

PSY 606: PSYCHOLOGICAL TESTING AND MEASUREMENTS

Class Meeting: Online

Instructor: Joseph R. Mobley, Jr., Ph.D.

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Text: Friedenberg, L. (1995). *Psychological testing: Design, analysis and use*. New York: Allyn & Bacon (Note: this text is out of print, but is a lucid description of the basics of classic measurement theory; chapters are available from instructor; see also supplemental reading list for specific topics).

Catalog Course Description

This course analyzes various kinds and uses of tests, gives a history and background for each, discusses their strengths and weaknesses, and develops the student's understanding of the quantitative measurement foundations of tests. Evaluation, selection, and interpretation of psychological tests for guidance and the use of psychometric data in counseling are also covered topics. As part of the course requirement, students will administer, score, and interpret tests.

Instructor's Course Description

This course analyzes various kinds and uses of tests, gives a history and background of tests and their strengths and weaknesses, and develops the student's understanding of the quantitative measurement foundations of tests. Evaluation, selection, and interpretation of psychological tests for guidance and the use of psychometric data in counseling. As part of the course requirement, students will administer, score and interpret tests. *Note: It is imperative that students keep all syllabi from all courses taken while in the MSCP program to facilitate the application process for licensing, certification, doctorate school application, etc.*

Chaminade MSCP Description webpage: <http://www.chaminade.edu/admissions/grad/mscp.php>

MSCP Core Program Learning Outcomes (PLOs)

1. Students will identify core counseling theories, principles, concepts, techniques and facts.
2. Students will demonstrate the ability to facilitate the counseling process with clients.
3. Students will identify the relationship between adaptation and change and the counseling process.

Student Learning Outcomes

Students will demonstrate an understanding of:

1. Students will identify the scientific method and empirical process as related to psychometrics and social science research (PLO #1).
2. Students will describe the APA ethical guidelines as they pertain to testing and Counseling (PLO #2).
3. Students will demonstrate these concepts in the form of a case study and initial history report (PLO #3).

ACA Ethical guidelines for Self-Care and Self-Monitoring

Given the 1) long-standing issue of problematic self-care and self-monitoring in the field of counseling, clinical psychology, and psychotherapy, 2) chronic stress demonstrated by many

students in the current Covid-19 ever-changing, and uncertain environment, 3) fact that there appears there will be numerous stressed out clients as a result of the Covid 19 ever-changing, and uncertain environment, and 4) fact that the ACA requires self-care and self-monitoring as part of their ethical guidelines, all courses will include and address the following ACA guidelines in all of their syllabi. These guidelines also apply to all faculty and staff teaching in the MSCP program.

Relationship of Course with Marianist Educational Values

All five of the Marianist Educational Values are represented to varying degrees in this required course, but two of them, including “Educate for adaptation to change” as well as “Provide an excellent education” are particularly relevant. In these days of assessment of learning outcomes there is little room for subjective evaluation of excellence or change. Our accreditation bodies and education shareholders demand measurable evidence of these outcomes. Whether we intend to show increased self-efficacy from nursing education, increased achievement in mathematics, or enhanced strength from weight training, all involve the basic principles of measurement and techniques for evaluating change. This course teaches the basic principles of classical measurement theory, as well as the methods of evaluating psychometric scales by demonstrating reliability and validity. Without measurement, we cannot speak definitively about excellence or change.

Technology and Software Requirements

For this asynchronous online course, it is assumed that the student will have reliable access to the internet through any standard web browser (e.g., Safari, Chrome, Firefox, etc.). The only additional software required is access to Microsoft Powerpoint (included in the Microsoft Office Suite package for both PC and Mac platforms) and Microsoft Word for submission of written assignments.

Faculty-Student Grading/Feedback Expectations

Assuming on-time submission of assignments, the instructor will make every reasonable effort to return graded assignments within one week of submission. Communications via email will be generally responded to in the same day but no later than 2 days after receipt.

