

Subject Outline

Subject Name	Master Class 1: Data Science
Subject Code	MA5851
Credit Points	3
Study Period	SP82 2021
Study Mode	External
Campus	Online
Subject Coordinator/Division /College	Dr David Donald / Data Science / College of Science & Engineering

We acknowledge the Traditional Owners of the lands and waters where our University is located and actively seek to contribute and support the JCU Reconciliation Statement, which exemplifies respect for Australian Aboriginal and Torres Strait cultures, heritage, knowledge and the valuing of justice and equity for all Australians.

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Pre-requisites

24 credit points of postgraduate subjects. We recommend students to complete [MA5805](#), [MA5830](#) and [MA5820](#) before attending this subject.

Subject Outline preparation

This subject outline has been prepared by Dr Mostafa Al Masum, Dr Neil Fraser and Dr David Donald for the College of Science and Engineering, Division of DTES, James Cook University. Updated 01/02/2021.

Q1. This subject is offered across more than one campus and/or mode and/or study period within the one calendar year.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Q2. If yes (Q1), the design of all offerings of this subject ensure the same learning outcomes and assessment types and weightings.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Q3. If no (Q2), [Type here] has authorised any variations, in terms of equivalence.		

Subject Outline peer reviewer

Name	Carla Ewels
Position	Lecturer
Date reviewed	11-Feb-2021

Teaching Staff contact details

Teaching team	Staff member	Email	Consultation times*
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Learning Advisors	The Learning Centre	Online contact form	Visit Learning Advice Desk – JCU Library

*Consultation times by appointment only.

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1 Subject at a glance

1.1 Student participation requirements

The JCU Learning, Teaching and Assessment [Procedure](#) (2.1.2d) indicates a typical student workload for a **three (3) credit point subject** requires a **130 hour work load** of study related activities, including attendance, assessment and self-directed study over the duration of the subject with equivalency across all modes of delivery.

Note that attendance at specified classes will be a mandatory requirement for satisfactory completion of some subjects (Learning, Teaching and Assessment Procedures, 3.1.8e); and that additional hours may be required per week for those students in need of **English language, numeracy or other learning support**.

Students are expected to participate in the Learn Ultra discussion boards. Discussion boards give you a place to interact with staff and other students about subject content and topics, and help students to clarify and extend their understanding of key content. These are a forum for students to present their thoughts and ideas in an online version of an in-person classroom discussion and, therefore, the same courtesy rules apply.

While attendance in the Collaborate sessions is not mandatory, it is highly recommended. These sessions will provide you with the opportunity to have synchronous (at the same time) conversations with your Subject Coordinator (or your tutor) and with your fellow students from across the subject, to have your questions answered and to receive further clarification about any concerns or questions you may have.

Key subject activities	Time	Day and date	Room/Location
Two, 1 hour collaborate sessions per week (optional)	News and announcements discussion board on Learn JCU for MA5851		
Weekly discussion boards	5-7pm	Everyday	Learn JCU

For information regarding class registration, visit the [Class Registration Schedule](#).

1.2 Key dates

Key dates	Date
Census date	See 2021 Study Period and Census Dates
Last date to withdraw without academic penalty	See 2021 Study Period and Census Dates
Assessment item 1: Timed Online Quiz [10 %]	Due Sunday 1159pm (local Time) 14/03/2021
Assessment item 2: NLP Recommender System [50 %]	Due Sunday 1159pm (local time) 04/04/2021
Assessment item 3: Web Scraper and Strategic Insights [40 %]	Due Wednesday 1159pm 21/04/2021

1.3 Communication

Online discussion board forums

- Students are encouraged to participate in the online discussion board forums. There is no assessment attached to these forums, but you will find it helpful to post general questions about subject matter here.
- The teaching team monitors and replies to comments on the discussion board once per day except Sunday
- Any student or staff member can post or reply to posts on a discussion forum.
- Subject coordinator reserves the right to remove any unprofessional comments and any unprofessional comments on discussion forums will be reported to the appropriate administrators for actioning. For more information on Student Code of Conduct, <https://www.jcu.edu.au/policy/student-services/student-code-of-conduct>

Email

- For matters of a personal nature, you are permitted to email the subject co-ordinator so long as "MA5851" in the subject line of the email.
- Only emails of a professional, courtesy standard are responded to.
- You should allow up to 2 business days for a response. For example, if you send an email on Friday, you may not receive a reply until Wednesday. If there is a delay in replying, please resend your email.
- Staff do not monitor the messages tab in LJC. For communicating with the teaching team please follow the procedure described above.

