

ICT702 Data Visualisation

School: School of Science, Technology and Engineering

2023 | Session 6

UniSC Sunshine Coast

**BLENDED
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

Online

ONLINE

You can do this course without coming onto campus.

Please go to usc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

A picture is worth a thousand words! Data in a spreadsheet or in a table doesn't tell the same story as a well presented graph. Visually-displayed data is much more accessible, and enables businesses to promptly identify potential strengths and weaknesses and in turn make well informed decisions. Through this course, you will learn to create easy-to-understand visualizations and dashboards to enable decision-makers and stakeholders to see the big picture and act on the results.

1.2. How will this course be delivered?

| ACTIVITY | HOURS | BEGINNING WEEK | FREQUENCY |
|--|-------|----------------|-----------|
| BLENDED LEARNING | | | |
| Learning materials – Asynchronous Learning material | 4hrs | Week 1 | 6 times |
| Tutorial/Workshop 1 – In-class workshop | 4hrs | Week 1 | 6 times |
| Tutorial/Workshop 2 – Week 7 workshop | 2hrs | Week 7 | Once Only |
| ONLINE | | | |
| Learning materials – Asynchronous Learning material | 4hrs | Week 1 | 6 times |
| Tutorial/Workshop 1 – Interactive zoom workshop | 4hrs | Week 1 | 6 times |
| Tutorial/Workshop 2 – Week 7 workshop | 2hrs | Week 7 | Once Only |

1.3. Course Topics

Data Visualization and Design.
 Purposeful Use of Color.
 Exploring Data Visually.
 Explaining Visually to Influence with Data.
 Data Dashboards.
 Telling the Truth with Data Visualization.

2. What level is this course?

700 Level (Specialised)

Demonstrating a specialised body of knowledge and set of skills for professional practice or further learning. Advanced application of knowledge and skills in unfamiliar contexts.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

| COURSE LEARNING OUTCOMES | | GRADUATE QUALITIES |
|---|--|--|
| On successful completion of this course, you should be able to... | | Completing these tasks successfully will contribute to you becoming... |
| 1 | Explain the role of data visualisation in a business context | Knowledgeable Creative and critical thinker |
| 2 | Apply the principles of data visualisation in a business context | Creative and critical thinker Empowered |
| 3 | Use data analysis and visualisation techniques to gain business insights. | Creative and critical thinker Empowered |
| 4 | Effectively communicate data-driven findings using data visualisation techniques | Creative and critical thinker Empowered |

5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Must be enrolled in a postgraduate program.

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

Formative feedback provided on weekly tutorial exercises.

6.3. Assessment tasks

| DELIVERY MODE | TASK NO. | ASSESSMENT PRODUCT | INDIVIDUAL OR GROUP | WEIGHTING % | WHAT IS THE DURATION / LENGTH? | WHEN SHOULD I SUBMIT? | WHERE SHOULD I SUBMIT IT? |
|---------------|----------|--|---------------------|-------------|--|-----------------------|--|
| All | 1 | Quiz/zes | Individual | 15% | 1 hour | Week 3 | Online Test (Quiz) |
| All | 2 | Artefact - Creative, and Written Piece | Individual | 40% | 1000-word report and data visualisation artefact | Week 5 | Online Assignment Submission with plagiarism check |
| All | 3 | Examination - not Centrally Scheduled | Individual | 45% | 2 hours | Week 7 | Online Test (Quiz) |

All - Assessment Task 1: Online Test

| | | | | | | |
|------------------|--|--|--|--|--|----------------------------------|
| GOAL: | To assess your understanding and application of visualisation techniques to make sense of business data. | | | | | |
| PRODUCT: | Quiz/zes | | | | | |
| FORMAT: | An online exam with short answer and/or essay questions. | | | | | |
| CRITERIA: | No. | | | | | Learning Outcome assessed |
| | 1 | Critical analysis of data visualisation in the given problem | | | | 1 |
| | 2 | Creative approaches to solving the problem | | | | 3 |
| | 3 | Application of relevant visualisation concepts | | | | 2 |

All - Assessment Task 2: Data Visualisation Report

| | | | | | | |
|------------------|---|--|--|--|--|----------------------------------|
| GOAL: | To design and develop effective data visualisation for a real-world data case study. | | | | | |
| PRODUCT: | Artefact - Creative, and Written Piece | | | | | |
| FORMAT: | Using a data visualisation software, you will create a dashboard to communicate insights for the given business case. In addition you will also be required to submit a report of your findings. Further details will be available on Canvas in the assignment specification. | | | | | |
| CRITERIA: | No. | | | | | Learning Outcome assessed |
| | 1 | Presentation and organisation of report | | | | 4 |
| | 2 | Insightful analysis of the given problem | | | | 3 |
| | 3 | Correct use of data visualisation principles and approaches to solving the problem | | | | 2 |

All - Assessment Task 3: Final Exam

| | | | | | | |
|-----------------|---|--|--|--|--|--|
| GOAL: | Apply data visualisation techniques and principles for given business scenarios | | | | | |
| PRODUCT: | Examination - not Centrally Scheduled | | | | | |
| FORMAT: | 2 hour online exam. | | | | | |

| CRITERIA: | No. | Learning Outcome assessed |
|-----------|---|---------------------------|
| | 1 Application of data visualisation principles to given scenarios | 2 |
| | 2 Correct use of data visualisation tools and techniques | 3 |

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

| REQUIRED? | AUTHOR | YEAR | TITLE | EDITION | PUBLISHER |
|-----------|--|------|--|---------|------------------|
| Required | Jeffrey D. Camm,James J. Cochran,Michael J. Fry,Jeffrey W. Ohlmann | 2021 | Data Visualization: Exploring and Explaining with Data | 1st | Cengage Learning |

8.2. Specific requirements

You must have a computer (Desktop or Laptop) that you can install the needed software on, in order to be able to practice data visualisation skills outside workshop times.

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. 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 considered to be 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.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

10.3. Assessment: Submission penalties

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

- 5% (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% (of the assessment task's identified value) for the third day - 20% (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 after 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. To request an extension you must contact your course coordinator to negotiate an outcome.

10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email safe@usc.edu.au.

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email studentwellbeing@usc.edu.au.

10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email AccessAbility@usc.edu.au or call 07 5430 2890.

10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.10. General Enquiries

In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au