Student Interaction Expectations

Students are expected to conduct themselves in a manner appropriate to professional standards in counseling, i.e., treat each other with respect and courtesy. Group assignments should be delegated to respective group members so that equivalent effort is a likely outcome. Group conveners will be responsible for ensuring that standard is met.

Assessment

1) Quizzes--there will be 10 weekly quizzes consisting of 10 multiple choice questions with an allowable completion time of 10 minutes for each quiz. The ten quizzes combined will contribute a total of 100 pts possible towards the course total. Quizzes will be available for a 48-hr period from Friday through Saturday each week (midnight to midnight).

2) Psychometric Case Report--the student will select an acquaintance who agrees to participate in this psychometric evaluation exercise. It is imperative that the participant understand that this is a classroom exercise and not a formal evaluation. The student will then interview that person and administer two personality assessments (Myers-Briggs Type Indicator, MBTI; and Big Five Inventory, BFI) plus a minimum of three additional tests from a list of available scales (based on relevance to the case). The interview and test results will then be summarized in a case report.

A sample case report will be made available as a handout for use as a model format. This report will count 50 pts towards the course total.

3) Group assignments—students will be assigned to groups of 3 individuals each with one designated as group convener in order to perform two group assignments (listed under Assignments). The role of the convener will be to collect input from the other group members, assemble a cohesive response, share draft with other members then transmit final draft to the instructor. These will count for up to 10 pts each and all group members will receive the same score.

Grading Criteria

Points: Quizzes (10 @ 10 pts ea)--100	Grading: <u>Points</u>	<u>Grade</u>
Case Report ----- 50	153-170	A
Group Assignments (2)---- 20	119-152	B
Total ----- 170 pts	below 119	C

Grading Policy / Late Submissions

It is assumed that students will allocate their time so that all assignments and quizzes will be submitted by the deadline. Make-up quizzes will only be considered if extraordinary circumstances occur that might reasonably prevent a student from meeting the 48-hr window of time available for quiz completion (Fri-Sat each week). Assignments should be submitted by the respective deadlines with the understanding that one point (1 pt) will be deducted for each day that the assignment is late.

Academic Honesty

Violations of academic honesty principles are extremely serious and won't be tolerated. Examples of dishonesty are records theft, cheating on examinations, altering grades, and plagiarism. Specific instances of dishonesty are investigated first by the instructor, then the program director. The penalty for dishonesty can range from an F grade to expulsion from the University.

TITLE IX

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct will NOT be tolerated at Chaminade. If you have been the victim of sexual misconduct, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment. Should I learn of any sexual misconduct, I am required to report the matter to the Title IX Coordinator as part of my mandatory reporting responsibilities. If you wish to speak to a **confidential** source, you may contact Dr. June Yasuhara in the Personal Counseling Center on the Chaminade campus. Phone | [808.735.4845](tel:808.735.4845) |

SCIENTIFIC METHOD DEFINITIONS

The **METHODS OF SCIENCE** are only tools, tools that we use to obtain knowledge about phenomena.

The **SCIENTIFIC METHOD** is a set of assumptions and rules about collecting and evaluating data. The explicitly stated assumptions and rules enable a standard, systematic method of investigation that is designed to reduce bias as much as possible. Central to the scientific method is the collection of data, which allows investigators to put their ideas to an empirical test, outside of or apart from their personal biases. In essence,

stripped of all its glamour, scientific inquiry is nothing more **THAN A WAY OF LIMITING FALSE CONCLUSIONS ABOUT NATURAL EVENTS.**

Knowledge of which the credibility of a profession is based must be objective and verifiable (testable) rather than subjective and untestable.

SCIENCE is a mode of controlled inquiry to develop an objective, effective, and credible way of knowing.

The assumptions one makes regarding the basic qualities of human nature (that is, cognitive, affective, behavioral, and physiological processes) affect how one conceptualizes human behavior.

The two basic functions of scientific approach are 1) advance knowledge, to make discoveries, and to learn facts in order to improve some aspect of the world, and 2) to establish relations among events, develop theories, and this helps professionals to make predictions of future events.

