Data Science and Digital Solutions ITS315118

15 TCE Points

You will work through the following units as part of the subject

Module 1: People, data and digital systems

explore digital transformation and how data-driven innovation is challenging and changing society, business and industry. Collect, store, process, analyse and communicate data.

Module 2: Data-driven design

solve user problems through the analysis of data and application of a problem-solving process. Explore information security in organisations and how cyber security risks can be managed.

Module 3: From problem to solution

ideate to identify a problem, need, opportunity or situation that has an achievable innovative solution and create a design specification that will lead into systems design process to create and evaluate a data informed digital solution.

How you'll be assessed:

Common types of internal assessments are:

- assignments, reports and essays
- tests
- data analysis

Data Science and Digital Solutions has an externally assessed folio and no exam.

Data Science and Digital Solutions Level 3 provides learners with the opportunity to develop industry-based skills in data science and the creation of digital solutions which are highly advantageous across a range of careers. It also supports further study for those interested in vocational and university courses in STEM and business-related pathways.

COMPLETION OF WORK

Assessment due dates are provided in the Program of Learning and on Canvas. Work must be submitted by the due date unless an approved extension has been granted. Unapproved late submissions will incur penalties as outlined in the *Completion of Work Policy*. Students needing extensions should contact their subject teacher before the due date with valid reasons, such as illness or unforeseen circumstances.

For more details refer to the Launceston College: Completion of Work Policy.

ACADEMIC INTEGRITY

All senior secondary students in Tasmania are expected to uphold academic integrity, meaning they complete their work honestly and fairly. This includes properly referencing any ideas, images, or information borrowed from others, allowing teachers to distinguish between original and sourced content.

Assignments will be submitted through Canvas, email, hard copy as directed in the task sheet.

For more details, refer to the Launceston College: Academic Integrity Policy.

REFERENCING

The Harvard referencing system is recommended for Data Science and Digital Solutions. The standards for criterion 4 state that a student must:

- follows and correctly applies all referencing conventions and methodologies to accurately identify sources of information
- identifies all sources used in structured reference lists that align to all referencing conventions.

COURSE DOCUMENT

The TASC website provides considerable information about the course. Data Science - TASC

DATA SCIENCE AND DIGITAL SOLUTIONS: PROGRAM OF LEARNING

Week	Lesson 1	Lesson 2	Lesson 3
T1 - Week 1			
T1 - Week 2	Grok Cloud	Data Layout	CRUD & REST
T1 - Week 3	Truth & Trust	Data vs. Information	
T1 - Week 4	Versions & Backup		Sources
T1 - Week 5	Impacts of Technology		History, Innovation, & Enterprise
T1 - Week 6		History, Innovation, & Enterprise	
T1 - Week 7	Digital Careers & Transformation		
T1 - Week 8	Peer Review	Data problem solving cycle	Data problem solving cycle
T1 - Week 9	Data problem solving cycle		
T1 - Week 10	Data problem solving cycle		
T2 - Week 1	Networks and Security		
T2 - Week 2	Networks and Security		
T2 - Week 3	Networks and Security		
T2 - Week 4	Information and Cyber Security		
T2 - Week 5	Information and Cyber Security		
T2 - Week 6	Data-driven systems solution and journal		
T2 - Week 7	Data-driven systems solution and journal		
T2 - Week 8	Data-driven systems solution and journal		
T2 - Week 9	Data-driven systems solution and journal		
T2 - Week 10	Data-driven systems solution and journal		
T3 - Week 1	Project Brainstorming and Investigation		
T3 - Week 2	Project Brainstorming and Investigation		
T3 - Week 3	Digital Solutions Project		
T3 - Week 4	Digital Solutions Project		
T3 - Week 5	Digital Solutions Project		
T3 - Week 6	Digital Solutions Project		
T3 - Week 7	Digital Solutions Project		
T3 - Week 8	Digital Solutions Project		
T3 - Week 9	Digital Solutions Project		
T3 - Week 10	Digital Solutions Project		
T4 - Week 1	Digital Solutions Project		
T4 - Week 2	Finalise Assessment		
T4 - Week 3	Finalise Assessment		
T4 - Week 4	Finalise Assessment		

ASSESSMENT

Criterion-based assessment helps students see how well they're meeting course outcomes at the end of their study. While there is continuous feedback to guide learning, final assessments focus on showing what students have achieved by the end. Ratings are given as 'A', 'B', or 'C', based on course standards. A 't' indicates partial achievement below a 'C', and a 'z' means no evidence provided.

Criteria

The assessment for Data Science and Digital Solutions Level 3 will be based on the degree to which the learner can:

1. apply a systematic process to analyse problems and produce a digital solution*
2. explain and apply knowledge and understanding of information systems to provide effective digital solutions*
3. select and apply data interpretation techniques to inform the design of user centred solutions*
4. communicates for technical and non-technical audiences*
5. apply and monitor personal and project management processes skills
6. explain the interrelationships between innovation, digital technologies and transformation in organisations
7. explain the role of information security in an organisation
8. explain the ethical, legal and sustainability considerations that impact the design and implementation of digital solutions*.

*denotes criteria that are both internally and externally assessed.

Award Requirements

The final award will be determined by the Office of TASC from 13 ratings (8 from the internal assessment, 5 from external assessment).

The minimum requirements for an award in this course are as follows:

EXCEPTIONAL ACHIEVEMENT (EA)
10 'A' ratings, 3 'B' ratings (3 'A' ratings, 2 'B' rating from external assessment)

HIGH ACHIEVEMENT (HA)
5 'A' ratings, 5 'B' ratings, 3 'C' ratings (1 'A' ratings, 3 'B' ratings, 1 'C' rating from external assessment)

COMMENDABLE ACHIEVEMENT (CA)
6 'B' ratings, 6 'C' ratings (2 'B' ratings, 3 'C' ratings from external assessment)

SATISFACTORY ACHIEVEMENT (SA)
11 'C' ratings (3 'C' ratings from external assessment)

PRELIMINARY ACHIEVEMENT (PA)
6 'C' ratings

A learner who otherwise achieves the ratings for a CA (Commendable Achievement) or SA (Satisfactory Achievement) award but who fails to show any evidence of achievement in one or more criteria ('z' notation) will be issued with a PA (Preliminary Achievement) award.