



*MISSION: To develop a unique business school identity which is distinctive in the marketplace and provides a clear value proposition for students. This will be achieved by embedding the themes of entrepreneurship and innovation, digitalisation and data within our programs and embracing sustainability, work integrated learning and a commitment to social justice.*

## OVERVIEW

**Course Description** Business Intelligence (BI) aims to deliver straightforward snapshots of the current state of affairs to business managers. It uses a combination of software tools, databases and models to support business professionals in their understanding of business operations and performance. One of the goals of BI is that it should be easy for relatively non-technical end users to understand, and even to explore the data and create new reports.

**Sustainable Development Goals**



**Contact Hours**

**Lecture/Workshop**

Face to Face on Campus

A two (2) hour(s) integrated learning session plus one (1) hour workshop per Week, commencing in Week 2

Students are expected to complete four (4) hours of guided learning via online preparation, lectures, interactive workshops, tutorials, discussion groups or self-directed learning and an additional six (6) hours of independent study per week.

**Unit Weighting**

10

**Assumed Knowledge Workload**

BUSA2001 Big Data Analytics; STAT2020 Predictive Analytics  
Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

**Please refer to the course CANVAS site for details of teaching staff for ALL course offerings. The primary contact for courses is the Course Coordinator, whose details are listed on the course CANVAS site.**

**Student Consultation** A minimum of one (1) hour of consultation per week. Please see course CANVAS site for details of time and location.

**Course Learning Outcomes**

**On successful completion of this course, students will be able to:**

1. Demonstrate understanding of how Business Intelligence (BI) supports managerial decision making and problem solving in the real-world;
2. Make use of BI tools and models which are available to assist in managerial decision making;
3. Apply knowledge about decision-making processes by interpreting business intelligence to identify a current business issue; and
4. Critically assess existing BI practices when using data such as product reports, sales reports, and financial reports.

# COURSE OUTLINE

# ASSESSMENT DETAILS

This course has 3 assessments. Each assessment is described in more detail in the sections below:

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Online class test	Week 6	Individual	25%	1, 2, 3
2	Report BI system	Sunday of Week 10 by 5:00 pm	Individual	40%	1, 2, 3, 4
3	Critical Essay	Friday of Week 13 by 5:00 pm	Individual	35%	2, 3, 4

**Please note: students are advised that all assessments must be submitted in English. Assessment items not submitted in English will receive a mark of zero.**

**Results of individual assessment items and final results, including those provided via the Learning Management System (LMS) are ‘unofficial results’ until they are confirmed as finalised by the School Assessment Body and the Head of School or delegate. Finalised results are released directly to students on the Fully Graded Date of the relevant Semester/Trimester.**

## Time referenced is time in Newcastle NSW

<b>Late Submissions</b>	The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. <b>Note:</b> this applies equally to week and weekend days.
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### Assessment 1 – Online Class Test

<b>Assessment Type</b>	Online class test
<b>Purpose</b>	The purpose of this class test is to assess student’s learning progression at a primary stage. The test is online case-based with different managerial decision support exercises, short answer and case-based problem-solving questions. These questions are related to different applications of BI solutions in organisations that provide an early immersion of student’s learning and encouragement. This provides an opportunity for students to utilise feedback in improving student learning to achieving their successful comprehension of the course. This test will be an online activity in the classroom.
<b>Description</b>	The online class test will cover materials of lecture from week 1 to 5 and relevant textbook chapters. The class test consists of cases of decision support issues, relevant short answer for students to go through. There will be a mock-up paper uploaded on CANVAS, prior to the online test, so that student may follow as a guide of practices for preparation. Students are not allowed to use any materials or textbook during the online class test in week 6.
<b>Weighting</b>	25%
<b>Length</b>	50 minutes
<b>Due Date</b>	Week 6 (During the tutorial session)
<b>Submission Method</b>	Online via CANVAS
<b>Assessment Criteria</b>	Each question will have defined details online
<b>Return Method</b>	Online submission
<b>Feedback Provided</b>	Online – All correct answers and total score will be provided immediately after the completion of the class test.

