FAIRMONT STATE UNIVERSITY

MEMORANDUM

TO: Curriculum Committee

FROM: Jack Kirby

DATE: September 4, 2012

SUBJECT: Curriculum Proposal #12-13-01
Final Faculty Senate Approval 10/09/2012

I recommend approval of the attached Curriculum Proposal #12-13-01 from the College of Liberal Arts, Department of Behavioral Science.

The proposal increases the required hours for the Psychology major from 40 to 55 hours and removes the requirement for an 18 hour minor. This results in a reduction of total program hours (major and minor) from 58 to 55 credit hours.

The proposal reduces PSYC 2240 (Statistics) from 4 to 3 hours and creates a new 4-hour course (PSYC 3305 – Research Methods). PSYC 3305 (Research Methods) and PSYC 3340 (Intervention Techniques and Applications) are added as required major courses, along with the new requirement of 9 hours of Psychology electives.

Finally, the prerequisite for PSYC 3390 (Foundations) is changed from PSYC 3310 (Experimental Psychology) to PSYC 3305 (Research Methods).

c: Dr. Christina Lavorata
Dr. Deanna Shields
Dr. Sharon Boni
Dr. Clarence Rohrbaugh
Ms. Evie Brantmayer

CURRICULUM PROPOSAL (Submit one hard copy and an electronic copy to the Associate Provost by the second Tuesday of the month.)

Proposal Number: 12-13-01

School/Department/Program: Department of Behavioral Sciences

Preparer/Contact Person: Clarence Rohrbaugh

Telephone Extension: 4669

Date Originally Submitted: 09/03/2012

Revision (Indicate date and label it Revision #1, #2, etc.):

Implementation Date Requested: August, 2013

I. **PROPOSAL**. Write a brief abstract, not exceeding 100 words, which describes the overall content of the proposal.

Reduce required hours for PSYC 2240 statistics from 4cr. Hrs. to 3cr. Hrs. Create new program required course PSYC 3305 Research Methods 4cr. Hrs. Change total required hours for the Psychology major from 40cr. Hrs. to 55cr hours by adding the Research Methods course and requiring three 3cr. Hr. psychology electives. Remove the requirement for a minor. Change prerequisite for PSYC 3390 from PSYC 3310 to PSYC 3305.

II. **DESCRIPTION OF THE PROPOSAL**. Provide a response for each letter, A-H, and for each Roman Numeral II–V. If any section does not apply to your proposal, reply N/A.

A. Deletion of course(s) or credit(s) from program(s)

Reduce required hours for PSYC 2240 from four to three hours.

Total hours deleted. 01

B. Addition of course(s) or credit(s) from program(s)

Add currently existing PSYC 3340 Intervention Techniques and Application – three credit hours
Newly created PSYC 3305 Research Methods – four credit hours
Currently existing courses as options to fulfill new 09 credit hour psychology elective requirement.

ELECTIVE COURSE OPTIONS

PSYC 2250 Community Psychology
PSYC 2260 Industrial Personnel
PSYC 3320 Sensation and Perception
PSYC 3360 Cognitive Psychology
PSYC 3399 Special Topics
PSYC 4480 Directed Studies
PSYC 4485 Advanced Psychometrics
PSYC 4487 Practicum I
PSYC 4489 Practicum II
PSYC 4490 Directed Research
PSYC 4491 Psychopathology/Child & Adoles.
PSYC 4493 The Psychology of Aging
PSYC 4494 Interpersonal Dynamics

Total hours added. 16

C. Provision for interchangeable use of course(s) with program(s)

PSYC 3360 may be either one of the required electives or interchangeable with PSYC 3370 as a required course. PSYC 3360 may not be used as both an elective course and a required course.

D. Revision of course content. Include, as an appendix, a revised course description, written in complete sentences, suitable for use in the university catalog.

PSYC 2240 will no longer contain a lab component. This only means that the use of the SPSS statistical program will no longer be required as a separate lab component. The course will only demonstrate SPSS use and the course description will only require the removal of the line "one hour of laboratory per week."

E. Other changes to existing courses such as changes to title, course number, and elective or required status.

All elective courses listed in item B will be elective courses eligible to fulfill the new 09cr hr of required electives with the exception as noted in item C.

