

# Data-Based Decision Making Loyola University Chicago



**Summer Session A: MMXIV**

**CIEP 541 Syllabus**

Dr. R. James Breunlin, NBCT

Office phone: 312-915-7727

Cell phone: 630-269-4331

E-mail: [rbreunl@luc.edu](mailto:rbreunl@luc.edu)

Office hours: Lewis 1124 Monday and Wednesday 2:00 to 4:30 or by appointment

## **Instructional Material**

Creighton, T. (2007) *Schools and Data: The Educator's Guide for Using Data to Improve Decision Making*, Thousand Oaks California, Corwin Press  
ISBN 1-4129-3733-7

Suggested: 3 ring binder with separation tabs to organize handouts for future reference

A calculator

## **Reference Text**

Norušis, J. (2005) *SPSS 13.0 Guide to Data Analysis*, New Jersey, Prentice Hall  
ISBN 0-13-186535-8 (candidates do not need to acquire this reference text)

## **Course Description**

This course provides school leaders with the knowledge and skills to explore and apply basic concepts supporting data-driven decision-making and performance accountability. Students apply data-driven decision-making and problem-solving techniques to the classroom, school, and school district. Descriptive, inferential, correlational and non-parametric techniques will be used to investigate questions that arise in an educational setting. The use of data will be investigated in the context of RtI, formative assessment, summative assessment, high stakes testing and teacher performance.

## **Module Goals**

Essential Questions:

1. How can summative and formative assessment be used to provide individual feedback regarding student achievement?
2. How are objectives, assessment, data collection, data analysis, and educational decisions related?
3. How do teachers effectively collaborate with other professionals across grade level and content area teams?
4. How can teachers use data to effectively design, adjust and modify instruction for the individual classroom and school?
5. How do education professionals use data to discern differences in populations?
6. How do education professionals use data to discern relationships between attribute?
7. How is data most effectively displayed for effective use?
8. Based on data, what are appropriate objectives and interventions for students and classes?

## **IPTS Objectives**

Candidates will understand that effective educators use of data to direct instruction and assess teaching and learning effectiveness.

Candidate demonstrates a knowledge and understanding of:

### **Illinois Professional Teaching Standards: Knowledge Indicators:**

- 8C: share collaboratively the use of data to design and implement effective school interventions that benefit all students
- 7D: know current terminology and procedures necessary for the appropriate analysis and interpretation of assessment data
- 7C: identify and explain measurement theory and assessment-related issues, such as validity, reliability, bias, and appropriate and accurate scoring
- 1L identify information about students' individual experiences, families, cultures, and communities can be used to create meaningful learning opportunities and enrich instruction for all students
- 3D: identify when and how to adjust plans based on outcome data, as well as student needs, goals, and responses
- 5G: evaluate and use student performance data to adjust instruction while teaching
- 5H: know when and how to adapt or modify instruction based on outcome data, as well as student needs, goals, and responses
- 3G: describe the relationship between research and the use of data to guide instructional planning, delivery, and adaptation
- 4H: acknowledge the use of student data (formative and summative) can be used to design and implement behavior management strategies

### **Illinois Professional Teaching Standards: Skills Indicators:**

- 3N: access and use a wide range of information and instructional technologies to gather and use data to enhance a student's ongoing growth and achievement
- 4Q: analyze student behavior data to develop and support positive behavior
- 6K: use assessment data, student work samples, and observations from continuous monitoring of student progress to plan and evaluate effective content area reading, writing, and oral communication instruction
- 7G: make data-driven decisions using assessment results to adjust practices to meet the needs of each student
- 5P: use student data to adapt the curriculum and implement instructional strategies and materials to meet the needs of each student
- 1P: analyze and use student information to design instruction that meets the diverse needs of students and leads to ongoing growth and achievement
- 3j: Use data to plan for differentiated instruction to allow for variations in individual learning needs (IPTS)

### **Other Objectives**

- Use pretest and post test data to calculate student and class growth
- Use pretest and posttest data to determine the mastery of objectives
- Represent data in a variety of graphical forms and tables

### **Dispositions Assessed in this Seminar**

The teacher candidate commits to appropriate professional and interpersonal behaviors by...

- **D6** collecting and analyzing community, school, family, and student data to guide educational decision making. (a2E) (IB)
- **D8** demonstrating how one's beliefs about diverse learners impact teaching and learning and reflecting upon how one's actions affect others by demonstrating respect, fair-mindedness, empathy, and ethical behavior toward all learners, including respect for students' right to privacy. (a1F, i2A, i2B) (IB)

## Tentative Schedule of Discussion Topics CIEP 534

(Assignments will be announced weekly in class and posted on Blackboard)