### Assessment 2 – Report BI System

<b>Assessment Type</b>	Report – Integrating BI System in ERP (Enterprise Resource Planning)
<b>Purpose</b>	The purpose of this assessment is to assess student skills on developing technical reports on BI system integration. The report will also help assess how students apply knowledge using different forms of BI tools to improve decision making processes and justify their arguments through critical analysis in real-world problem solving in organisations.
<b>Description</b>	The report should describe why a data-driven BI is an essential tool, which values should be revealed from BI integration to any ERP and how to determine an effective BI strategy in enhancing data visualisation capabilities for managerial decision support (e.g. tracking sales performance in terms of which is at the lead-edge) in a modern enterprise

	- in which existing ERP system is in functioning mode since last 10 years. The report should relate to your independent investigation on potential BI tools and architecture that is essentially a vital component embracing data warehouse, data mining, data security & ethical sensitivity and finally on the design matter of data dashboard. A report template will be uploaded on CANVAS for student to start with the assignment.
<b>Weighting</b>	40%
<b>Length</b>	3000 words
<b>Due Date</b>	Sunday of Week 10 by 11:59 pm
<b>Submission Method</b>	Online via - CANVAS
<b>Assessment Criteria</b>	See the course CANVAS site for further details
<b>Return Method</b>	Online
<b>Feedback Provided</b>	Online – through the rubrics and comments feedback

### Assessment 3 – Critical Essay

<b>Assessment Type</b>	Essay
<b>Purpose</b>	The purpose of this critical essay is to assess student's overall learning in this course, through facts and evidential information presented as their key learning. In this assessment, students will be focusing on articulating a solid report to define the most critical success factors of BI Systems implementation in organisation.
<b>Description</b>	The essay will critically report the critical success factors of BI implementations in an organisation, evaluating the alignment between business and IT strategy, decision making culture, data infrastructure, BI provisions & potentials, as well as the importance of having clear business need. In doing this assignment, students are required to find and examine relevant sources (e.g. book chapters, journal articles and industry white papers) first to make/take notes of relevant ideas prior to composing their statements. Students are required to undertake critical thinking for analysing content and contrasting elements for revealing supporting insights in this work. The format of the report will be based on the detailed essay outline to structure your idea into 1) Introduction (key topic, background, statement on the key issues); 2) Main Body of the Report (existing works in the topic area, cover your views on concerns, your analysis or evaluation), and finally 3) Concluding remarks (Restating the work, summarising the key pieces of evidence and overall significance of your work).
<b>Weighting</b>	35%
<b>Length</b>	2500
<b>Due Date</b>	Sunday of Week 13 by 5:00 pm
<b>Submission Method</b>	Online - via CANVAS
<b>Assessment Criteria</b>	See the course CANVAS site for further details
<b>Return Method</b>	Online
<b>Feedback Provided</b>	Online – through the rubrics and comments feedback

## SYLLABUS

<b>Course Content</b>	<p><b>Topics in the course include but are not limited to the following:</b></p> <ol style="list-style-type: none"> <li>1. Fundamentals of Business Intelligence (BI) by managing and sharing data in both structured and unstructured formats.</li> <li>2. Review of contemporary BI applications in various industries</li> <li>3. Data warehouse modelling and implementation</li> <li>4. BI technology in the global business environment</li> </ol>
<b>Course Materials</b>	<p><b>Required Text:</b></p> <p>Turban, E., Sharda, R., Aronson, J. E., &amp; King, D. (2008). <i>Business intelligence: A managerial approach</i>. Upper Saddle River, NJ: Pearson Prentice Hall.</p> <p><b>ISBN:</b> 9780136100669</p> <p>An additional Readings list will be provided on the course CANVAS site.</p>