F. Creation of new course(s). For each new course

1. Designate the course number, title, units of credit, prerequisites (if any), ownership (FSU, PC&TC, or shared) and specify its status as an elective or required course. If you are creating a shared course, attach a memo from the Deans of the affected Schools explaining the rationale for the course being shared.

   PSYC 3305 Research Methods – 04 credit hours
   Prerequisite – PSYC 2240 Statistics
   FSU owned course
   Required by the Psychology program

2. Include, as an appendix, a course description, written in complete sentences, suitable for use in the college catalog.

   See Appendix B page 8

3. Include, as an appendix, a detailed course outline consisting of at least two levels.

   See Appendix C page 9

4. In order to meet the requirements as outlined in Goal One of the Strategic Plan, please include Outcome Competencies and Methods of Assessment as an appendix. Examples are available upon request from the Chair of the Curriculum Committee.

   See Appendix D page 15

G. Attach an itemized summary of the present program(s) affected, if any, and of the proposed change(s).

1. Describe how this proposal affects the hours needed to complete this program. Specifically, what is the net gain or loss in hours? Use the format for Current and Proposed Programs in Appendix A.

2. Include proof that this proposal meets the degree definition policy (Board of Governor's Policy #52) as part of the Proposed Program in Appendix A page 5.

3. Exceptions to the degree definition policy: As per policy #52, programs seeking exceptions to any of the maximum credit hour limits must submit formal requests to the Board of Governors for approval. Explain the rationale for the exception by documenting the existence of one or more of the criteria in paragraph 4.2.

III. RATIONALE FOR THE PROPOSAL.

A. **Quantitative Assessment**: Indicate the types of assessment data, i.e., surveys, interviews, capstone courses, projects, licensure exams, nationally-normed tests, locally developed measurements, accreditation reports, etc., that were collected and analyzed to determine that curricular changes were warranted. Quantitative data is preferred.

See Appendix E for the American Psychological Associations (APA) outcome based goals for an undergraduate education. These goals identify specific domains of study essential to an undergraduate education in psychology. Relevant sub-headings are copied along with courses to be offered in the new program structure.

The following is a list of other WV Colleges' and Universities' research methods and statistics requirements for the Psychology degree.

Bluefield State College	480 Research Design and Proposal 3hrs	210 Elementary Statistics 3hrs
Concord University	Experimental Psychology 3hrs	212 Behavioral Statistics 3hrs
Glenville State College	293 Research Methods in Psychology 3hrs	No statistics requirement
Marshall University	323 Experimental Psychology 3 hrs	223 Elementary Behavioral Statistics 3hrs
Shepherd University	251 Research Methods in Psychology3hrs	250 Statistics for the Social Sciences3hrs
West Liberty University	PSYC 301 Experimental Psychology 3hrs	SS 250 Stats in the Soc. & Behav. Sciences 3hrs
West Virginia State University	205. Experimental Psychology 4hrs	200. Statistics for the Social Sciences 4hrs
West Virginia University	202. Research Methods in Psych 3hrs	211 STAT 3hrs

B. **Qualitative Assessment**: Based upon the assessment data above, indicate why a curricular change is justified. Indicate the expected results of the change. Be sure to include an estimate of the increased cost, or reduction in cost of implementation. FOR EXAMPLE: Will new faculty, facilities, equipment, or library materials be required?

Rational for these changes arise from several different areas.

1. The change from 4 to 3cr hrs for PSYC 2240 Statistics is based on the fact that only one other University in WV offers a 4cr hr statistics course. This causes transfer problems.
2. The addition of the PSYC 3305 Research Methods course is based on the recognition that almost all Psychology programs across the country offer a research methods course. At some WV schools the research course is called Experimental. However, experimental refers to a specific type of research and does not cover the broader spectrum of research options.
3. In August 2011 the APA launched its outcome measurement database to provide guidelines for undergraduate education in psychology. These goals (Appendix E) clarify major areas of psychology that should be covered in an undergraduate program. The new required core courses along with the required 12 hours of electives are needed to meet these new guidelines and provide students with the best possible coverage in the field of psychology.

IV. Should this proposal affect any course or program in another school, a memo must be sent to the Dean of each school impacted and a copy of the memo(s) must be included with this proposal. In addition, the Deans of the affected schools must sign below to indicate their notification of this proposal.

By signing here, you are indicating your college's/school's notification of this proposal.

