WITHYOU
WITHME

Data Foundations

Course Outline

The WYWM Edge?

We Build Talent

The WYWM testing is built and functions on long-term career planning, not simply matching to 'a job' or a 'profile'. We believe in helping companies build talent for the future, not just tracking where the talent moves.

Future of Work Careers

WYWM matches uniquely and specifically to the future of work careers. Our testing algorithms are powered by labour market data, internal company workforce data and talent pool data. As jobs, skills, generations and your workforce change, so does the algorithm.

Learning Style is Key

Testing learning style is key to developing talent for new roles quickly, onboarding effectively and building leaders. Understanding one's learning style is a predictor of long-term increased performance and increased fluid intelligence.

Metadata history

Release	Date	Comments	Approver
v1.0	11 Jan 2019	First approved version	Michelle Mosey Head of WYWM Academy
v2.0	20 Mar 2019	Additional information required from ANSI application submission	Kemal Pinjo Head of WYWM Academy
v2.1	10 July 2019	Additional information required from onsite audit	Anindo Basu Head of WYWM Academy
v2.2	21 July 2020	Annual Review	Anindo Basu Head of WYWM Academy

ACCEPTANCE OF POLICY DOCUMENT

1.   WYWM Pty Ltd trading as "WithYouWithMe"

2.   Conducted by Head of WYWM Academy

Anindo Basu

Head of WYWM Academy

Our Training Philosophy

We are proud of our methodology and standards which provide a holistic approach to training. Our content is aligned with in demand skills required in industry with rapid constant continual development to become highly sought-after members of industry. Our focus is on workforce "development", long term career growth and challenging traditional placement systems and services.

Military model of instruction

Adult learning principles are neatly supported by the military competency-based approach which has the added benefit of presenting veterans with a framework they are familiar with. This approach has a few key principles:

- Tell me, show me, test me (TST).
- Military training follows a natural progression of explanation, demonstration and practice.
- Unlike most civilian training, instructors are required to show both the "right way to do something" and explain the "why and when you should use something"
- Repetition. The staple of military learning is repetition through cycles of practice, assessment, improvement and more practice improvement.
- Assessment and competencies. The military values assessment based competency. Assessments confirm that the training outcomes of a course have been achieved. Completion of the assessment makes a person "competent".

Course Description

The first course in a three-part course series, in Data Foundations Course you'll be introduced to the basics of data, including basic statistics and analysis, basics of visualisation and frequency distributions.

Target Audience

The Data Foundations course is for individuals who wish to pursue a career in any data-driven field (including but not limited to) data analysis, data engineering, data science, business intelligence, etc.

Program Purpose

Teach the principles of programming and basics of Python language, to enable students to further their own education and begin writing code.

Scope

Cover the basic concepts of programming: data types, comparisons, operators, decision making.

Then move on to core concepts such as loops, functions, and compound data types - lists, dictionaries, tuples. Finally, round out student's understand with procedural and object oriented programming, file handling, exception handling, and give an introduction to algorithm and data structure design.

Unit Outcomes

The information below is provided as a guide to assist students in engaging appropriately with the course requirements.

Prerequisites

The minimum requirement for this prerequisite is successful completion of WYWM Testing. The WYWM Aptitude Testing is a diagnostic test that provides an understanding of a learner's aptitude, potential to complete the course, and their potential for future employment in the Automation industry.

Pass score

The passing score for this course is 70%.

CERTIFICATE REQUIREMENTS

Certificate requisites

Academic: To fulfil the academic requirements of the curriculum, students must complete the curriculum and satisfactorily complete all assignments, as well as the knowledge checks in the curriculum. Knowledge checks and the assignments are created to test student achievement of established learning outcomes.

Certificate issuance: To be issued a certificate of completion, a student must complete all the academic requirements of the curriculum. Upon successful completion of the assignments, the student will receive a certificate of completion for the exam

Certificate maintenance and use: Each certificate has a unique serial number which is tracked by WYWM Academy Administrator. Certificate is not transferable to another person or company. The certificate can only be used while it is valid. When certificate is invalidated for any reason, the person can no longer use the certificate.

