SAS - MSc DATA SCIENCE & CYBERSECURITY ACADEMIC SPECIALIZATION IN BUSINESS AND DATA ANALYTICS
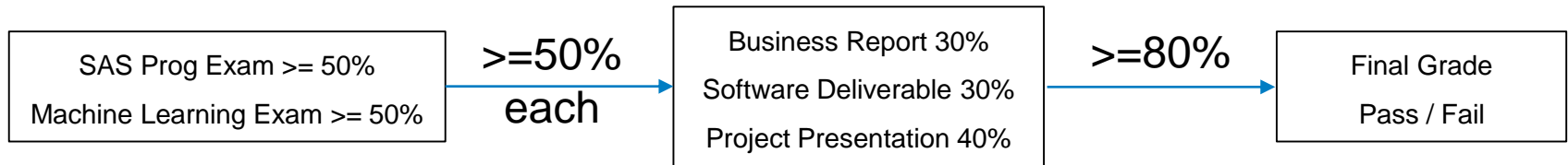
ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
ΠΜΣ Κυβερνοασφάλεια και Επιστήμη Δεδομένων
UNIVERSITY OF PIRAEUS
MSc Cybersecurity and Data Science

§sas
THE POWER TO KNOW.

Specilization/ Certificate Contents

⇨ Access, Management and Processing of Data Using SAS Programming on SAS Studio - Viya.

⇨ Visualization and Reporting Using SAS Visual Analytics - Viya.

⇨ Machine Learning (Pattern Discovery & Predictive Analytics) Using SAS Visual Data Mining and Machine Learning - Viya.

FINAL PROJECT AND GRADING STRUCTURE
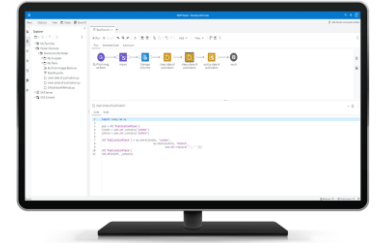
- Access, Manage, Process and Report data from a real - world organization by using SAS Programming and SAS Visual Analytics to help the organization make decisions.

- Use SAS Visual Data Mining and Machine Learning to help the organization apply Market Basket Analysis for next best offer decisions, segment their customer base using RFM analysis and identify good customers using predictive analytics.

SAS Prog Exam >= 50%	>=50% each	Business Report 30%	>=80%	Final Grade
Machine Learning Exam >= 50%		Software Deliverable 30%		Pass / Fail
		Project Presentation 40%		

§sas | THE POWER TO KNOW.

SAS ACADEMIC SPECIALIZATION

SAS CERTIFICATE AND BADGE FOR SOCIAL MEDIA

SAS CERTIFICATE AND BADGE FOR SOCIAL MEDIA

COURSE CONTENTS
DATA ANALYTICS PART

Lecture 1

- Introduction to Data Driven Decision Making Using Analytics and Artificial Intelligence.

- Introduction to Machine Learning.

- Overview of SAS Viya

Lecture 2

- Association Rules (Market Basket Analysis) with Applications in the Retail and Banking Sector.

- Introduction to Predictive Modelling.

- A Case Study for Customer Targeting in a Non - Profit Organization.

- Accessing, Exploring and Correcting Data for Predictive Modelling Purposes.

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
ΠΜΣ Κυβερνοασφάλεια και Επιστήμη Δεδομένων
UNIVERSITY OF PIRAEUS
MSc Cybersecurity and Data Science

§sas. | THE POWER TO KNOW.

Lecture 3

- Theory and Mechanics Behind Decision Trees.

- Application of Decision Trees in SAS Visual Data Mining and Machine Learning.

- Case Study for Customer Targeting in the Retail Sector (Super Market)..

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
ΠΜΣ Κυβερνοασφάλεια και Επιστήμη Δεδομένων
UNIVERSITY OF PIRAEUS
MSc Cybersecurity and Data Science

§sas | THE POWER TO KNOW.

Lecture 4

- Model Assessment in Predicitve Modelling.

- Scoring New Data in Predicitve Modelling.

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
ΠΜΣ Κυβερνοασφάλεια και Επιστήμη Δεδομένων
UNIVERSITY OF PIRAEUS
MSc Cybersecurity and Data Science

§sas. | THE POWER TO KNOW.

Lecture 5

- Clustering with Applications in Customer Segmentation.

- Introduction to RFM (Recency - Frequency – Monetary) Analysis.

- A Case Study for Customer Segmentation from the On – Line Retail Sector.

- Profiling of the Customer Segments.

