

### Program Overview:

The speed and volume of data generated every fraction of a second significantly impact our personal lives and businesses. Data is everywhere: from the production flow of a manufacturing floor to the sales results in a grocery store to the number of shares a page gets on Facebook, to the web of click on online shopping platforms, and even personal movement tracked by handheld devices. How to use the data and sort it all out in an informative way to make sense and decisions is the constant trivia faced by modern-day professionals? Decision Making is key to successful businesses, and the application of data analytics is rising in leaps and bounds across the various business stakeholders. Today professions need to be skilled and ready for the data-driven world. The program suits the requirements of industry professionals looking to advance their careers simultaneously; it also serves as a pedigree for academicians looking to incorporate analytics and decision-making into their course curriculum and content delivery.

### Objectives:

- To appreciate the “R” programming framework and explore its capability for data-centric decision making using multivariate data analytics.
- To work on simulated and Real-Time business datasets to get exposed to understand data-driven decision making.
- To understand underlying statistical techniques for informed decision-making.

### Contents :

- Multivariate correlation, canonical correlation
- Multivariate regression, generalized linear models

- Correspondence analysis, multiple correspondence analysis
- Multidimensional scaling (metric & non-metric)
- Topic modeling, latent dirichlet allocation (LDA)
- Text mining, natural language processing
- Reliability and validity analysis
- Principal component analysis
- Exploratory and confirmatory factor analysis
- Structured equation modeling and cluster analysis

### Pedagogy:

In class Lecture , PowerPoint Presentations , Data Sets, In class Discussion and Case Studies

### Key Takeaways

The program ensures learning critical skills to get an edge over peers and insights into modern data science practices for effective and efficient decision-making apart from expansion of professional and personal network.

### Who should Attend ?

Industry Professionals (Preferably Entry / Middle Level) exploring opportunities in analytics and analyst roles, Academic Professionals engaging in R programming, R-applications, Analytics, Data Science, Decision Sciences, and Academic or Industry professionals engaging in Academic or Industry Research.

### Program Director

[Dr. Kamakshiah Musunuru](#), Associate Professor