ISS NICF COURSES: ANALYTICS & INTELLIGENT SYSTEMS

Harness the power of analytics to address key business challenges and gain a competitive edge

- NICF – Advanced Customer Analytics
- NICF – Customer Analytics
- NICF – Data Storytelling
- NICF – Managing Business Analytics Projects
- PCP for Data Analysts
- NICF – Predictive Analytics – Insights of Trends and Irregularities
- NICF – Social Media Analytics
- NICF – Statistics Bootcamp Using R and Tableau
- NICF – Statistics for Business
- NICF – Text Analytics
"The course provides us with hands-on experience and real-world examples - the most important elements for all programming classes!"
Low Wei Jian, Deputy Manager, Policy, Land Transport Authority of Singapore (NICF - Statistics Bootcamp Using R and Tableau, Class of Jan 2017)

"Great insights with relevant case studies! I’ve learnt not just one software, but different softwares, and the course content was relevant and well-paced."
Verinder Singh, Digital Analytics Manager, Citibank (NICF - Customer Analytics, Class of Jan 2017)

"The course taught me about different predictive analytics techniques and their complexities, as well as the tools that can be employed."
Yu Shyuan Kang, Technology Development Engineer, Institute of Technical Education (NICF - Predictive Analytics - Insights of Trends and Irregularities, Class of Jan 2017)

"Unlike some other resources, data does not deplete as you use it. Data becomes more valuable the more you share it and use it... Data and analytics underpin our development towards being an increasingly Smart Nation."
Mr. Steve Leonard, Founding Chief Executive Officer, SGInnovate, and Deputy Chairman, Infocomm Media Development Authority

Data and business analytics are crucial in defining success for businesses. They provide valuable insights for more intelligent decision-making and act as a catalyst for positive change. The knowledge and information gathered are also beneficial in the effort to remain competitive and achieve sustainable success.

NUS-ISS provides a comprehensive suite of Analytics & Intelligent Systems courses that will empower participants with the capability to make data driven and evidence-based decisions. These assets are pivotal in the development of effective strategic solutions and the effort to achieve greater competitive advantage.

With increasing interest in business analytics and the advantages it can render, more organisations and businesses are expected to join the data-driven revolution. The Analytics & Intelligent Systems courses are designed to help you harness the true potential of your business.

**CORPORATE CLIENTS**
Some of the clients we have worked with on consulting projects include:
- Ministry of Education
- Ministry of Transport
- Land Transport Authority
- Infineon Technologies Asia Pacific Pte Ltd

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<table>
<thead>
<tr>
<th>STATISTICAL ANALYSIS</th>
<th>Foundation</th>
<th>NICF - Statistics for Business 3 days</th>
<th>NICF - Statistics Bootcamp Using R and Tableau 5 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate</td>
<td>NICF - Customer Analytics 3 days</td>
<td>NICF - Text Analytics 3 days</td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>NICF - Predictive Analytics - Insights of Trends &amp; Irregularities 3 days</td>
<td>NICF - Advanced Customer Analytics 3 days</td>
<td></td>
</tr>
</tbody>
</table>

| SERVICE & SOCIAL MEDIA ANALYSIS | Intermediate | NICF - Social Media Analytics 3 days |

| PROFESSIONAL CONVERSION PROGRAMMES | Foundation | PCP for Data Analysts 133 days |

| MANAGEMENT & LEADERSHIP | Foundation | NICF - Managing Business Analytics Projects 3 days | NICF - Data Storytelling 3 days |
NUS-ISS works closely with the Infocomm Media Development Authority of Singapore (IMDA) and SkillsFuture Singapore Agency (SSG) to align our Analytics & Intelligent Systems training curriculum to the National Infocomm Competency Framework (NICF), to equip learners with practical business analytics knowledge, skills and tools.