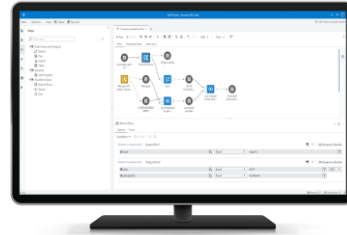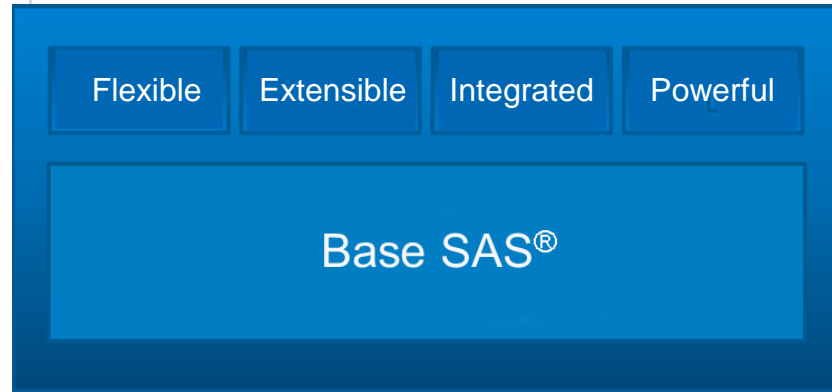- The Mechanics of K – Means and Ward Clustering Algorithms.

COURSE CONTENTS
DATA MANAGEMENT PART
USING SAS PROGRAMMING

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
ΠΜΣ Κυβερνοασφάλεια και Επιστήμη Δεδομένων
UNIVERSITY OF PIRAEUS
MSc Cybersecurity and Data Science

§sas
THE POWER TO KNOW.

Base SAS is the centerpiece of all SAS software.

| Flexible | Extensible | Integrated | Powerful |

Base SAS®

Base SAS is a product within the SAS Foundation set of products that provides

- a highly flexible and extensible fourth-generation programming language
- a rich library of encapsulated programming procedures
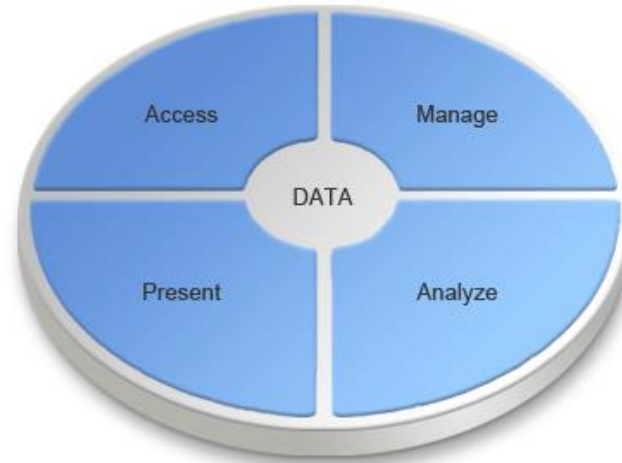- a graphic user interface for administering SAS tasks

Base SAS software enables you to do the following:
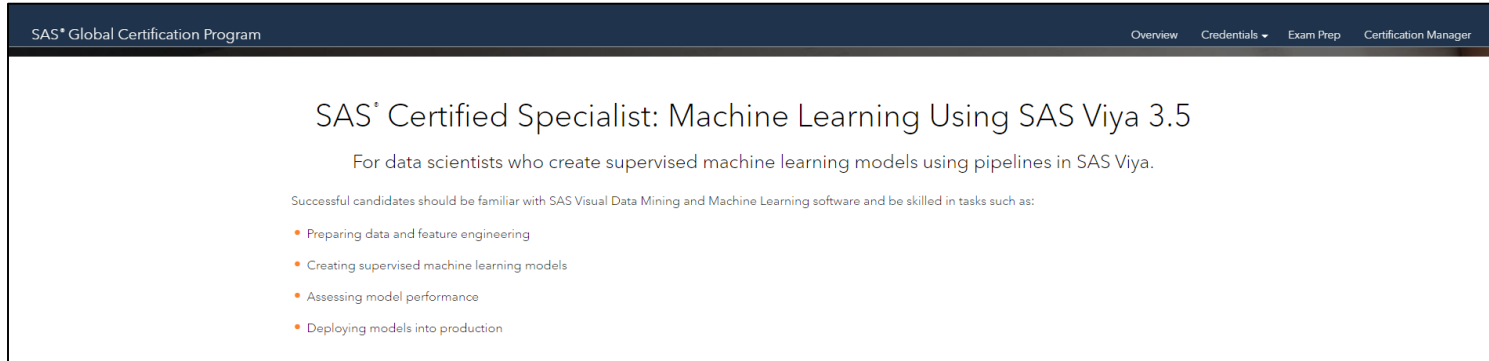
Access data across multiple sources

Manage data

Perform sophisticated analyses

Deliver information across your organization

Participants in the SAS - MSc DS and CS UniPi Certificate/ Academic

Specialization program will have the opportunity to also

attempt the professional certification of SAS entitled

"SAS® Certified Specialist: Machine Learning Using SAS Viya 3.5"

during an exam that will be held on campus.

SAS® Global Certification Program | Overview | Credentials ▾ | Exam Prep | Certification Manager

SAS˚ Certified Specialist: Machine Learning Using SAS Viya 3.5

For data scientists who create supervised machine learning models using pipelines in SAS Viya.

Successful candidates should be familiar with SAS Visual Data Mining and Machine Learning software and be skilled in tasks such as:

- Preparing data and feature engineering
- Creating supervised machine learning models
- Assessing model performance
- Deploying models into production

THANK YOU!