College/School	Dean	Signature
School of Nursing and Allied Health Administration	**Dr. Sharon Boni**	
College of Liberal Arts	**Dr. Deanna Shields**	

V. Should this proposal affect any course to be added or deleted from the general studies requirements, a memo from the chair of the General Studies Committee indicating approval of the change must be included with this proposal.

NA

VI. ADDITIONAL COMMENTS.

APPENDIX A
B.S. Degree in Psychology
Current Program

Required Major Courses			**HRS**	
PSYC 1101		Introduction to Psychology	03	
PSYC 2220		History & Systems of Psychology	03	
PSYC 2230		Social Psychology	03	
PSYC 2240		Statistics	04	
PSYC 3300		Abnormal Psychology	03	
PSYC 3310		Experimental Psychology	03	
PSYC 3330		Developmental Psychology	03	
PSYC 3350		Biopsychology	03	
PSYC 3370		Theories of Learning	03	
PSYC 3390		Foundations	03	
PSYC 4400		Psychometrics	03	
PSYC 4410		Theories of Personality	03	
PSYC 4460		Seminar	03	
TOTAL Required Major Courses				40
Major Electives				00
Minor Electives				18
TOTAL HOURS FOR MAJOR				**58**
Required General Studies Courses				
First Year Experience				15-16
ENGL	1104	Written English I	3	
ENGL	1108	Written English II	3	
INFO	1100	Computer Concepts and Applications	3	
MATH			3-4	
COMM	2200, 2201, OR 2202	Communication	3	
Scientific Discovery				8
Cultural / Civilization Exploration				9
Society / Human Interactions				6
		3 hrs provide by major		
Artistic / Creative Expression				6
TOTAL GENERAL STUDIES HOURS				**44**
TOTAL FREE ELECTIVES				**26**
TOTAL HOURS				**128**

B.S. Degree in Psychology
Proposed Program
--and--
Analysis of Compliance with Degree Definition Policy

Required Major Courses		HRS	Degree Definition Policy
PSYC 1101	Introduction to Psychology	03	
PSYC 2220	History & Systems of Psychology	03	
PSYC 2230	Social Psychology	03	
PSYC 2240	Statistics	03	
PSYC 3300	Abnormal Psychology	03	
PSYC 3305	Research Methods	04	
PSYC 3310	Experimental Psychology	03	
PSYC 3330	Developmental Psychology	03	
PSYC 3340	Intervention Techniques and Applications	03	
PSYC 3350	Biopsychology	03	
PSYC 3370	Theories of Learning or PSYC 3360 Cognitive	03	
PSYC 3390	Foundations	03	
PSYC 4400	Psychometrics	03	
PSYC 4410	Theories of Personality	03	
PSYC 4460	Seminar	03	
Psychology Required Electives		09	
TOTAL HOURS FOR MAJOR		**55**	Max 65

Required General Studies Courses		
Attribute IA – Critical Analysis	PSYC 3310	X
Attribute IB – Quantitative Literacy	MATH 1107 or higher in IB	3
Attribute IC – Written Communication	ENGL 1104	3
Attribute ID - Teamwork	COMM 2200	X
Attribute IE – Information Literacy	ENGL 1108	3
Attribute IF – Technology Literacy	ENGL 1109	3
Attribute IG – Oral Communication	COMM 2200 or 2201 or 2202	3
Attribute III - Citizenship	HIST 1107 or 1108 or POLI 1103	3
Attribute IV - Ethics	Any course in IV	3
Attribute V - Health	PHED 1100	3
Attribute VI - Interdisciplinary	Any course in VI	2
Attribute VIIA - Arts	Any course in VIIA	3

Attribute VIIB - Humanities	3	
Any course in VIIB		
Attribute VIIC – Social Sciences	X	
PSYC 1101		
Attribute VIID - Natural Science	4	
Any course in VIID		
Attribute VIII – Cultural Awareness	3	
Any GEOG course in VIII		
Additional General Studies hours	X	
PSYC 3390 writing intensive course		
TOTAL GENERAL STUDIES HOURS	**39**	32-42
TOTAL FREE ELECTIVES	**26**	Min 21
TOTAL HOURS	**120**	120

APPENDIX B
Catalog course description

PSYC 3305 Research Methods.....4 hrs.

