research design: Qualitative & quantitative approaches* (2nd ed.) Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (1997). *Qualitative inquiry and research design: Choosing five traditions*. Thousand Oaks, CA: Sage Publications.

Ferguson, G. & Takane, Y. (1989). *Statistical analysis in psychology and education*. New York: McGraw – Hill.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston, MA: Allyn & Bacon.

Gall, J. P., Gall, M. D., & Borg, W. R. (1999). *Applying educational research: A practical guide* (4th ed.). New York: Addison Wesley Longman.

Gerrich, G., Wilan, H. & Hughe, W. (2002). Doctoral mentorship: A university-school district partnership. *National Forum of Educational Administrative and Supervision Journal*, v.18.

Glanz, J. (2005). *Action research: An educational leader's guide to school Improvement* (2nd ed.) Norwood, MA: Christopher-Gordon Publishers, Inc.

Gravetter, F. J. & Wallnau, L. B. (2000). *Statistics for the behavioral sciences*, (5th ed.). Belmont, CA: Wadsworth/Thomson Learning.

Heiman, G. W. (2001). *Understanding research methods and statistics: An integrated introduction for psychology*. Boston: Houghton Mifflin Company.

Holcomb, L. (2009). *Interpreting basic statistics*. (5th ed). Glendale, CA: Pycszak Publishing.

Isaac, S. & Michael, W. (1995). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences*. San Diego, CA: EdLTS Publishers.

Leedy, P. D. & Ormrod, J. E. (2016). *Practical research: Planning and design*. Boston: Pearson.

Lyne, L. (1999). *A cross section of educational research, journal articles of discussion and evaluation*. Los Angeles, CA: Pycszak.

McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project*. London and New York: Hyde Publications/Routledge, Inc.

Salkind, N. (2010). *Statistics for people who (think they) hate statistics*. Thousand Oaks, CA: Sage Publications.

Schram, T. H. (2003). *Conceptualizing qualitative inquiry: Mindwork for fieldwork in education and the social sciences*. Upper Saddle River, NJ: Merrill Prentice Hall.

Sowell, E. (2001). *Educational research: An integrative introduction*. Columbus, OH: McGraw-Hill Higher Education.

Sweet, S. A. & Grade-Martin, K. (2003). *Data analysis with SPSS: A first course in applied statistics* (2nd ed.). Boston, MA: Allyn and Bacon.

Thorndike, R. M. & Dinnel, D. L. (2001). *Basic statistics for the behavioral sciences*. Upper Saddle River, NJ: Merrill Prentice Hall.

Vierra, A., Pollock, J., & Golez, F. (1998). *Reading educational research*, (3rd ed.). New Jersey: Prentice Hall.

Welch, M., et al. (2002). *Project demonstrating excellence*. Nashville, Tennessee: Trevecca Nazarene University.

Wike, E. (2007). *Data analysis: A statistical primer for psychology students*. New Brunswick: Aldins Transaction.

Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage Publications.

Attachments

Readings Discussion rubric, Leadership Plan rubric, and Capstone Project rubric

Course Policies

The following polices apply to anyone participating in this course.

- **Academic Honesty** – Students are expected to respect and uphold accepted standards of honesty in writing examinations or submitting written work to instructors. Plagiarism, though occurring in many forms, in essence involves the presentation of another person’s work as if it were the work of the presenter. The results of research must be properly documented, and quoted material must be so designated. Students guilty of plagiarism or cheating may be suspended from the course and receive a failing grade.
- **Accommodations for Students with Special Needs** – Oakland City University actively supports the Americans with Disabilities Act which protects qualified individuals with disabilities from discrimination. Oakland City University will work with students and other associates to provide reasonable accommodations as provided in the Act. If a student or another associate believes he/she needs accommodations for class he/she should contact the Office for Campus Life at (812) 749-1421 or visit www.oak.edu/campus-life/student-services.php.
- **Bad Weather Policy** – Oakland City University uses the Nixle Emergency Notification System to contact staff, students, and members of the community about upcoming events, **class cancelations due to severe weather**, and on-campus emergencies. Students are encouraged to register for Nixle (www.nixle.com) to receive e-mail notifications about

campus emergencies. The latest alerts also can be followed on Twitter @OaklandCityU. Students may also check the following radio stations: WBIW-13.40 AM, WQRK-105.5 FM, or WPHZ-102.5 FM. We will also post class closures due to severe weather on our OCU website. www.ocu.edu

- **Respect for Divergent Viewpoints and Diversity** – Students and faculty are to show appropriate respect for each other, and for divergent viewpoints expressed in the classroom. Such respect does not require agreement with or acceptance of divergent viewpoints. Consult Diversity Statement on page 1.
- **Standards for Student Behavior** – As a denomination- affiliated university, the policies and guidelines of Oakland City University mandate student behavior to be consistent with Christian principles. Some behavior that is acceptable by the general public may not be acceptable on the Oakland City University campus.