Completion requirements

- Complete / view all course materials
- Pass all knowledge checks (Quizzes)
- Pass all formative and summative assessments

Certificate Issue

Students will receive a Certificate of Completion upon completing the academic requirements of the curriculum.

Validation for an employer

Employers may validate authenticity and term of validity (2 years) of WYWM certificate by contacting WYWM academy@withyouwithme.com and providing student name and course name. WYWM will provide a YES or NO. No further information will be provided to employers.

Validation for a student/graduate

Graduates may validate the term of validity of a WYWM certificate by contacting WYWM academy@withyouwithme.com and providing their name and course name. WYWM will provide the term of validity of the certificate.

Information Regarding Changes to the Certificate Program

The Academy will strive to deliver its curriculums in accordance with the descriptions provided on the website at the time of enrolment. However, in some situations it might be beneficial or necessary for WYWM to implement changes to curriculum. The changes will not be very substantial so as to have an impact on students who have already started their curriculum. In some circumstances where it is necessary for WYWM to implement such changes after enrolment due to developments in the relevant subject, advances in teaching or evaluation practice, or requirements of accreditation processes, students will be notified of the changes made to curriculum immediately. Primary stakeholders will be notified of changes to program purpose, scope, intended learning outcomes via the WYWM website.

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COURSE LEARNING OUTCOMES

Module Name	Learning Outcome	Learning Objective	Training Event	Formative Assessment	Summative Assessment
Introduction	Course introduction	Introduction to the course	Video Lesson	n/a	n/a
Introduction	The data analytics environment	1.1 Understand where data analysis is used 1.2 Correctly identify different types of data 1.3 Understand how data is stored and the basics of databases	Watch the video lessons and review the associated lesson handouts: 1. The data analytics environment 2. Data types 3. Data storage and databases	Lesson Quiz	Final Quiz
Introduction	Introduction to Excel	2. Provide an introduction to Excel, including how it is used for Data Analysis	Watch the video lessons and review the associated lesson handouts. 1. Introduction to Excel	Lesson Quiz	Final Quiz

Basic statistics	Filtering and sorting in excel	3. Understand how to use Filtering and Sorting within Excel for basic statistics, such as identifying the highest and lowest values in a range	Watch the video lessons, review the associated lesson handouts and complete the exercise. 1. Filtering and Sorting Scenario 2. Filtering and Sorting Lesson part 1 3. Filtering and Sorting Lesson part 2	Exercise and quiz	Basic Statistics Summary - Module Quiz
Basic statistics	Basic descriptive statistics	4.1 Understand different types of descriptive statistics (such as measures of central tendency and spread) and how they are used in Data Analysis	Watch the video lessons, review the associated lesson handouts and complete the exercise. 1. Basic Descriptive Statistics Lesson	Exercise and quiz	Basic Statistics Summary - Module Quiz
Basic statistics	Applying descriptive statistics	4.2 Use excel formulas to apply descriptive statistics to data	Watch the video lessons, review the associated lesson handouts and complete the exercise. 1. Applying Descriptive Statistics Lesson	Exercise and quiz	Basic Statistics Summary - Module Quiz
Basic statistics	Interpreting basic descriptive statistics	4.3. Use descriptive statistics to understand the nature of a dataset, direct analysis and describe results	Watch the video lessons and review the associated lesson handouts. 1. Introduction to Excel	Lesson Quiz	Basic Statistics Summary - Module Quiz
Basic statistics	Basic statistics Summary	Summary of Learning Objects 1-4	Complete the Module's Exercise and Quiz	Exercise and quiz	Basic Statistics Summary - Module Quiz
Basic analysis	Aggregating data	5. How and when to use excel formulas to aggregate data	Watch the 4 part video lessons, review the associated lesson handouts and complete all 3 exercises. 1. Aggregating Data Lesson part 1 2. Aggregating Data Lesson part 2 3. Aggregating Data Lesson part 3 4. Aggregating Data Lesson part 4	3 Exercises and lesson quiz	Basic Analysis Summary - Module Quiz
Basic analysis	Visualisation	6.1 Basics of Visualisation 6.2 Components of a graph 6.3 Understand when to use the right	Watch the 4 part video lessons 1. Visualisation Lesson part 1 - Basics 2. Visualisation Lesson part 2 - Planning	Lesson Quiz	Basic Analysis Summary - Module Quiz