Research methods provides an introduction to: 1) the scientific method used in the social sciences; 2) the design and control of research experiments; 3) the statistical analysis of data; 4) the communication of research results; and 4)an introduction to the application of ethics in the practice of research.. Various approaches to conducting research in psychology will be presented including observational, relational, and experimental. This course includes three hours of instruction and one hour of Lab. PR: PSYC 2240

APPENDIX C
Detailed course outline

Module 1: The basics

You must read chapters 1, 2, and 3 in the book, familiarize yourself with the terminology listed in **Bold** throughout each chapter, and be prepared to discuss the material from each chapter. This module provides the information to meet Outcome One based on chapter specific outcomes listed below. Discussion of each chapter will be followed by a quiz and an assignment or project with an Exam after completion of Chapter 3.

Chapter 1: Behavioral Research and the Scientific Method
After completing this chapter, you should be able to:

- Explain why it is important to know about the fourth R—researching.
- Differentiate between Peirce's four strategies for establishing beliefs.
- Explain why the expression "the scientific method" is a misnomer.
- Explain what is meant by the term "empirical reasoning."
- Provide examples of the use of empirical reasoning in behavioral science.
- Discuss three extra-empirical factors that play a role in science.
- Explain what is meant by "behavioral science."
- Discuss the role of methodological pluralism and theoretical ecumenism in behavioral science.
- Compare and contrast the descriptive, relational, and experimental orientations to behavioral and social research.
- Describe some of the traits of good researchers.

Chapter 2: From Hunches to Testable Hypotheses
After completing this chapter, you should be able to:

- Describe what is meant by the "discovery phase" of the scientific method.
- Provide examples of hypothesis-generating heuristics.
- Explain what belongs in a research proposal.
- Describe how reference materials can be found when doing a literature search.
- Explain the difference between operational and theoretical definitions of variables.
- Differentiate between a theory and a hypothesis.
- Discuss the three criteria for acceptable scientific hypotheses.
- Differentiate between independent and dependent variables.
- Provide examples of independent and dependent variables.

Chapter 3: Ethical Considerations and Guidelines
After completing this chapter, you should be able to:

- Discuss the role of ethical guidelines in scientific research.
- Describe the five general ethical principles.
- Explain the purpose of an informed-consent agreement and when it should be used.
- Describe the purpose of an ethics review.
- Discuss how IRBs perform a risk-benefit analysis when reviewing a research proposal.
- Identify potential ethical dilemmas one might encounter while conducting research.

- Discuss the use of deception in research, including the difference between active and passive deception.
- Explain the purpose of debriefing and how it should be done.
- Discuss how animal research is governed by ethical rules.
- Explain what is meant by plagiarism and lazy writing and how they can be avoided.

Module 2: Observation and Measurement

You must read chapters 4, 5, and 6 in the book, familiarize yourself with the terminology listed in **Bold** throughout each chapter, and be prepared to discuss the material from each chapter. This module provides the information to meet Outcome Two based on chapter specific outcomes listed below. Discussion of each chapter will be followed by a quiz and an assignment or project with an Exam after completion of Chapter 6.

Chapter 4: Methods of Systematic Observation
After completing this chapter, you should be able to:

- Differentiate between systematic observation and everyday noticing or watching.
- Explain the difference between qualitative and quantitative research methods.
- Explain how researchers simultaneously participate and observe.
- Describe how content analysis is used to impose structure on archival data.
- Describe how judges or raters are used to code behavior, and how they are chosen.
- Explain the role of laboratory situational simulation.
- Discuss what is meant by rival hypotheses.
- Differentiate between mundane and experimental realism.
- Distinguish between reactive and nonreactive observations.
- Explain what is meant by unobtrusive observation, and how researchers go about it.

Chapter 5: Methods for Looking Within Ourselves
After completing this chapter you should be able to:

- Explain the role of self-report measures in behavioral and social research.
- Describe four important issues to consider when using self-report measures.
- Compare and contrast open-ended and fixed-choice measures.
- Discuss how projective tests and personality inventories are used.
- Discuss the different types of rating scales that can be used in self-report measures.
- Identify potential rating errors and discuss how they can be controlled.
- Explain the purpose of semantic differentials, Likert scales, and Thurstone scales.
- Discuss when a questionnaire is used in research, and how it should be constructed.
- Describe how face-to-face and telephone interviews are done.
- Explain the use of behavioral diaries in research.