Research Design in Counseling
Heppner, Kivlighan, and Wampold

A **THEORY** is a large body of interconnected propositions about how some portion of the world operates; a **HYPOTHESIS** is a smaller body of propositions. **HYPOTHESES** are smaller versions of theories. Some are derived or born from theories. Others begin as researchers' hunches and develop into theories.

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The **PHILOSOPHY OF SCIENCE** decrees we can only falsify, not verify (prove), theories because we can never be sure that any given theory provides the best explanation for a set of observations.

Research Method in Social Relations
Kidder

THEORIES are not themselves directly proved or disproved by research. Even **HYPOTHESES** cannot be proved or disproved directly. Rather, research may either support or fail to support a particular hypothesis derived from a theory.

Scientific research has four general goals: (1) to describe behavior, (2) to predict behavior, (3) to determine the causes of behavior, and (4) to understand or explain behavior.

Methods In Behavioral Research; Cozby

In order to verify the reliability and validity of scientific research it is important to replicate the results. It is the preponderance of evidence that establishes/supports the theory.

<http://allpsych.com/researchmethods/replication.html>

MARIANIST EDUCATIONAL VALUES

The five characteristics of a Marianist Education are:

1. Educate for Formation in Faith

Catholic Universities affirm an intricate relationship between reason and faith. As important as discursive and logical formulations and critical thinking are, they are not able to capture all that can be and ought to be learned. Intellectual rigor coupled with respectful humility provide a more profound preparation for both career and life. Intellectual rigor characterizes the pursuit of all that can be learned. Respectful humility reminds people of faith that they need to learn from those who are of other faiths and cultures, as well as from those who may have no religious faith at all.

2. Provide an Excellent Education

In the Marianist approach to education, “excellence” includes the whole person, not just the technician or rhetorician. Marianist universities educate whole persons, developing their physical, psychological, intellectual, moral, spiritual and

social qualities. Faculty and students attend to fundamental moral attitudes, develop their personal talents and acquire skills that will help them learn all their lives. The Marianist approach to education links theory and practice, liberal and professional education. Our age has been deeply shaped by science and technology. Most recently, information and educational technologies have changed the way faculty and students research and teach. At Marianist Universities, two goals are pursued simultaneously: an appropriate use of information technology for learning, and the enhancement of interaction between students and teachers. As Catholic, Marianist Universities seek to embrace diverse peoples and understand diverse cultures, convinced that ultimately, when such people come together, one of the highest purposes of education is realized: a human community that respects every individual within it.

3. Educate in Family Spirit

Known for their strong sense of community, Marianists have traditionally spoken of this sense as “family spirit.” Marianist educational experience fosters the development of a community characterized by a sense of family spirit that accepts each person with loving respect, and draws everyone in the university into the challenge of community building. Family spirit also enables Marianist universities to challenge their students, faculty and staff to excellence and maturity, because the acceptance and love of a community gives its members the courage to risk failure and the joy of sharing success.

4. Educate for Service, Justice, and Peace

The Marianist approach to higher education is deeply committed to the common good. The intellectual life itself is undertaken as a form of service in the interest of justice and peace, and the university curriculum is designed to connect the classroom with the wider world. In addition, Marianist universities extend a special concern for the poor and marginalized and promote the dignity, rights and responsibilities of all people.

5. Educate for Adaptation to Change

In the midst of rapid social and technological change, Marianist universities readily adapt and change their methods and structures so that the wisdom of their educational philosophy and spirituality may be transmitted even more fully.

“New times call for new methods,” Father Chaminade often repeated. The Marianist university faces the future confidently, on the one hand knowing that it draws on a rich educational philosophy, and on the other fully aware for that philosophy to remain vibrant in changing times, adaptations need to be made.

