

# HUMAN CAPITAL ANALYTICS AND TECHNOLOGY (HCAT1-GC)

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## HCAT1-GC 1000 People and Organization Management (3 Credits)

This course provides a comprehensive review of the evolution of the management theory and practice critical for 21st century organizations. Students learn in a highly experiential and fully immersive residential format in the course of five consecutive days. Students practice to assess, design and apply people management solutions at all organizational levels. Impacting business success through effective people management is the responsibility of a strategic People Function. The course covers the following topics: the science underlying the individual components of an organization: individuals, teams, and the organization as a system; Existing and emerging integrated Talent Management (TM) and Employee Experience (EX) frameworks; Organizational design business objectives and organizational culture; and effective approaches for a successful organizational transformation. By the end of this class, students will be able to evaluate, design and apply people and organizational management approaches and solutions based on business objectives and in response to external and internal market challenges. Students will be prepared to add to their professional repertoire the analytical and technology enabled methods of organizational analyses, design and implementation.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

## HCAT1-GC 1005 Workforce Planning (3 Credits)

Workforce planning professionals have come to rely on the power of predictive and prescriptive analytics to make decisions and compete successfully in the constantly transforming business environment. This course introduces the student to the strategy and tools used to proactively plan for having the right people, in the right place, at the right time to maximize return and minimize risk. At the end of the course, students will be expected to have learned the fundamental analytical and financial tools and techniques necessary to be an effective strategic and analytical manager. The goal is for students to understand a company's strategic decision-making opportunities and processes related to workforce planning (and how they are informed by analytics) and apply these techniques to real-life decisions. Topics include (but are not limited to) forecasting supply and demand of resources by skill; drivers of workforce demand; attrition modelling; skills similarity analysis; skills retraining optimization techniques.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

## HCAT1-GC 1010 Human Resources Information Systems (3 Credits)

The management of Human Resources information and technologies are explored to facilitate the specification, development, implementation and maintenance of Human Resources information technology for supporting organization decision-making and strategic planning. Topics include: the role of information within HR organizations; overview of modern hardware and software platforms; systems development architectures; planning, developing and managing IT systems; introduction to databases and data warehouses; decision support; owner and user roles in systems development life cycles; data integrity and privacy. In response to today's societal concerns, the course addresses protecting people and information as well as computer security. Substantial use of real-world projects, case studies and hands-on assignments are employed. Upon completion of the course students are expected to have gained an appreciation of the important contribution information technology makes to the success of HR and the organization and how it helps achieve a competitive advantage. More specifically, they will have learned: the strategic role of information technology in HR organizations, typical contributions the human resource information system makes to the organization, major issues in HR IT management, and recent advances and current trends in IT.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

## HCAT1-GC 1015 Business Communications (1.5 Credits)

In Business Communications, students will review core principles of effective communication such as brevity, getting attention, organization, persuasion, and tone and apply them to an oral presentation and business documents (mostly involving human capital analytics). They will tap their critical thinking skills to produce compelling and meaningful content tied to business outcomes.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

## HCAT1-GC 1020 Managing Complex Projects (1.5 Credits)

This course will provide a framework for understanding and applying the philosophy, methodologies, principles, practices, and knowledge of structured project management. It will focus on the application of this framework to initiate, plan, execute, and manage chartered projects, to address business problems and opportunities that an organization will face. Students will gain both a theoretical as well as practical foundation on which to manage a project. In addition to lectures, facilitated discussions, in-class exercises, and case studies, students will also participate in a simulation project that will run concurrently throughout the course. Upon completion of this course, a student will be able to define a business problem, plan the delivery of a solution, execute that plan, and manage the completion of its deliverables. The content and subject matter are aligned with the current edition of the Project Management Institute's (PMI) A Guide to the Project Management Body of Knowledge (PMBOK).

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 1025 Managing the Analytics Function (3 Credits)**

The analytics function in organizations is a very complex one, involving many parts, and requires a different method of management than other aspects of HR technology. Analytics is not the transaction processing side of technology, but instead providing information to support decision making. It involves managing data sources and databases, the business intelligence layer, and methods of effectively communicating the findings to executives. Technology and techniques are changing so rapidly, the HR Analytics Manager is tasked with getting the maximal use of existing technology while constantly evaluating new solutions and determining medium and long-term strategy in an environment of uncertainty.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2000 Current/Future Trends in Human Capital Analytics and Technology (1.5 Credits)**

In setting strategy for an HR analytics function, it's imperative that we recognize trends in the industry, and where they may be leading. Although it's difficult to predict what's going to happen, there are certain things we know, which can be used to make reasonable predictions as to where technology is going. Being at the forefront of technology is paramount, and coming to grips with the issues that we will face due to very powerful technologies in the not-too-distant future will determine whether we can adapt successfully. Most companies are late adopters of new technology, preferring to let the market develop and mature. With rapidly advancing analytics technology, that is no longer an option if one is to gain a competitive advantage, otherwise become at a disadvantage.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**Prerequisites:** HCAT1-GC 1010 AND HCAT1-GC 1025.

