

## **EDF 7437 MEASUREMENT & SINGLE CASE DESIGN**

### **3 Semester Course Credit Hours**

- 45 hours divided into (a) 20 hours in measurement of behavior, data display, and data interpretation, (b) 20 hours in experimental evaluation of interventions, and (c) 5 hours in ethical considerations of applied behavior analysis.

**Prerequisites:** EDF 6225 Foundations of Applied Behavior Analysis in Education, EDF 6226 Behavioral Assessments, Interventions, and Outcomes in Education, EDF 6223 Positive Behavioral Change and System Support in Educational Settings. Students must be eligible to enroll in Masters, Specialist, or Doctoral level courses.

**Course description:** Measurement of behavioral data, data display, data interpretation, experimental evaluation of interventions, and ethical considerations of applied behavior analysis and research. This course serves as the fourth in a series of courses that prepares students to apply for the Board Certified Behavior Analyst Exam.

**Course Format/Type:** Mixed mode. Students will be required to access supporting documents from the Internet including the syllabus, assignments, and testing.

**Student Learning Outcomes:** Students will demonstrate proficiency in the following areas:

1. Students will be able to create operational definitions of behaviors including direct and indirect measures of behaviors.
2. Students will be able to create data displays and interpret data.
3. Students will be able to use single case designs to evaluate behavior change.
4. Students will be able to identify and explain ethical issues regarding behavior analysis and research practices.

#### **Topics Covered:**

Identify the measurable dimensions of behavior (e.g., rate, duration, latency, or inter-response times).

Define behavior in observable and measurable terms.

State the advantages and disadvantages of using continuous measurement procedures and sampling techniques (e.g., partial- and whole-interval recording, momentary time sampling).

Select the appropriate measurement procedure given the dimensions of the behavior and the logistics of observing and recording.

Select a schedule of observation and recording periods.

Use frequency (i.e., count).

Use rate (i.e., count per unit time).

Use duration.

Use latency.

Use inter-response time (IRT).

Use percent of occurrence.

Use trials to criterion.

Use interval recording methods.

Use various methods of evaluating the outcomes of measurement procedures, such as inter-observer agreement, accuracy, and reliability.

Systematically manipulate independent variables to analyze their effects on treatment.

Use withdrawal designs.

Use reversal designs.

Use alternating treatments (i.e., multi-element, simultaneous treatment, multiple or concurrent schedule) designs.

Use changing criterion design.

Use multiple baseline designs.

Identify and address practical and ethical considerations in using various experimental designs.

Conduct a component analysis (i.e., determining effective component(s) of an intervention package).

Conduct a parametric analysis (i.e., determining effective parametric values of consequences, such as duration or magnitude).

Select a data display that effectively communicates quantitative relations.

Use equal-interval graphs.

Use Standard Celeration Charts (for BCBA only – excluded for BCABA).

Use a cumulative record to display data.

Use data displays that highlight patterns of behavior (e.g., scatter plot).

Interpret and base decision-making on data displayed in various formats.

Obtain informed consent within applicable legal and ethical standards.

Assist the client with identifying life style or systems change goals and targets for behavior change that are consistent with:

The applied dimension of applied behavior analysis (Baer, Wolf, & Risley 1968).

Applicable laws.

The ethical and professional standards of the profession of applied behavior analysis.

Initiate, continue, modify, or discontinue behavior analysis services only when the risk-benefit ratio of doing so is lower than the risk-benefit ratio for taking alternative actions.

Identify and reconcile contingencies that compromise the practitioner - client covenant, including relationships among the practitioner, the client and other parties.

Use the most effective assessment and behavior change procedures within applicable ethical standards taking into consideration the guideline of minimal intrusiveness of the procedure to the client.

Protect confidentiality.

Truthfully and accurately represent one's contributions and those of others to the practice, discipline and profession of applied behavior analysis.

Ensure that the dignity, health and safety of one's client are fully protected at all times.

Give preference to assessment and intervention methods that have been scientifically validated, and use scientific methods to evaluate those that have not yet been scientifically validated.

### Required Texts:

Kazdin, A. (). Single Case Research Designs.

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). Functional assessment of problem behavior: A practical assessment guide (Second Edition). Pacific Grove, CA: Brookes/Cole Publishing.

Grading System: Points will be allocated using the following 100 point system:

1. Participation in weekly assignments (30)
2. Midterm Exam (35 points)
3. Final Exam (35 points)

A response cost of 5 points will be deducted for late assignments or incomplete assignments. Assignments will not be accepted 1 week after the due date.

Incompletes (I) will not be given except under very extreme circumstances. Please see the UWF catalog for rules about Incompletes and course withdrawals.

Grading scale:

A	92-100
A-	90-91
B+	88-89
B	82-87
B- (B- or lower is considered a Failing grade for a Graduate level course)	80-81
C+	78-79
C	72-77
C-	70-71
D	60-69
F	59 or below

**Special Technology Requirements:** Students need to activate their Argo account and use UWF email for this course. Students need to have access to the Internet to participate in the on-line components of the course. Computer labs are available on the UWF main campus that have the needed technology prerequisites.

**Assistance for Students with Special Needs:** If you have special needs that will require an accommodation of any kind for you to participate in this course you must be registered with the university as a special needs student requiring classroom, curriculum, instruction, testing, or any other accommodation. You must inform the instructor of your needs by the end of the second class meeting or within the first two weeks of the course. If you wish to discuss issues in private, please email me directly and/or make an appointment to come to office hours.

**Plagiarism & Fraud:** Committing any academic misconduct including plagiarism or fraud is punishable by **expulsion from the University System**. See UWF's Student Life Handbook page 48 for regulations and other sanctions. Ignorance regarding what constitutes academic misconduct will not excuse you from sanctions. If you commit plagiarism or fraud in this course you will fail this course without exception and additional sanctions may be pursued against you.

**Elements required in CCRs for course changes:** Topics covered, Midterm, and Final exams