		visualisation	3. Visualisation Lesson part 3 - Components of a graph 4. Visualisation Lesson part 4 - Selecting the right graph		
Basic analysis	Frequency distributions	7.1 Understand what a frequency distribution is and why it's important 7.2 Understand the different shapes of data and what they mean	Watch the video lessons and review the associated lesson handouts 1. Frequency Distributions Lesson part 1 2. Frequency Distributions Lesson part 2	Basic Analysis Summary - Module Quiz	Basic Analysis Summary - Module Quiz
Basic analysis	Plotting frequency distributions	7.3 Plot a histogram in a variety of ways	Watch the 4 part video lessons, review the associated lesson handouts and complete the exercise 1. Plotting frequency distributions Lesson part 1 2. Plotting frequency distributions Lesson part 2 3. Aggregating Data Lesson part 3 4. Aggregating Data Lesson part 4	Lesson Quiz	Basic Analysis Summary - Module Quiz
Basic analysis	Introduction to pivot tables and charts	8. How to create and manipulate pivot charts for exploratory analysis	Watch the video lesson, review the associated lesson handouts and complete the exercise 1. Introduction to pivot tables and charts Lesson	Lesson Quiz	Basic Analysis Summary - Module Quiz
Basic analysis	Misleading Statistics	9. What is a misleading statistics and how do we avoid it	Watch the video lesson and review the associated lesson handouts 1. Misleading Statistics Lesson	Lesson Quiz	Basic Analysis Summary - Module Quiz
Basic analysis	Basic Analysis - Summary	Summary of Learning Objects 5-9	Complete the Module's Exercise and Quiz	Exercise and quiz	Basic Analysis Summary - Module Quiz
Assessment	Data Foundations | Test Your Skills	Summary of Learning Objects 1-9	Complete the practical exercise	Exercise	Final Quiz
Assessment	Data Foundations | Test Your Knowledge	Summary of Learning Objects 1-9	Complete the Final Quiz	Final Quiz	Final Quiz

COURSE CONTENT

Module 0: Introduction

- Course Introduction
- The Data Analytics Environment
- The Data Analytics Environment
- Data Types
- Data Storage and Databases
- Introduction to Excel

Module 1: Basic Statistics

- Filtering and Sorting
- Basic Descriptive Statistics
- Applying Descriptive Statistics
- Interpreting Descriptive Statistics
- Basic Statistics | Summary

Module 2: Basic Analysis

- Aggregating Data
- Visualisation
- Frequency Distributions
- Plotting Frequency Distributions
- Introduction to Pivot Tables and Pivot Charts
- Misleading Statistics
- Basic Analysis | Summary

Final Quiz

- Test Your Skills
- Test Your Knowledge

TECHNICAL REQUIREMENTS

Hardware and Software required

- Access to a computer (desktop, laptop, notebook, etc)

- Internet connection

- CPU: 32 or 64-bit Processor (Intel or AMD chipsets; example i3 to i7)

- RAM: 4GB or Better (8GB+ Recommended)

- Operating Systems: Windows 7 to Windows 10, Linux 3.x (and up) Distros, Mac OS X

○ Note Power BI is only available on a Windows PC. Users with a Mac or Linux OS can complete the Data Visualisation component of the pathway on Tableau.

● Office Productivity for Reports e.g. Microsoft Office or LibreOffice

● Reader for PDF Files e.g. Adobe Acrobat Reader or MS Word 2016

● Web Browser: Google Chrome is recommended

● Microsoft Excel (2016 or higher recommended)

● Microsoft Power BI Desktop or Tableau Public

CAREERS

What to expect:

You'll learn the skills and tools required for day to day operations as a junior data analyst. You'll learn how data is stored, consumed, analysed, visualised, and how to make data-driven decisions. You'll develop an inquisitive mindset, learning the 4 step process (Define, Transform, Analyse, Communicate) in approaching a Data Analytics task.

