Sede:	Dip Rif.	CdS	cod. CdS	Cod. mat.	Attività formative	Obiettivi Formativi:
BO	STAT	CLAMSEI	6811	96793	INFORMATION SYSTEMS AND DATABASE MANAGEMENT	Aim of the course is to understand the concepts and learn the techniques to access data stored in database systems for analytical purposes. In particular, the student will understand the main concepts of relational and noSQL database systems and will learn how to effectively extract data from those systems in order to prepare them for subsequent application of statistical and machine learning techniques. The course will deal with both the query languages of databases and the interfaces with programmatic languages, such as R or Python. At the end of the course the student is able: - to understand the structure of a given database, either relational or noSql; - to access the data stored in a Database Management System either with the specific standard languages or with programmatic interfaces.
BO	STAT	CLAMSEI	6811	96800	STATISTICAL SOFTWARE FOR BUSINESS (LABORATORY)	At the end of the course the student is able to use different statistical software useful to explore and analyse commonly used business data structures, as well as to manipulate and integrate data from different sources. Moreover, the student knows the modern tools for graphical representation currently used for Business Data Visualization. In particular the student is able: - to use SAS and R programming and tools to clean, arrange, select and manipulate business data, and the basics of using logical operators to pre-process data; - to use SAS and R programming and tools explore business data; - to program using Python language to manage applications, management systems and digital systems transversal to many industries and companies.

BO	STAT	CLAMSS	9222	90477-2	MACHINE LEARNING SYSTEMS FOR DATA SCIENCE - 2	By the end of the course, the should - understand the fundamentals of supervised and unsupervised machine learning algorithms, focusing on deep learning algorithms - understand the fundamental programming principles of the Python language and be able to apply them primarily to data management and analysis, under the umbrella of data science - understand the role, purpose and features of Python libraries for numerical computation, data representation, and machine learning, and their interconnectivity with frameworks, such as Jupyter Notebook - be able to apply data science practices and methods to construct models and solve problems for various data-science applications.
BO	STAT	CLASS	8873	B8580	DATA SCIENCE AND MACHINE LEARNING FOR TEXT ANALYSIS	By the end of the course the student will develop advanced expertise in analyzing real-world phenomena by using statistical methods. By the end of this course students will be able to: - implement appropriate advanced statistical analysis using a statistical software (SAS or R or SPSS); - interpret the output of the procedures; - critically collate results and conclusions; - present the main results and conclusions in the form of concise summaries; - work independently on practical data analysis problems
BO	STAT	CLASS	8873	66056	LABORATORIO DI STATISTICA ECONOMICA E ANALISI DI MERCATO	Al termine del corso lo studente acquisisce la conoscenza di software statistico adatto all'elaborazione e all'analisi di banche di dati economici. In particolare lo studente è in grado di: - integrare le conoscenze metodologiche con l'interpretazione fenomenica - svolgere le varie fasi dell'analisi statistica dei fenomeni economici - presentare i risultati delle analisi statistiche effettuate sia in forma scritta che orale