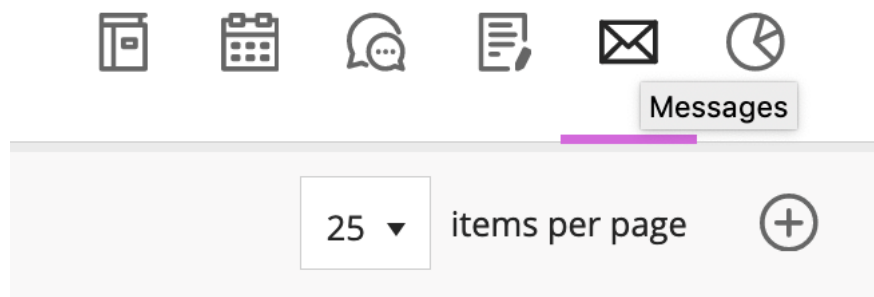


Figure 1: Do not use this messaging facility for attempting to communicate with the teaching team.

2 Subject details

2.1 Subject description

Data Science is a field that is transforming society finding application in essentially all domains from business, to science and healthcare. It is constantly evolving with new techniques in mathematics, statistics, machine learning and computation/data manipulation continually emerging to extract knowledge and value from data. The Data Science Master Classes will bring in leaders in the field to report recent advances in data science techniques and/or applications of data science.

2.2 Subject learning outcomes and course learning outcomes

Students who successfully complete this subject will be able to:

- Apply data science skills, knowledge and techniques to solve problems in a particular area of focus of the Master Class;
- Understand and apply new data science skills, knowledge and techniques to solve problems in data science;
- Effectively communicate the results of the project both orally and in written form at a career-ready level appropriate for the client

These outcomes will contribute to your overall achievement of **course learning outcomes**. Your course learning outcomes can be located in the entry for your course in the electronic [JCU Course and Subject Handbook 2021](#) (click on 'Course Information' bar/ select 'Undergraduate Courses' or 'Postgraduate Courses'/ select relevant course/ scroll down to 'Academic Requirements for Course Completion', 'Course learning outcomes').

2.3 Learning and teaching in this subject

In this masterclass we will take a deep dive into NLP, web scraping, the use of APIs and Spark processing. In weeks 1 to 3, we look at the importance of NLP and how it dominates much of the work data scientists are involved in.

We will then look at the fundamental concepts that underpin NLP, how it relates to business and how that relates to information resources such as documents and URLs. In weeks 4 to 6, we look at how NLP parsers are deployed effectively in web scraping with the use of APIs and Python scripting, and how to maintain these parsers as a production pipeline of work that can be re-used in different data science projects. Week 7 is kept free to work on your capstone project

Learning and teaching activities may be recorded for this subject. Personal Information in the form of images and audio may be collected by JCU during the recording. This Personal Information may appear as part of the recording which is accessible to students and staff in this subject on Learn JCU

2.4 Student feedback on subject and teaching

As part of our commitment at JCU to improving the quality of our courses and teaching, we regularly seek feedback on your learning experiences. Student feedback informs evaluation of subject and teaching strengths and areas that may need refinement or change. **Your JCU Subject and Teaching Surveys** provide a formal and confidential method for you to provide feedback about your subjects and

the staff members teaching within them. These surveys are available to all students through [LearnJCU](#). You will receive an email invitation when the survey opens. We value your feedback and ask that you provide constructive feedback about your learning experiences for each of your subjects, in accordance with responsibilities outlined in the [Student Code of Conduct](#). Refrain from providing personal feedback on topics that do not affect your learning experiences. Malicious comments about staff are deemed unacceptable by the University.

In response to previous student feedback and other data, the following enhancements to this subject have been made:

- Assessment 2, the NLP recommender, have been reviewed to include
 - Base line data
 - Trove API access
 - Clarification of the NLP system task
- Assessment 3, the Web Scraper, has been reviewed to incorporate the Strategic Insights report – previously Assessment 4. This has reduced the overall assessment profile to two written tasks.

2.5 Subject resources and special requirements

All subject readings and resources, including journal articles, book chapters, websites, videos, print and eTextbooks, are available to view online from your *Readings list* via your LearnJCU subject site. Textbooks are listed in your *Readings list*, including links to library holdings. The JCU Library has limited print copies of prescribed textbooks for two-day loan, and options for viewing available textbooks online.

Additionally, you can find the most appropriate library subject resources, including dedicated discipline-specific Library Guides, relevant databases and access to library services and staff through the *Your Library* tool, in your LearnJCU subject site.

The following textbooks are required for this subject and are either free online or available electronically through the library.

- Clark, A., Fox, C. & Lappin, S. (Eds.). (2013). *The handbook of computational linguistics and natural language processing* (1st edn). Chichester, UK: John Wiley & Sons. Retrieved from <https://ebookcentral.proquest.com/lib/jcu/detail.action?docID=4035461>.
Part 1V, 18 Information Extraction , Part IV, 13 Statistical Parsing
- Mitchell, R. (2018). *Web Scraping with Python: Collecting More Data from the Modern Web*. Newton, MA: O'Reilly Media, Inc. Retrieved from <https://yanfei.site/docs/dpsa/references/PyWebScrapingBook.pdf>.

See your [Subject Reading list](#) for all required and recommended readings.

3 Assessment details

3.1 Requirements for successful completion of subject

To pass this subject, you must:

- Achieve an overall percentage of 50% or more
- Submit assessments comprising of at least 80% the subject weighting.