Where it can take you:

The WYWM Data Analytics Pathway can take you on a number of different data-driven career pathways (including but not limited to) data analysis, data engineering, data science, business intelligence, consulting, and project management.

INSTRUCTOR PROFILES

Ben DeMaine	Ben served in the British and Australian Army as an Infantry Officer before becoming responsible for Workforce Data Analytics. Ben has a Bachelor of Science and over three years of experience as a data analyst and analytics instructor. Ben supports all of our data courses as the Practice Lead at WYWM. **Contact**: bendemaine@withyouwithme.com

Jimmy Wynen	Jimmy is the lead instructor for our Data Analyst Pathway. Jimmy is a past Technical Consultant with advanced skills in Data Analytics, with Microsoft certifications in Excel and Power BI. Jimmy is passionate about telling stories through data and excels at translating detailed information into

easy-to-understand steps.

Contact: jimmy@withyouwithme.com

GENERAL ENQUIRIES

Pathfinder Team (during Australian – AEST and US – EST office hours 9 to 5, Mon to Fri)

Email: contact@withyouwithme.com

EXPECTATIONS OF STUDENTS IN THIS COURSE

Student Attention / Participation

The online courses are designed to be highly interactive and collaborative, as authentic learning takes place within a social context. Refer to the instructor outline for further guidance on interaction. To help ensure an effective learning experience, all students in online courses are expected to participate on a regular basis. Participation is defined as "submitting required work as assigned; being an active contributor and responder to fellow students and the instructor in a timely basis, as set forth by online discussion guidelines in each course." Failure to participate may be counted as an absence.

If technical circumstances prevent a student from entering the course site for a period, it is the student's responsibility to contact the instructor in a timely manner if the student wishes to receive credit for any missed online activities.

There is a student Administration file located in the course that will provide useful information such as student code of conduct, assessment requirements, and course outline.

Instructor Participation

Staff and Affiliates of WYWM are expected to perform all work, duties and functions associated with their positions that includes and not limited to engagement process refer to instructor outline for further guidance on interaction.

CONTINUAL COURSE IMPROVEMENT

Periodically student responses are gathered, using online evaluation forms. Student responses are taken seriously, and continual improvements are made to the course based in part on such feedback. Significant changes to the course will be communicated to subsequent cohorts of students taking the course. It is important that students and teachings complete the surveys for this course. This is completely anonymous and provides important student observations and suggestions to ensure that the course is continually improved.

ASSESSMENT

The assessment shall be administered with a level of identity verification and security congruent with the certificate program's purpose, scope and intended learning outcomes.

Academic Integrity Academic integrity is the ethical standard of the Academy. It ensures that students graduate because of proving they are competent in their discipline. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment. Academic integrity means that you do not engage in any activity that is academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others.

You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references. To minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to a software that will check for text comparison.

Late Submission Penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

- 5 percent (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task
- 10 percent (of the assessment task's identified value) for the third day
- 20 percent (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task
- A result of zero is awarded for an assessment task submitted seven days from the date identified as the due date for the assessment task.
- Weekdays and weekends are included in the calculation of days late.

Assessment marks

The assessment scoring is designed and conducted by qualified personnel following industry accepted practices, uses methods appropriate to purpose, scope and intended Learning Outcomes, and is based on a passing score established through a criterion-referenced method in advance of the assessment being administered. The results of the assessment are communicated to learners in a consistent, timely and appropriate manner and documented as part of the learner's record.

Assessment Task

As a WYWM Academy student, you can expect to undertake various types of assessment. These may be either formative or summative. Formative assessment helps students identify weaknesses in their understanding and/or performance in this course. In this course a formative assessment is delivered by short answers and multiple-choice questions which is not graded to your overall pass mark for this course. However, a summative assessment passes judgement on the quality of a student's learning. Summative assessments are detailed below:

Assessment Task	Data Foundations Summary Quiz 1
Pass Mark	70%
Weighting	20%
Task description	This quiz is a summary of the first four lessons, used to assess the Basic Statistics Module wholistically. It takes the form of a multiple choice quiz.