# SCHEDULE

Week	Topic	Class Preparation	Assessment
1	An Overview of Business Intelligence, Analytics and Data Science	Lecture slides (Textbook Chapter 1)	Overview of BI and Business Office Case Analysis (Source: Chapter 1)
2	BI Systems as Descriptive Analytics	Lecture slides, tutorial notes, and video (Textbook Chapter 2)	Data Sourcing, Data Consolidation, Data Cleaning, Data Transformation, Data Reduction for Data Driven Marketing (Source: Chapter 2)
3	BI Reporting	Lecture slides, tutorial notes and video (Textbook Chapter 2)	Introduction to Tableau for BI reporting
4	Data Warehousing in BI Systems	Lecture slides, tutorial notes (Textbook Chapter 3)	ETL (Extraction, transformation and loading) processes (Source: Chapter 3)
5	Data Mining Process, Methods, and Algorithms	Lecture slides, tutorial notes and video (Textbook Chapter 4)	Demonstration and working principles of different data mining tools
6	BI System in form of Web and Text Analytics Solutions	Lecture slides, tutorial notes (Textbook Chapter 5; Additional resources in CANVAS)	<b>Assessment 1 due:</b> In-class
7	Social Media Analytics	Lecture slides and tutorial notes (Textbook Chapter 5; Additional resources in CANVAS)	Introduction to data mining tools (open-sourced solutions)
8	Optimisation and Simulation	Lecture slides, tutorial notes and video (Textbook Chapter 6)	Working with key functions of social media analytics and simulation software (External Speaker)
9	Big Data Concepts for BI Solutions	Lecture slides, tutorial notes and video (Textbook Chapter 7)	Working with critical success factors of BI implementation (technical and organisational factors)
10	BI Tools and Data Sensing Devices	Lecture slides, tutorial notes and video (Additional resources in CANVAS; Textbook Chapter 7)	IoT for data tracking case study and BI development  <b>Assessment 2 due:</b> Sunday of week 10 by 5:00 pm
11	Issues of BI and Data Management	Lecture slides and tutorial notes (Additional resources in CANVAS; Textbook Chapter 8)	Power BI as BI Tools for data management (External Speaker)
12	Future Trends, Privacy and Managerial Considerations	Lecture slides and tutorial notes (Textbook Chapter 8)	Big data technologies- MapReduce technique as BI Engine (Source: Chapter 7)
13	Review lecture	Lecture slides and tutorial notes (Chapter review and problem-solving case studies)	Recapping all practical tasks  <b>Assessment 3 due:</b> Sunday of Week 13 by 5:00 pm

**If a lecture/class is scheduled on a public holiday, a make-up lecture may be announced by the course coordinator on the course CANVAS site.**

# CONTACTS

## School Offices

### Newcastle Business School – Callaghan, Newcastle City & Online

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### PSB Academy Enquiries

Log your question or request to the PSB Program Executives at the following website:  
<http://www.psb-academy.edu.sg/eng>  
+65 6390 9000

### Newcastle Australia Institute of Higher Education Pte Ltd

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# ADDITIONAL INFORMATION

## Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).

<b>Communication Methods</b>	Communication methods used in this course include: <ul style="list-style-type: none"> <li>- CANVAS Course Site: Students will receive communications via the posting of content or announcements on the CANVAS course site.</li> <li>- Email: Students will receive communications via their student email account.</li> <li>- Face to Face: Communication will be provided via face to face meetings or supervision.</li> </ul>
<b>Course Evaluation</b>	Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.
<b>Oral Interviews (Vivas)</b>	As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the <a href="#">Oral Examination (viva) Procedure</a> . In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the <a href="#">Student Conduct Rule</a> .
<b>Academic Misconduct</b>	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <a href="https://policies.newcastle.edu.au/document/view-current.php?id=35">https://policies.newcastle.edu.au/document/view-current.php?id=35</a> .
<b>Adverse Circumstances</b>	The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: <ol style="list-style-type: none"> <li>1. the assessment item is a major assessment item; or</li> <li>2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;</li> <li>3. you are requesting a change of placement; or</li> <li>4. the course has a compulsory attendance requirement.</li> </ol> Before applying you must refer to the Adverse Circumstances Affecting Assessment Items Procedure available at: <a href="https://policies.newcastle.edu.au/document/view-current.php?id=236">https://policies.newcastle.edu.au/document/view-current.php?id=236</a>
<b>Important Policy Information</b>	The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <a href="https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures">https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures</a> that support a safe and respectful environment at the University.

*This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*

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