Students at Oakland City University are expected to conduct themselves in an appropriate adult manner on and off campus and to conform to standards of propriety at all times. They should act with consideration for the rights of other students and for the reputation of the school and the community.

Inappropriate actions or activities occurring on or off-campus which may reflect upon the integrity or character of Oakland City University will be addressed based on the guidelines and policies of disciplinary action found in this handbook. The University reserves the right to dismiss a student whose conduct is detrimental to the general welfare of the school or community.

For a further explanation concerning the Christian principles which Oakland City University follows as well as the General Baptist Concepts of Morality, a copy of the General Baptist Social Principles Handbook may be obtained through the University Bookstore, or you may ask for the desk copy from any Resident Hall Director, Resident Assistant, or the Office for Campus Life.

- **Use of Inclusive Language** – Students are expected to use non-sexist inclusive language as appropriate in the completion of course assignments and participation in classroom discussions. The use of male gender terms to describe individuals, groups, titles, or roles that can include the female gender should be rewritten to more accurately reflect that both genders are being addressed. In cases where only one gender is clearly intended, language should be used that reflects that gender.

Targeted Standards of Course Learning

The following mission statements and attached document, Standards for Reference, are to be applied in the teaching of the course as appropriate to the school and degree program enrolled in taking the course.

OCU Mission Statement

Oakland City University is a Christian faith-based learning community dedicated to the enhancement of intellectual, spiritual, physical and social development for positive leadership.

OCU School of Education Mission Statement

The School of Education at OCU is a collaborative learning community dedicated to:

- Academic knowledge, technological skills, pedagogical proficiency, and lifelong learning
- The preparation for gainful employment through academic excellence
- The promotion of Christian ethical and moral values
- The enhancement of each student practitioner's intellectual, physical, spiritual, and social development
- Community service through positive leadership

School of Education – Graduate Programs Conceptual Framework and Objectives

The purpose of the Conceptual Framework (CF) as it relates to graduate studies in the School of Education (SOE) is to provide a foundation and organizational system through which candidates accomplish the primary objective of the program.

This objective is to advance the knowledge, skills, and disposition of those serving in leadership positions in the educational and business communities.

The OCU School of Education promotes development of effective educators who master knowledge, skills, and dispositions which enable servant leaders to positively impact the next generation of learners. The learning outcomes that flow out of the primary objective are to develop a student that:

- has advanced skills in one's specialized content area(s) and has the knowledge of and uses the tools of inquiry as part of the on-going educational process while demonstrating ethical leadership in creating positive working or learning environments for employers and students;
- has advanced knowledge of human development and uses the information to support the advancement of humankind's intellectual, social, and personal development within a business or educational community environment;
- has an in-depth understanding of diversity issues in life and their inherent value;
- models a variety of current leadership skills that assist employees/students to become critical thinkers and analytical problem solvers;
- guides, facilitates, and supports the success of all learners by providing leadership in curriculum development learning assessment, instructional supervision, and program

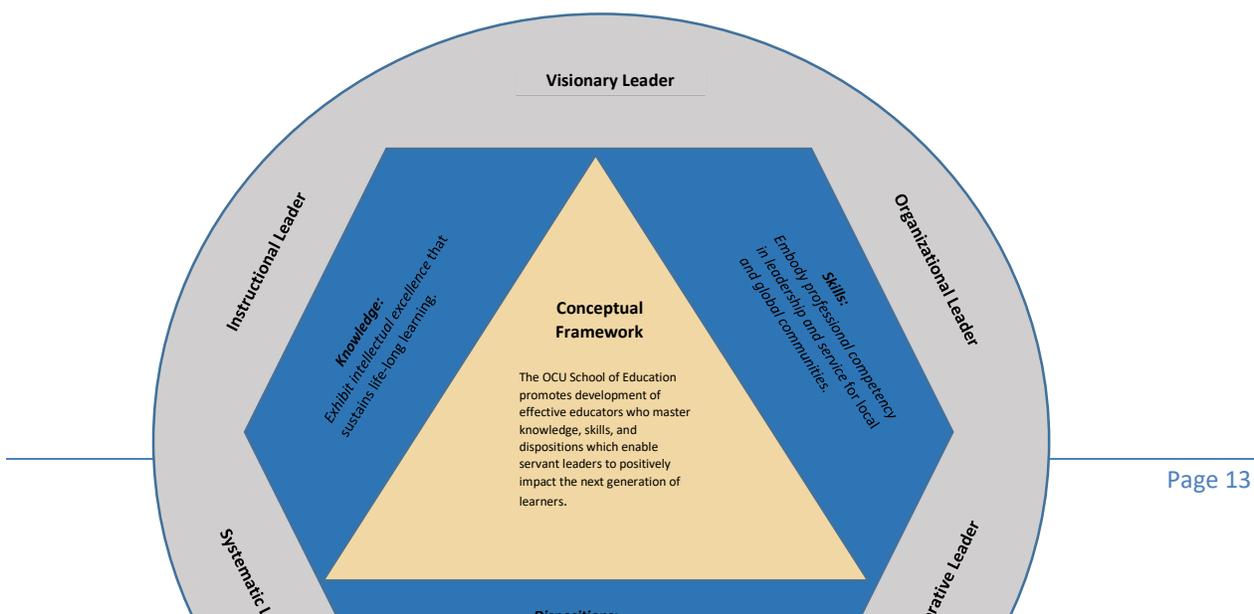
evaluation conducive to student learning, personnel professional growth, and district and organizational accountability;