Chapter 6: Reliability and Validity in Measurement and Research.
After completing this chapter you should be able to:

- Explain the difference between validity and reliability.
- Differentiate between random and systematic errors.

- Describe the purpose of test-retest and alternate-forms reliability.
- Explain what is meant by internal consistency reliability.
- Describe methods for estimating and increasing internal consistency reliability.
- Discuss reliability as it pertains to observational studies using judges.
- Describe how reliability is related to replication and external validity.
- Differentiate between content validity and criterion validity.
- Discuss the role of construct validity in test development and experimental research.
- Describe the role of statistical conclusion validity and internal validity in making causal inferences.

Module 3: Causality.

You must read chapters 7, 8, and 9 in the book, familiarize yourself with the terminology listed in **Bold** throughout each chapter, and be prepared to discuss the material from each chapter. This module provides the information to meet Outcome Three based on chapter specific outcomes listed below. Discussion of each chapter will be followed by a quiz and an assignment or project with an Exam after completion of Chapter 9.

Chapter 7: Randomized Experiments and Causal Inference.
After completing this chapter, you should be able to:

- Describe the purpose of randomly assigning sampling units to treatment conditions and how it is done.
- Explain how between-subjects and within-subjects designs differ from each other.
- Discuss why causation is said to be "shrouded in mystery, controversy, and caution."
- Differentiate among the four kinds of causation.
- Describe the three criteria scientists use to justify causal inferences.
- Discuss how Mill's methods apply to the logic of experimental control.
- Explain how the Solomon design can be use to illustrate the process of teasing out effects of interest.
- Discuss what is characteristic of "pre-experimental designs."
- Describe how history, maturation, instrumentation, and selection represent threats to internal validity.
- Explain what demand characteristics have to do with the "good subject" and quasi-control subjects.
- Discuss how experimenter expectancy effects are addressed by "blind" designs and expectancy control designs.

Chapter 8: Nonrandomized Research and Causal Reasoning
After completing this chapter, you should be able to:

- Discuss why researchers are sometimes not able to use randomized experimental designs to make causal inferences.
- Differentiate between randomized experimental designs and quasi-experimental research designs.
- Explain the third-variable problem in correlational research.
- Explain how studies with nonequivalent groups can be used to address questions of causality.

- Explain how one might infer causation based only on circumstantial evidence of covariation and temporal precedence.
- Describe the role of time-series designs and "found experiments" in social research.
- Describe the design strategies used in single-case experiments.
- Explain how cross-lagged panel designs are used to infer causation.
- Discuss the limitations of cross-lagged panel designs.
- Discuss the purpose of longitudinal research.
- Identify the risks associated with generalizing from cross-sectional research to long-term changes.

Chapter 9: Survey Research and Subject Recruitment
After completing this chapter, you should be able to:

- Explain when the use of opportunity samples would and would not be appropriate.
- Describe how probability sampling can lead to samples representative of the population.
- Discuss what is meant by bias and stability in survey designs.
- Describe simple random sampling and how it is done.
- Describe the advantages of stratified random sampling over simple random sampling.
- Describe area probability sampling plans.
- Discuss some of the lessons on how to conduct survey research learned by George Gallup.
- Describe how point estimates and 95% confidence intervals are calculated and interpreted in survey research.
- Explain what is meant by the nonresponse bias and how it can be minimized.
- Describe the volunteer bias as well as strategies for minimizing this bias.

Module 4: Research analysis and power

You must read chapters 10, 11, and 12 in the book, familiarize yourself with the terminology listed in **Bold** throughout each chapter, and be prepared to discuss the material from each chapter. This module provides the information to meet Outcome Four based on chapter specific outcomes listed below. Discussion of each chapter will be followed by a quiz and an assignment or project with an Exam after completion of Chapter 12.

Chapter 10: Summarizing the Data
After completing this chapter, you should be able to:

- Describe the three important criteria for good visual displays.
- Describe how frequency distributions are useful for visualizing data.
- Explain how a stem-and-leaf chart works.
- Describe how to calculate the three measures of central tendency: the mean, median, and mode.
- Differentiate among symmetrical, positively skewed, and negatively skewed distributions.
- Discuss the effects of outliers on measures of central tendency.
- Differentiate between the crude range and the extended range.
- Describe how to calculate the variance and the standard deviation.
- Differentiate between descriptive and inferential measures.
- Discuss how to calculate the confidence interval for a mean.