**HCAT1-GC 2005 Storytelling with Data (1.5 Credits)**

The collection, analysis and insights from data are important in running every aspect of the enterprise. With vast amounts of data created at an ever-increasing speed, it becomes even more critical to create a common visual medium to understand and interpret the data and communicate insights. The ability to present data visually for any type of audience using a mix of numbers, images and graphs is a critical skill for today's business leaders. In this course, we explore the fundamentals of data visualization, different principles and best practices of communicating data and creating visual analytics with a wide variety of tools such as Tableau and Power BI. By completing this course, students will be able to pick the appropriate visual representation for the data using a variety of tools from the market place.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2010 Digital Workplace Design (1.5 Credits)**

In this course the workplace is examined as a system, and the roles of information, data, technology solutions and its integration with the physical workplace design are explored to facilitate the specification, development, implementation and maintenance of digital workplace design to support orchestration of work in the most optimal way. HR has an opportunity to step into the role of intermediary to shape the integration of the worker experience across the physical and technical realms to design a Digital Workplace that can maximize the effectiveness of workers, increase collaboration, create opportunities for innovation and strengthen the organizational culture and cohesiveness. Students will explore the changing nature of work- and information-flow within organizations; physical and digital workplace integration, worker centered design, technologies that are enabling digital workplace design and decision support; impact on HR's roles and processes; implications of working in a digital workplace. In response to today's societal concerns, the course addresses protecting people and information, impact on worker's well-being and mental health, computer crime and forensics. Real-world projects, case studies and hands-on assignments will be used.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2015 Intelligent Automation (1.5 Credits)**

Intelligent Automation has been a main theme of business change in the modern era and will likely continue to be so. There are two major components to Intelligent Automation: Robotic Process Automation (RPA) and Artificial Intelligence (AI). While the focus of RPA is the automation of physical tasks, the focus of AI is the automation of cognitive tasks. Both of these forces will fundamentally change the way labor markets evolve. Students will learn about the latest trends in automation and develop a framework for understanding how these forces will affect labor markets.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2020 Algorithmic Responsibility (1.5 Credits)**

This course is designed to critically evaluate the core, contemporary issues facing the application of big data algorithms. Through class discussions, case studies and exercises, students will learn to exercise ethical consideration towards the responsible management of predictive analytics and their pervasive role in some of society's more prominent institutions. Discussion will cover the implications of storing and sharing data, algorithmic transparency, uncovering bias in the models, measuring accuracy, data ownership, and governance. The course also provides background on the tenets of analytic tools, their interpretations and determinations in applied arenas. Respective of these concerns, we will look into ways of conceptualizing, objectively evaluating, and mitigating bias in algorithmic decision-making. In essence, students will develop and defend an informed perspective on where, when and how to act responsibly in the construction and maintenance of predictive algorithms in "real world" settings.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2025 Agile Methods and Organization (1.5 Credits)**

This course introduces students to the agile methodology and how it applies to managing tasks, products, and teams in organizations. Students will learn about the history of agile, tools for implementing agile methods, and the benefits of agile to organizations and individuals. Topics include (but are not limited to) the history of agile; agile principles; the psychology of agile; the scrum framework, roles, and teams; sprint planning, execution, and retrospectives; and the design thinking framework. Students that successfully complete this course will be able to: understand the fundamentals of the agile methodology; organize work using agile methods; analyze the costs and benefits of various approaches to work; and be prepared to join organizations that leverage agile methods.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No

**HCAT1-GC 2030 Internship (1.5 Credits)**

NYU has partnered with several industry companies and associations to provide students with real world experience and access to industry thought-leadership. At the conclusion of the internship, the student will deliver a case study on the company and their analytics initiatives.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** Yes

**HCAT1-GC 3000 Capstone Project (3 Credits)**

The capstone will conclude the course of study for the HCAT program. It will consist of a blend of hands-on practical application of newly acquired skills working on a variety of projects in sponsor companies and a research paper and presentation summarizing student's practice-based findings. The Capstone project will reflect an area of study that is relevant to most organizations and that allows students to apply their critical thinking and analytical skills gained during the course of the program.

**Grading:** GC SCPS Graded

**Repeatable for additional credit:** No