Selected from *Characteristics of Marianist Universities: A Resource Paper*, Published in 1999 by Chaminade University of Honolulu, St. Mary’s University and University of Dayton

Students with Disabilities

Chaminade will provide assistance for any student with documented disabilities. Any student who believes he/she may need accommodations in this class must contact the ADA Accommodations Office (email: ada@chaminade.edu; phone: 808-739-8305) in order to determine whether the student meets the requirements for documented disability in accordance with the Americans with Disabilities Act. It is important to contact them as soon as possible so that accommodations are implemented in a timely fashion.

Course Calendar:

<u>Week</u>	<u>Topic</u>	<u>Lesson</u>
10/4-10/10	Introduction to course; description of assignments (video) Sample Case Report Intro. to Measurement; Design of Ability Tests;	1-1 1-2
10/11–10/17	APA ethical standards (2010), go to: http://www.apa.org/ethics/code/index.aspx Design of Typical Performance Tests Reading: issue in education--CRT vs NRT tests: http://www.proftesting.com/test_topics/pdfs/test_types_CRT.pdf	APA site 2
10/18-10/24	Understanding the MBTI and BFI (MBTI: http://www.humanmetrics.com/cgi-win/jtypes2.asp BFI: https://openpsychometrics.org/tests/IPIP-BFFM/ Working with Scores	3-1; 3-2; 3-3
10/25-10/31	Reliability Analysis	4
11/1 – 11/7	Validity Analysis Item Analysis	5-1 5-2
11/8 – 11/14	Psychometrics of ACE Scale --Group Assignment #1 due	Handouts
11/15-11/21	Testing in Educational Settings Cross-cultural issues in testing	6
11/22-11/28	Testing in Clinical Settings Testing in Counseling Settings --Case Reports due	8-1 8-2
11/29-12/5	Testing in Business and Industry Review for Final Exam	9
12/6-12/12	Course wrap-up --Group Assignment #2 due	

LIST OF AVAILABLE TESTS

TEST NAME	APPROX. TIME REQUIRED
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MAXIMAL PERFORMANCE TESTS: (both required)

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|---|-----------|
| 1) Kaufman Brief Intelligence Test (K-BIT2) | 20-30 min |
| 2) Wide Ranging Achievement Test--Vers. 4 (WRAT-4) | 20-30 min |

TYPICAL PERFORMANCE TESTS

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|--|-----------|
| 1) Myers-Briggs Type Inventory (MBTI) (required)
(I. Briggs Myers, 1977) MBTI manual (pdf from instructor) | 15-20 min |
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NOTE: Remaining tests are to be chosen based on relevance to case; **All the following are available from instructor (email request):**

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|---|-------------|
| 2) Hudson Scales (Hudson, 1982) | 15 min each |
| <ul style="list-style-type: none"> a) Child's Attitude Toward Father (CAF)—quality of relationship with father b) Child's Attitude Toward Mother (CAM)—quality of relationship with mother c) Generalized Contentment Scale (GCS)—life satisfaction d) Index of Family Relations (IFR)—quality of relationship with family members e) Index of Marital Satisfaction (IMS)—level of marital satisfaction f) Index of Parental Attitudes (IPA)—quality of parental relationship with children g) Index of Peer Relations (IPR)—quality of relationship with peers h) Index of Self-Esteem (ISE)—level of self esteem i) Index of Sexual Satisfaction (ISS)—level of sexual satisfaction in relationship j) Sexual Attitude Scale (SAS)—level of sexual conservatism | |

Scoring Hudson scales: i) At bottom of each scale is a list of numbers—these refer to the items on the scale which are to be reverse-scored--e.g., if nos. read "1, 3, 5" then score as follows:

Item	Score	Reverse score	Key: Regular	Reverse
1	3	3	1	5
2	1		2	4
3	4	5	3	3
4	5		4	2
5	5	1	5	1

Sums: 6 9

ii) **SCORE = sum of regular scores (uncrossed out) + sum of reverse scores - 25 pts**

iii) increasing score indicates decreasing level of construct (≥ 30 = "elevated"; < 30 is "favorable")