	Class Date	Topics or Issues	Assignments ( <i>Data set used</i> )
Use of Data in the Classroom	May 19	<ul style="list-style-type: none"> <li>• Course Introduction</li> <li>• Ethical Issues of Data Use</li> <li>• Measures of Center</li> <li>• Data Types</li> <li>• Data uses in the classroom: formative assessment and RtI system</li> <li>• Basic Excel Functions</li> </ul>	Data Sorting Exercise ( <i>Horizon HS Data Set</i> )
	May 21	<ul style="list-style-type: none"> <li>• Use of MAP data in the classroom to differentiate instruction</li> <li>• Pretest/ Posttest Growth Analysis</li> <li>• Organizing Data with Excel</li> <li>• <b>6:30-7:30 CISA Corboy 202</b></li> </ul>	Descartes Analysis ( <i>Descartes set</i> )  Pre/Post analysis ( <i>Pre/Post Data Sets</i> )
	May 26	Memorial Day: No Class	
Use of Data in a Department or School	May 28	<ul style="list-style-type: none"> <li>• Introduction to SPSS</li> <li>• Descriptive Data Representations               <ul style="list-style-type: none"> <li>○ Histograms</li> <li>○ Stem and Leaf</li> <li>○ Bar charts</li> <li>○ Line graphs</li> </ul> </li> </ul>	Descriptive Stats 1 ( <i>GSSNET</i> )
	June 2	<ul style="list-style-type: none"> <li>• Normal Distribution</li> <li>• Variation</li> <li>• Boxplots and outliers</li> <li>• Cross tabulations</li> </ul>	Descriptive Stats 2 ( <i>Horizon HS Data Set</i> )
	June 4	<ul style="list-style-type: none"> <li>• Introduction to constructing and testing hypotheses</li> <li>• T-test for sample means and comparing 2 means</li> <li>• SPSS and t-testing</li> </ul>	Comparing Groups #1 ( <i>EPAS and Horizon HS Data Set</i> )
	June 9	<ul style="list-style-type: none"> <li>• Validity and reliability</li> <li>• Analysis of Variance (ANOVA)</li> </ul>	Comparing Groups #2 ( <i>Schools</i> )
	June 11	<ul style="list-style-type: none"> <li>• Linear regression and correlation</li> <li>• Prediction and Goal Setting in Schools</li> </ul>	Correlation and Regression ( <i>Horizon HS Data Set and EPAS n Courses</i> )

Use of Data at the District Level			
	June 16	<ul style="list-style-type: none"> <li>• Analysis of Growth</li> <li>• Creating Student Profiles</li> <li>• EPAS System</li> </ul>	Growth Analysis ( <i>EPAS</i> )
	June 18	<ul style="list-style-type: none"> <li>• Analysis of survey data: nonparametric procedures <ul style="list-style-type: none"> <li>• Mann-Whitney U Test</li> <li>• independent samples test</li> <li>• Spearman Rank-Order correlation</li> </ul> </li> </ul>	Survey Analysis ( <i>Tech survey data</i> )
	June 23	<ul style="list-style-type: none"> <li>• Chi-Square</li> </ul>	Chi-Square ( <i>TBA</i> )
	June 25	<ul style="list-style-type: none"> <li>• Qualitative methods</li> </ul>	

## Course Policy

### **IDEA Objectives for the Faculty Information Form**

1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, or theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)

### **Academic Honesty**

Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education's Policy on Academic Integrity can be found at: [http://www.luc.edu/education/academics\\_policies\\_integrity.shtml](http://www.luc.edu/education/academics_policies_integrity.shtml). For additional academic policies and procedures refer to: [http://www.luc.edu/education/academics\\_policies\\_main.shtml](http://www.luc.edu/education/academics_policies_main.shtml)

### **Accessibility**

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd/>

## **Harassment (Bias Reporting)**

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>

## **Conceptual Framework**

Each syllabus is required to have a statement explaining how the SOE's Conceptual Framework—*Professionalism in Service of Social Justice*—is exemplified within the context of that particular course. Please be sure to state the conceptual framework, as well as thoughtfully elaborate on how it is exemplified within the context this course. If this course houses a Core assessment for one or more of the CF Standards for your program area it is critical that you include the CF standard(s) and describe how it weaves through the course and is assessed. Our conceptual framework is described here: <http://www.luc.edu/education/mission/> Please feel free to use all or part of this on your syllabus.

## **Conceptual Framework**

The School of Education at Loyola University Chicago supports the Jesuit ideal of knowledge in the service of humanity and the advancement of social justice. In fact the conceptual framework of the School of Education is “Professionalism in Service of Social Justice.” CIEP 541 emphasizes the importance of ethical teacher behavior, equitable student access to a quality education, and strong support for the success of all through technological knowledge and skills which enhance education. It is through a unique bond between instructor and learner that enables schools to leave no child behind and realize social justice.

CF1: Candidates demonstrate an understanding of a current body of literature and are able to critically evaluate new practices and research in their field.

CF2: Candidates demonstrate knowledge and skills in a variety of school and professional settings.

CF3: Candidates demonstrate an understanding of issues of social justice and inequity.

CF4: Candidates demonstrate skills that will enable them to work effectively with diverse clients.

CF5: Candidates demonstrate technological knowledge and skills which enhance education.

CF6: Candidates demonstrate professional decision-making skills and behaviors in advancing social justice and service.

CF7: Candidates demonstrate how moral and ethical decisions shape actions directed toward service to others.

CF8: Candidates apply ethical principles in professional decision-making.

## **Diversity**

Loyola University Chicago strives to partner with schools and community agencies in the Chicago area. This provides students with the opportunity to embrace the challenges and benefits of diversity that enhance the environment for learning. In CIEP 534, students will study and discuss important social structures that may affect students' prior knowledge and attitudes.

## **Technology**

Students will use Microsoft Excel and SPSS to manipulate, represent and analyze data.

## **Course Requirements**

**1. Attendance:** Your attendance is critical to your success in this class. Absences should be for extreme circumstances only. Inform the professor of such circumstance. Anyone absent more than twice is ineligible for an "A" grade

### **2. Assignments:**

Question sets will be assigned each class session. These question sets are due the following class in electronic or hard copy format, but are usually finished in the class. Late assignments are penalized 50%. An assignment is considered late if it is not submitted by the end of the class session on the due date. Exceptions to this policy are rare and are for extreme cases supported by documentation such as a doctor's note. Assignments are subject to change

## **Grade Assignment**

A 93-100%

B 92-85%

C 84-78%

D 77-70%

F 69-0%

Pluses and minuses are the percentage points at the top and bottom of the grade ranges