Assessment Task	Data Foundations Summary Quiz 2
Pass Mark	70%
Weighting	45%
Task description	This quiz is a summary of the previous size lessons comprising the "Basic analysis" module. It will assess a student's comprehension and grasp of the preceding content, and takes the form of a multiple choice quiz

Assessment Task	Data Foundations Final Quiz
Pass Mark	70%
Weighting	35%
Task description	This quiz contains two parts - Test Your Skills, where you'll download a dataset and manipulate it using basic descriptive statistics and pivot tables to determine the correct answers, and Test Your Knowledge, wher you'll answer knowledge-based questions to test your comprehension of the foundations of Data. The first part is a practical exercise, and the second a multiple choice quiz.

Complaints Process

We have a separate complaints process that provides information and clear steps to assist you in lodging an appeal or making a complaint about a decision or determination made by a member of the WYWM academic staff. Please notify WYWM at contact@withyouwithme.com or +61 2 83118755.

FEES, PAYMENTS AND REFUNDS

This course is FREE for military veterans and immediate family of military veterans.

However, if you are doing this course as a Paid Service, please acknowledge and agree that:

- You (or your employer) must pay WYWM the fee for the course in-full at the time of enrolling. We will immediately process your payment through a third-party ecommerce platform, Stripe. Third party terms may apply to your purchase;
- If your payment is successful, we will send you an acknowledgement and email confirming your access to the Paid Service; and
- subject to the para below, all fees are non-refundable.

In respect of the Training Course:

- You may cancel your enrolment within 7 days of the date you first registered and we will refund the fees paid by you in full;
- We may, in our discretion, refuse to accept your registration for any reason, including:
  - If the Training Course is full or longer available;
  - If you fail any entry test we stipulate; or
  - If we suspect any fraudulent activity related to your enrolment.

Unless otherwise expressly stated, all fees, prices or other sums payable or consideration to be provided under these Terms of Use are exclusive of GST. If GST applies to a supply by any party under these Terms of Use, the consideration will be increased by an amount equal to the GST liability incurred by the party making the supply.

DATA PROTECTION PRACTICES

WYWM has adopted the following principles for the collection, use, retention, transfer, disclosure and destruction of personal information, with which workers must comply:

- We will process personal information lawfully, fairly and in a transparent manner;
- We will collect personal information for specified, explicit and legitimate purposes only;
- We will only process the personal information that is adequate, relevant and necessary for the relevant purposes;
- We will keep accurate personal information, and take reasonable steps to ensure that inaccurate personal information is deleted/corrected without delay;
- We will keep personal information for no longer than is necessary for the purposes for which the information is processed; and
- We will take appropriate technical and organisational measures to ensure that personal information is kept secure and protected against unauthorised or unlawful processing, and against accidental loss, destruction or damage.

STUDENT CODE OF CONDUCT

The Student Code of Conduct ("the Code") sets out WYWM's expectations of students as members of the academic community. All students at enrolment must accept their shared responsibility for maintaining a safe, harmonious and tolerant environment in which to study and work. The Code details WYWM's responsibilities and what students can reasonably expect in terms of quality provision, a safe and fair learning environment, and the student experience.

Student Conduct

The Code provides a framework for the standard of conduct expected of students with respect to their academic integrity and behaviour. It outlines the primary obligations of students and directs staff and students to the code and related procedures. Where a student breaches the Code, WYWM may take disciplinary action.

Student Complaints

The Code also provides for a Student Complaint Procedure which contains guiding principles and processes for student complaint resolution. This framework can be accessed through the Complaints Process described earlier.

Scope

The Student Code of Conduct is the basis for the relationship between WYWM and our students. WYWM is committed to providing a fulfilling and rewarding learning and research experience that enables students to achieve their full academic potential. This commitment is underpinned by an expectation that all members of the WYWM academic community will conduct themselves in a manner consistent with WYWM's values and guiding principles to maintain our strong tradition of excellence in learning, teaching and research, innovation and community engagement.