<table>
<thead>
<tr>
<th>COURSES</th>
<th>COURSE INTENT</th>
<th>KEY TAKEAWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICF - Advanced Customer Analytics</td>
<td>Enhance your analytical techniques and learn how to apply advanced customer analytics in your workplace. The course will provide you with knowledge in advanced analytics, as well as hands-on practice of using analytical tools.</td>
<td>• Apply dimension reduction and clustering techniques to create actionable customer groups and informed marketing strategy. • Apply statistical methods to develop a proprietary model to optimise marketing budgets and run campaigns. • Apply Customer Lifetime Value (CLV) estimation according to business needs.</td>
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<tr>
<td>NICF - Customer Analytics</td>
<td>Learn how to segment and profile customers so that you can better understand them and know when to market to the right customer, with the right product and through the right channel. Find out how to identify profitable customers so that the business can keep and acquire more of them.</td>
<td>• Understand customer segmentation so that different marketing tactics can be applied to different customer segments. • Understand customer profiling so that customer segments are better understood not only descriptively, but behaviorally. • Apply SPSS Modeler analytical techniques, such as customer lifetime value, loyalty and RFM scoring, to solve business problems. • Appreciate the Business Customer Game and learn when to market to each customer segment with the right product/service and through the right channel.</td>
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<td>NICF - Data Storytelling</td>
<td>Equip yourself with the essential knowledge and skills to effectively collate and consolidate data, so to be able to quickly present data in the most interesting visual manner, as well as to accurately analyze and interpret the hidden trends and patterns, thus improving decision making.</td>
<td>• Identify the principles of data visualisation. • Identify different types of questions and analytics patterns. • Conduct exploratory and diagnostic analysis. • Develop a dashboard as data storytelling mechanism for business purposes. • Develop infographics as data storytelling mechanism for broad communication.</td>
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<td>NICF - Managing Business Analytics Projects</td>
<td>Learn the latest knowledge and best practices from the various domains of Agile, Lean and traditional project management to effectively equip business analytics teams with the skills to successfully manage business analytics projects.</td>
<td>• Understand the unique nature and challenges of business analytics projects. • Learn how to correctly perform inception for a business analytics project. • Learn how to choose and adapt the different project life cycles, and especially agile practices, to your project. • Develop the initial and subsequent iterative plans for your project. • Learn how to manage the construction phase of your project. • Understand the considerations for retrospective and transition requirements.</td>
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<td>PCF for Data Analysts</td>
<td>Gain practical data analytics skill and knowledge, required to understand the potential of data and ability to explore and discover insights from data and apply new insights to impact business outcomes.</td>
<td>• Organise and present data from internal and external sources. • Monitor data quality. • Perform data analysis and identify trends and patterns. • Create and maintain business metrics and reports. • Analyse related data to develop insights and recommendations. • Acquire skills in communicating and interacting with others.</td>
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<td>NICF - Predictive Analytics - Insights of Trends &amp; Irregularities</td>
<td>Learn how to utilise business data more effectively by deriving insights of trends and irregularities from data and applying them for forward-looking predictions. This is realised through building predictive models with appropriate analytical techniques. You can then make actionable business predictions through mining abundant historical data.</td>
<td>• Identify where predictive analytics can be applied and the benefits which can be derived. • Evaluate the predictive model's objectives and data available. • Design the predictive analytics process. • Assess and select the appropriate testing methods to validate the predictive models. • Analyse the results and communicate the decision to end users.</td>
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<td>NICF - Social Media Analytics</td>
<td>Learn how to use social media monitoring tools to analyse and understand the impacts of social media. Find out how to interpret the social media data so as to take effective action.</td>
<td>• Use and apply social media listening and monitoring tools to gather data. • Interpret the social media data gathered. • Discover customer insights from the leading listening/monitoring tools in the market. • Compute the effectiveness of a marketing campaign. • Produce effective actions based on the analytics.</td>
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<td>NICF - Statistics Bootcamp Using R &amp; Tableau</td>
<td>Learn to effectively use R and Tableau in your statistical analysis for accurate and impactful data-driven decision. You will gain insights into how to use statistics to answer your business questions.</td>
<td>• Use R functions for statistical analysis. • Use Tableau for interactive visual analytics. • Compare and evaluate different business strategies. • Make predictions based on relevant factors. • Make better data-driven decisions.</td>
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<td>NICF - Statistics for Business</td>
<td>Learn how to interpret and effectively apply powerful statistical analysis to generate factual insights, which can then be used in evidence-based decision making. You will learn how to use data visualisation to provide a cockpit overview of the company's business operations, and to make use of descriptive statistics, correlation, simple linear regression analysis and multivariate regression analysis to identify important variables and interpret trends and insights from the data.</td>
<td>• Present data visually using the appropriate visual display so and for better understanding of relationships between variables. • Statistically analyse whether there is a relationship between two variables and determine the size of the relationship. • Predict one variable in terms of another. Many other variables to provide scientific planning and decision making for improvement in business performance. • Determine whether one strategy is better than another.</td>
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<td>NICF - Text Analytics</td>
<td>Acquire knowledge and skills to effectively analyse large amounts of textual data such as customer feedbacks and social media conversation to discover themes, patterns, and trends to improve business process and decision making. In scenario-based case studies, you will be introduced to common text analytics tasks, such as data pre-processing and preparation, linguistic/knowledge resources management, concept extraction, text categorisation, clustering, association and trend analysis.</td>
<td>• Identify main themes or topics in the collection of documents or textual data. • Discover relationships and patterns among topics. • Categorise documents based on discovered topics and user-definable criteria. • Perform sentiment analysis on customers' comments, reviews, or other forms of opinions. • Extract useful information from text as structured data. • Incorporate business understanding and domain knowledge into the analysis through lexical and knowledge resources. • Use a commercial text analytics tool (SPSS Modeler, to perform the above tasks.</td>
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The courses above are aligned to the National Infocomm Competency Framework (NICF) and accredited by SSG. Up to 70% SSG funding of the course fee is available for eligible participants (Singapore Citizens and Permanent Residents). Up to 90% SSG funding is available for company-sponsored participants (Singapore Citizens and Permanent Residents) of Small and Medium Enterprises (SMEs) via the Enhanced Training Support for SMEs scheme. Abstainer pays is claimable for all employer-sponsored participants. Singaporeans aged 40 and above may enjoy up to 90% course fee subsidies of SSG-funded courses. Terms and conditions apply. Visit www.ssg.gov.sg for full details.
“The course gave me an understanding of all available data and analytics tools that will help me better execute future marketing campaigns in my work.”