- Describe the role of the normal distribution.
- Discuss why z-scores are called "standard scores" and how they can be used in research.

Chapter 11: Correlating Variables
After completing this chapter you should be able to:

- Describe the purpose of the correlation coefficient.
- Differentiate between continuous and discrete variables and explain when discrete variables are dichotomous.
- Describe what is meant by the "third-variable problem."
- Explain why the Pearson r measure is called the "product-moment correlation."
- Discuss when one would use a rank-order correlation coefficient.
- Explain why the Spearman rho is classified as a product-moment r.
- Describe the purpose of the point-biserial r.
- Explain how dummy coding is used to quantify dichotomous variables.
- Describe the relationship between the phi coefficient and the Pearson r.
- Discuss how one can show that the Spearman rho, the point-biserial r, and the phi coefficient are simply cases of the Pearson r.

Chapter 12: Understanding p-values and Effect Size
After completing this chapter you should be able to:

- Describe the purpose of null hypothesis significance testing (NHST).
- Explain the difference between the null hypothesis and the alternative hypothesis.
- Differentiate between Type I and Type II errors.
- Describe how one finds and reports the statistical significance of r.
- Explain when a large effect size may not be statistically significant.
- Explain how a tiny effect size can still be meaningful and statistically significant.
- Discuss the purpose of the binomial effect-size display (BESD).
- Explain why one should not present effect sizes as squared rs.
- Discuss the purpose of a statistical power analysis.
- Describe how confidence intervals for effect size rs are computed.
- Describe the purpose of computing Killeen's prep.

Module 5: Design and Analysis

You must read chapters 13, 14, and 15 in the book, familiarize yourself with the terminology listed in **Bold** throughout each chapter, and be prepared to discuss the material from each chapter. This module provides the information to meet Outcome Five based on chapter specific outcomes listed below. Discussion of each chapter will be followed by a quiz and an assignment or project with an Exam after completion of Chapter 15.

Chapter 13: The Comparison of Two Conditions
After completing this chapter you should be able to:

- Explain how the concept of a signal-to-noise ratio applies to t-tests.

- Discuss the relationship between degrees of freedom (df) and p values.
- Describe how a t-test on independent samples is computed.
- Explain how the effect-size r is estimated directly from t.
- Define Cohen's d.
- Discuss why t is said to be the product of the effect size and the study size.
- Describe how one can maximize t.
- Describe how a t-test on related samples is computed.
- Identify the statistical assumptions of the t-test

Chapter 14: Comparisons on More Than Two Conditions
After completing this chapter you should be able to:

- Explain how t and F are related.
- Describe the logic behind the analysis of variance (ANOVA).
- Explain how the variation of all the observations is divided into separate sources of variance.
- Describe how an ANOVA summary table is set up and interpreted.
- Differentiate between focused and omnibus statistical procedures.
- Discuss the purpose of "tests of simple effects."
- Describe the advantages that two-way designs offer.
- Explain how the factorial ANOVA is conceptualized in terms of an additive model.
- Discuss the purpose of contrast F and t tests.
- Differentiate between intrinsically and nonintrinsically repeated measures

Chapter 15: The Analysis of Frequency Tables
After completing this chapter you should be able to:

- Discuss the purpose of chi-square.
- Describe how chi-square is computed.
- Explain the relationship between chi-square and the phi coefficient.
- Describe how an effect size r can be estimated directly from a 1-df chi-square.
- Discuss strategies for interpreting a large table of counts Chapter 15: The Analysis of Frequency Tables

APPENDIX D

Course: PSYC 3305 Research Methods
Instructor: Clarence Rohrbaugh

Course Outcomes	Direct assessment measures	Satisfactory performance standards
Upon successful completion of this course, students will be able to	Student performance with respect to this outcome will be measured by	Satisfactory student performance on the direct assessment measure will consist of
1. Describe the stages of the scientific method and the use of the hypothesis, variables, and ethics within the method.	Three quizzes, one exam, one or more assignments.	70% minimum on quizzes and exam 80% on assignment scoring rubric
2. Distinguish between the various methods of data collection and recognize the role of reliability and validity within the process.	Three quizzes, one exam, one or more assignments.	70% minimum on quizzes and exam 80% on assignment scoring rubric
3. Identify random and non-random designs in existing studies and appropriately apply these techniques to causal and non-causal research.	Three quizzes, one exam, one or more assignments.	70% minimum on quizzes and exam 80% on assignment scoring rubric
4. Demonstrate the use and explain the meaning of basic analytic techniques.	Three quizzes, one exam, one or more assignments.	70% minimum on quizzes and exam 80% on assignment scoring rubric
5. Describe and demonstrate the appropriate use of several parametric and non-parametric analyses.	Three quizzes, one exam, one or more assignments.	70% minimum on quizzes and exam 80% on assignment scoring rubric

