

# TAIR 2025 Summer Workshops

## Learning Outcomes Assessment Master Class

Assessment is often described as painful and meaningless. This workshop presents a process that faculty describe as easy and logical. This workshop will go deep into the design of the data model, and participants will perform calculations on model data sets to see how the data model works.

By the end of the workshop, participants will be able to:

Describe the use of Universal Program Learning Outcomes and how they allow for data aggregation across different disciplines.

Align Course-Level Learning Outcomes with Program-Level Learning Outcomes to create an alignment infrastructure that encompasses all academic disciplines.

Process student learning data using an algorithm that standardizes and aggregates data across disciplines.

Explain how processed learning data is visually displayed to allow faculty to understand the strengths and weaknesses of their programs.

Workshop Level: Intermediate

Presenter: Douglas Walcerz, Lee College (Baytown/Houston)

## Navigating Ethics in Institutional Research: Awareness, Reflection, and Action

Description:

This workshop explores core ethical concepts, how ethics operates in academia, and IR's role in fostering ethical culture. We aim to build awareness of ethical challenges and how we can equip ourselves with tools for ethical reasoning, dialogue, and decision-making to support integrity in our roles.

By the end of the workshop, participants will be able to:

Understand the foundational concepts of ethics, morality, values, principles, and fraud as they relate to institutional research.

Recognize and analyze ethical dilemmas through real-world scenarios, applying frameworks and tools to navigate complex decision-making without prescribing right or wrong answers.

Evaluate the role of the institutional research office in promoting ethical culture and integrity, including familiarity with the AIR Statement of Ethical Principles and common fraud theories.

Presenter: Erin Cowart, The University of Texas at Austin

## Using Power BI at the Intersection of Institutional Research and Institutional Effectiveness

Description:

This workshop focuses on theory and method for bringing a "big data" approach to small campus data sets using Power BI. Participants will learn how to use Power BI to produce data products aimed at better supporting assessment and CQI efforts using the example of a student satisfaction survey.

By the end of the workshop, participants will be able to:

- 1a. Conceptualizing "big data" approaches to smaller campus data sets.

- 1b. Supporting measures that matter: understanding the needs of campus partners in assessment and IE.
- 2a. Setting up a data model in Excel & Power Query.
- 2b. Writing useful and efficient measures and calculations in DAX
- 2c. Organizing security and distribution strategies for bespoke user groups
- Workshop Level: Intermediate

Presenter: Ben Reynolds, University of Texas Southwestern Medical Center

## **SQL 101: A Hands-on Introduction for Institutional Researchers**

### **Description:**

Dive into SQL basics in this hands-on introductory workshop designed for institutional researchers. This session provides an accessible foundation in SQL, including how to retrieve, filter, and summarize data from relational databases, join tables, and create conditional expressions using case statements. Step-by-step instructions, practical exercises, and sample code will be provided through an online SQL environment, allowing attendees to follow along and practice each new skill in real time. By the end of the session, attendees will have the essential SQL skills to work with data more confidently. Prior knowledge of SQL is not required, and the session will focus solely on the SQL language itself, with no software or systems information provided.

By the end of the workshop, participants will be able to:

Understand SQL's role in data retrieval, manipulation, and analysis.  
 Write SQL code to retrieve data using SELECT, FROM, and ORDER BY statements.  
 Use the WHERE clause and logical operators to filter data effectively.  
 Join tables from different sources to create meaningful data connections.  
 Create statements to apply conditional logic.  
 Summarize data with aggregate functions like COUNT, SUM, and AVG.  
 Use GROUP BY and HAVING clauses to organize and filter aggregated data.  
 Implement UNION to combine data from multiple sources.

Workshop Level: Beginner

Presenter: Emily Rhodes, UT Health Science Center at San Antonio

## **Using Python and Predictive Analytics to Support Student Retention and Success in Higher Education**

### **Description:**

Learn how to apply Python for student retention modeling using institutional data. Covers data preparation, logistic regression, predictive analytics, machine learning basics, and real-world applications to support student success and data-driven decisions.

By the end of the workshop, participants will be able to:

Understand how predictive analytics informs student success strategies  
 Learn how to structure institutional data for retention and GPA modeling  
 Gain hands-on experience building simple logistic regression models in Python  
 Explore real-world use cases of predictive models driving student interventions  
 Discuss ethical considerations when using AI and predictive modeling in higher education  
 Workshop Level: Intermediate

Presenter: Aishwary Pawar, Southern Methodist University (Dallas)

## **Wading into Power BI**

### Description:

This course is for Excel users intrigued by Power BI's capabilities but who have never used it. Also, for those of you who have poked at Power BI with unsuccessful results, this class may be for you.

Admittedly, it's a complex beast, but by the end of this presentation, you'll feel comfortable doing the following.

- Accessing Data and Preparing Data
- Data Modeling and Exploration
- Visualization
- Publishing Reports

Presenter: Mark Stout, University of Houston-Clear Lake (Houston)