Keong Fong Cheng, Assistant Marketing Manager, Cold Storage Singapore
(NICF - Social Media Analytics, Class of Jan 2017)

“The course content was well-planned, allowing even participants from non-technical backgrounds to understand sufficiently.”

James Liao, Senior Associate, Changi Airport Group (Singapore)
(NICF - Text Analytics, Class of Jan 2017)

NUS-ISS – Your Choice Executive Education Partner

With over 30 years of experience in education, consulting and research, the Institute of Systems Science (ISS) at the National University of Singapore (NUS) offers a suite of high quality learning courses across various practices and expert areas. Executive education at NUS-ISS are mentored and delivered by industry professionals with successful track records and an average of more than 20 years of industry experience.

The institute is accredited by leading international and local certification bodies to deliver programmes that lead to recognised certifications and qualifications. It also conducts research, organises management and technology update seminars, and provides consulting services to the industry. Its objectives are to develop Infocomm and digital business leaders, and to drive organisational innovation and business transformation. NUS-ISS has achieved ISO 29990:2010 certification, and is the first CET (Continuing Education and Training Centre) centre in Singapore certified for full suite of executive education courses.

To date, over 111,000 infocomm and business professionals, 5,800 corporate customers and 5,100 post-graduate alumni members have benefitted from NUS-ISS’ suite of services.

Courses are conducted in NUS-ISS facilities within the NUS campus. And we are also able to conduct our courses at your organisation. The same NICF funding applies. Email istraining@nus.edu.sg to find out more today.

NUS-ISS Executive Education Programmes

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- Digital Leadership
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- IT Service Management
- Product and Project Management
- Software Engineering & Design
- Startup & SME