WYWM Responsibilities

This Code is underpinned by two primary objectives:

1. To provide a learning, teaching and research environment that enables students to achieve their full potential

2. To provide an academic experience for students consistent with the values and guiding principles.

Student's expectations

Students are expected to:

- Participate in subjects in accordance with the requirements of students described in Subject Outlines and in this study guide.
- Read Subject Outlines and ensure that they are familiar with subject requirements.
- Participate fully in subjects and submit assignments by the due dates.
- Check Subject Outlines and other relevant sources to see whether their question has been answered, before contacting staff and asking individual questions.
- Use advertised consultation times to seek assistance from lecturers and tutors.
- Understand what plagiarism is, and how to avoid it.
- If any piece of work that is found to contain plagiarism, the student may be ineligible for marking and may earn the student a grade of ZERO for the subject. Should plagiarism be suspected, the student will be informed of appropriate investigative and possible disciplinary action.

Students have a right to expect:

- That course content will be up to date and based on research, study and academic discussion in the field.
- Feedback on their work and their performance will be provided in a timely manner.
- To have access throughout the session to lecturers, coordinators and general staff including access to teaching staff outside class times in accordance with consultation and contact information provided for each subject.

Integrity in academic work

Students are expected to:

- That course content will be up to date and based on research, study and academic discussion in the field.
- Not engage in plagiarism or other academic misconduct
- Conduct themselves in a manner conducive to the pursuit of academic excellence

- Actively participate in the learning process
- Submit assessment tasks by required dates and times, unless unforeseen or exceptional circumstances arise
- Behave ethically, avoiding any action or behaviour that would unfairly advantage or disadvantage either themselves or another student
- Ensure their academic activities are conducted safely and do not place others at risk of harm, including abiding by all ethics requirements in relation to that academic activity
- Be familiar with the programs and resources made available or recommended by WYWM to assist them in conducting their studies and research appropriately, including resources to help students avoid plagiarism and to comply with the ethics requirements of research
- Not behave in any way which impairs the reasonable freedom of other persons to pursue their studies, work or research or to participate in the life of the University.

Equity, respect and safety

Students are expected to:

- Treat all staff, other students, and visitors online with courtesy, tolerance and respect.
- Respect the rights of others to be treated equitably, free from all forms of unlawful discrimination, harassment and bullying
- Respect the rights of others to express political and religious views in a lawful manner
- Not engage in behaviour that is perceived to be threatening or intimidating or causes any person to fear for their personal safety or well-being
- Not engage in unlawful behaviour
- Not participate in any learning activity, such as, tutorials, laboratory classes, under the influence of alcohol or a prohibited substance.

Use of WYWM Course Forums

The WYWM Course Forums hosted on either the learning platform or externally established as a convenient means for WYWM students of the relevant course, course instructors and course mentors (invited by WYWM for that purpose) to share information to assist students successfully complete the Course.

All participants are required to conduct themselves on the Course Forums in accordance with their obligations set out in this document as well comply with any Terms and Conditions of usage for the platform used.

The Course Forums enable students to problem-solve technical issues, share understanding of course content, alert each other to interesting and relevant open source information relating to cyber security. Participants may also draw attention to industry-related events being held from time to time.

Collaboration and sharing information are important aspects of cyber security work and we encourage this. However, many people doing this course are doing so as part of a wider engagement with WYWM in order to start a new and fulfilling career. Often, they have not participated in academic training previously AND often, they have not been part of a jobs-network previously. This can sometimes lead to a misunderstanding of their academic obligations and sometimes the posting of well-meaning but misplaced career advice. Some problems include:

- **Plagiarism.** While helping one another with assignments such as the interpretation of questions, ideas for selecting topics and sharing useful information or links, is perfectly acceptable you must write and submit your own work.

- **Career Advice.** Often well-intentioned but rarely well-informed, such advice in a WYWM forum attracts credibility without any of the necessary professional underpinning and is therefore prohibited.
- **Jobs Board.** The Course Forums are not to be used as a de-facto jobs board. If you become aware of opportunities which might be suitable for course participants or graduates you are strongly encouraged to contact your instructors directly as WYWM has other processes better suited to such situations.