APPENDIX E

APA GUIDELINES FOR THE UNDERGRADUATE PSYCHOLOGY MAJOR

Taken from (http://www.apa.org/ed/precollege/about/psymajor-guidelines.pdf)

Learning Goals

I. Knowledge, Skills, and Values Consistent With the Science and Application of Psychology

Goal 1: Knowledge Base of Psychology

Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

Goal 2: Research Methods in Psychology

Students will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

Goal 3: Critical Thinking Skills in Psychology

Students will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

Goal 4: Application of Psychology

Students will understand and apply psychological principles to personal, social, and organizational issues.

Goal 5: Values in Psychology

Students will be able to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a discipline.

II. Knowledge, Skills, and Values Consistent With Liberal Arts Education That Are Further Developed in Psychology

Goal 6: Information and Technological Literacy

Students will demonstrate information competence and the ability to use computers and other technology for many purposes.

Goal 7: Communication Skills

Students will be able to communicate effectively in a variety of formats.

Goal 8: Sociocultural and International Awareness

Students will recognize, understand, and respect the complexity of sociocultural and international diversity.

Goal 9: Personal Development

Students will develop insight into their own and others' behavior and mental processes and apply effective strategies for self-management and self-improvement.

Goal 10: Career Planning and Development

Students will emerge from the major with realistic ideas about how to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

Goal 1

1.1 Characterize the nature of psychology as a discipline.

a. Explain why psychology is a science

b. Identify and explain the primary objectives of psychology: describing, understanding, predicting, and controlling behavior and mental processes

c. Compare and contrast the assumptions and methods of psychology with those of other disciplines

d. Describe the contributions of psychology perspectives to interdisciplinary collaboration

1.2 Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology:
a. Theory and research representing each of the following four general domains:
(1) Learning and cognition
PSYC 3370 Theories of Learning PSYC 3360 Cognitive Psychology 3 credit hours

(2) Individual differences, psychometrics, personality, and social processes, including those related to sociocultural and international dimensions
PSYC 4400 Psychometrics PSYC 4410 Theories of Personality PSYC 2230 Social Psychology 9 credit hours

(3) Biological bases of behavior and mental processes, including physiology, sensation, perception, comparative, motivation, and emotion
PSYC 3350 Biopsychology PSYC 3320 Sensation and Perception 6 credit hours

(4) Developmental changes in behavior and mental processes across the life span
PSYC 3330 Developmental Psychology 3 credit hours

b. The history of psychology, including the evolution of methods of psychology, its theoretical conflicts, and its sociocultural contexts
PSYC 2220 History & Systems of Psychology 3 credit hours
Goal 2
2.2 Explain different research methods used by psychologists.
PSYC 3305 Research Methods PSYC 2240 Statistics 7 credit hours
2.4 Design and conduct basic studies to address psychological questions using appropriate research methods.
PSYC 3390 Foundations of Psychology PSYC 4490 Directed Research 6 credit hours
PSYC 3310 Experimental
Goal 4
4.1 Describe major applied areas (e.g., clinical, counseling, industrial/organizational, school, etc.) and emerging (e.g., health, forensics, media, military, etc.) applied areas of psychology.
b. Origin and treatment of abnormal behavior
PSYC 3340 Intervention Techniques and Appl. PSYC 2260 Industrial Personnel
PSYC 3300 Abnormal Psychology PSYC 4491 Psychopathology/Child & Adoles. 12 credit hours
4.3 Articulate how psychological principles can be used to explain social issues and inform public policy.
a. Recognize that sociocultural contexts may influence the application of psychological principles in solving social problems
b. Describe how applying psychological principles can facilitate appropriate change in institutions and in society
c. Articulate the role of psychology in developing, designing, and disseminating public policy
PSYC 2250 Community Psychology 3 credit hours

Total recommended hours 55 credit hours