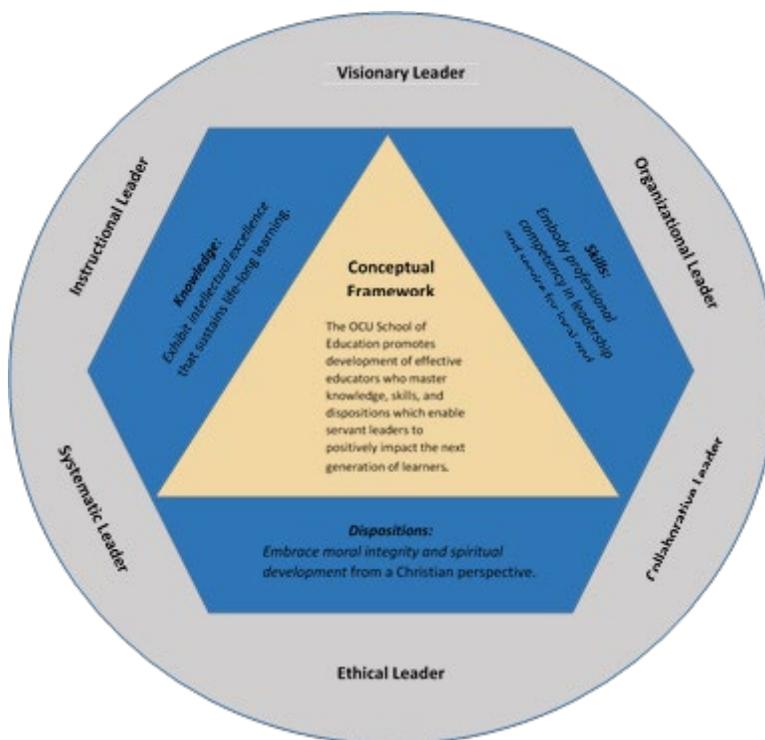
- uses collaboration within a positive organizational or learning environment with his or her employees, students, and work community;
- effectively uses a variety of communication techniques that foster inquiry and collaboration within the work environment;
- develops a leadership style that incorporates technological delivery systems with colleagues that enhance business and educational communication and community support;
- reflects on his or her leadership techniques and styles and experiences and adapts them to meet business, education, or community needs as he or she flourishes professionally through active participation in professional organizations, community organizations, and community service activities; and
- serves the community and assists as a community resource person in the community in which he or she is employed.

Conceptual Framework OCU School of Education Advanced Programs

SOE Conceptual Framework Components

1. Skills
 - 1.1 Technological Skills
 - 1.2 Pedagogical proficiency
2. Disposition
 - 2.1 Promotion of ethical and moral values
 - 2.2 Community service through positive leadership
 - 2.3 Lifelong learning and Collaboration
3. Knowledge
 - 3.1 Knowledge of Student
 - 3.2 Knowledge of Content





Courseware Usage

This syllabus is intended to reflect accurately all aspects of the course learning experience. However, Oakland City University or the professor reserves the right to modify any portion of this syllabus as necessary because of events and circumstances that occur during the course.

No part of this course, including the syllabus, lessons, handouts, presentations, web pages, audio or video media, etc., may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Oakland City University, except when used for instructional purposes during which Oakland City University and the professor is acknowledged as the source of the material.

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