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|---|-----------|
| 3) Beck Depression Inventory (BDI) (Beck, 1967)—level of depression | 15-20 min |
| 4) State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1976)—level of anxiety of the moment (A-state) as well as anxiety proneness (A-trait) | 15-20 min |
| 5) Locus of Control (LOC) (Nowicki & Strickland, 1973)—sense of personal control | 15-20 min |
| 6) Adverse Childhood Events (ACE) scale (Fellitti et al. 1998)—checklist of ACE events | 15-20 min |
| 7) Social Desirability Scale (SD) (Crowne & Marlowe, 1960)—importance of appearing favorable | 15-20 min |
| 8) Job Satisfaction Index (JSI) (BPC Publishing Ltd, 1975)—level of job satisfaction | 15-20 min |
| 9) Michigan Alcoholism Screening Test (MAST)—predisposition to alcoholism | 5-10 min |

PSY 606: Supplemental Readings (provided by instructor):

- 1) Baldwin, W. (2000). Information no one else knows: The value of self-report. In A.A. Stone, J.S. Turkkan, C.A. Bachrach, J.B. Jobe, H.S. Kurtzman & V.S. Cain (Eds.), *The science of self-report* (pp. 3-7). Mahway, NJ: Erlbaum.
- 2) Bullinger, M., Anderson, R., Cella, D. & Aaronson, N. (1993), Developing and evaluating cross-cultural instruments from minimum requirements to optimal models. *Quality of Life Research*, 2, 451-459
- 3) Camilli, G. (1992). A conceptual analysis of differential item functioning in terms of a multidimensional item response model. *Applied Psychological Measurement*, 16, 129-147.
- 4) Cronbach, L.J. & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.
- 5) Dube SR, Felitti VJ, Dong M, Giles WH, Anda RF. The Impact of Adverse Childhood Experiences on Health Problems: Evidence from Four Birth Cohorts Dating Back to 1900. *Preventive Medicine*. 2003; 37: 268-77.
- 6) Dunning, D., Heath, C. & Suls, J.M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5(3), 69-106.
- 7) Gosling, S.D., Vazier, S., Srivastava, S. & John, O.P. (2004). Should we trust Web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, 59, 93-104.
- 8) Jackson, D.N. (1969). Multimethod factor analysis in the evaluation of convergent and discriminant validity. *Psychological Bulletin*, 72, 30-49
- 9) Li, H. & Wainer, H. (1998). Toward a coherent view of reliability in test theory. *Journal of Educational and Behavioral Statistics*, 23, 478-484.
- 10) Pareek, U., & Rao, T.V. (1980). Cross-cultural surveys and interviewing. In H.C. Triandis & J.W. Berry (Eds.), *Handbook of cross-cultural psychology: Methodology* (Vol. 2, pp. 127-179), Boston: Allyn & Bacon.
- 11) Poole, J.C., Dobson, K.S., & Pusch, D. (2017). Neglect childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse & Neglect*, 64, 89-100.
- 12) Rosenthal, R., and Rosnow, R.L. (2008, 3rd ed.). *Essentials of behavioral research*. Boston: McGraw-Hill (chs 4: reliability & validity of measurements; 6: questionnaires, interviews and diaries).

APPENDIX B
PSY 606: Psychological Testing

TESTING AGREEMENT

In agreeing to take these psychological tests, I understand that this is a class exercise and that the test administrator is a graduate student in a course on psychological testing, and is thereby not qualified to administer and interpret these tests at a professional level. I further understand that all evaluations based on the results of these tests should be considered as tentative and inconclusive, in light of the non-professional nature of the test-taking situation. I also understand that in order to obtain a fully valid psychological profile, I would need to consult a licensed clinical psychologist/psychometrician. Finally it is my understanding that my test results will be anonymous and my identity protected throughout this process.

Signed:

testing volunteer

student test administrator

Note: Once signed, this form will be retained by the student test administrator;
The instructor will not see this form;
The name of the testing volunteer will not be divulged in any manner.