Assessment items and final grades will be reviewed through moderation processes (Learning, Teaching and Assessment [Procedure](#), 3.6). It is important to be aware that assessment results “must always undergo final ratification for each study period. No single grade or mark represents a final result in a subject” (Learning, Teaching and Assessment [Procedure](#), 3.7.4.).

Final results for this subject will be graded as described in the [Student Results Policy](#).

3.1.1 Inherent requirements [delete section if not applicable]

[Inherent requirements](#) are the fundamental abilities, attributes, skills, and behaviours needed to achieve the learning outcomes of a course while preserving the academic integrity of the university’s learning, assessment and accreditation processes. Students and prospective students must be able to demonstrate that they have acquired or have the ability to acquire the inherent requirements for their degree.

Reasonable adjustments may be made to assist students manage additional circumstances impacting on their studies provided these do not change the academic integrity of a degree. Reasonable adjustments do not alter the need to be able to demonstrate the inherent requirements of the course.

Students who believe they will experience challenges completing their degree or course because of their disability, health condition or other reason should discuss their concerns with an Accessibility Services team member or a member of College staff, such as the Course Coordinator. In the case where it is determined that inherent requirements cannot be met with reasonable adjustments, the University staff can provide guidance regarding other study options.

3.2 Feedback on student learning

Feedback for students will be provided on all assessment items. Feedback on quizzes will be held during a workshop or collaborative session within seven days of the quiz due date. Feedback of written assessments will be provided within seven working days from the assessment due date. Feedback will include the assessment of each specific rubric item and may include comments related to individual aspects of each rubric item and suggestions for improvement.

3.3 Originality of work

Assessments submitted must acknowledge other’s academic work, including acceptable referencing style, source acknowledgement and avoidance of plagiarism. Students are to adhere to the [Student Code of Conduct](#). If academic misconduct is suspected then the [Academic Misconduct Procedure](#) will be followed.

Assessment items

ASSESSMENT ITEM 1: TIMED ONLINE QUIZ

Aligned subject learning outcomes	<p>This assessment addresses the following subject learning outcome(s):</p> <ul style="list-style-type: none">• Understand and apply new data science skills, knowledge and techniques to solve problems in data science using natural language processing (NLP). Specifically, students will need to demonstrate their ability to:• Define and explain language concepts used in data science (e.g. lists, dictionaries, Zipf's law, SVD and basic vector (metric) space model for representing documents and terms)• Identify the main components of text analytics• Apply the tools and techniques of NLP to solve problems.
Group or individual	Individual assessment item
Weighting	10%
Due date	Sunday 1159pm (local Time) 14/03/2021

ASSESSMENT ITEM 1: DESCRIPTION

Assessment 1 will be multiple choice. Only one attempt at this quiz is permitted.

ASSESSMENT ITEM 1: CRITERIA SHEET (OR RUBRIC)

Each question is worth 1 mark.

ASSESSMENT ITEM 2: NLP MAPPING ALGORITHM

Aligned subject learning outcomes	This assessment addresses the following subject learning outcome(s): <ul style="list-style-type: none">• Understand and apply new data science skills, knowledge and techniques to solve problems in data science using natural language processing (NLP).
Aligned professional standards/ competencies	This assessment relates to the following work-based skills: <ul style="list-style-type: none">• The ability to map text hierarchies using NLP, a valuable back-office automation opportunity saving time and increasing accuracy for organisations.
Group or individual	Individual item
Weighting	50%
Due date	Due Sunday 1159pm (local time) 04/04/2021

ASSESSMENT ITEM 2: DESCRIPTION

This assignment involves a mapping problem which is facing higher education providers (HEP) in Australia. There are just over 800 higher education providers (HEP) in Australia. Each higher education providers in Australia is required to map their courses, specialisations and units of study to the [Field of Education Classification](#) provided by the Department of Education based on the subject matter of the teaching material, unit name and unit outline. This is a time consuming and manual task that is prone to errors and could be optimised using NLP data science techniques.

Your task is to design, test and validate a natural language processing (NLP) technique(s) to do this task automatically with the information provided. The mapping output must follow the detailed structure and [guidelines](#) outlined by the department of education. The mapping table for field of education are available for download at the [Australian Bureau of Statistics Website](#). Further details of the hierarchy mapping tasks are provided in the assessment outline.

ASSESSMENT ITEM 2: CRITERIA SHEET (OR RUBRIC)

For all assessment questions, students are expected to show all necessary working. It is insufficient to write only the answer, even if it is correct, as most marks are given for the procedure and minimal marks are allocated for the correct answer alone. Also, while marks are not awarded for neatness, students may be penalised for poorly written or extremely untidy work.

All assessment questions will be marked by comparing student answers to a model set of solutions and marking scheme prepared by the lecturer. For the full assessment criteria information, refer to the Assessment 2 rubric on LearnJCU.

ASSESSMENT ITEM 3: WEB SCRAPING REPORT AND STRATEGIC INSIGHTS ORAL PRESENTATION

Aligned subject learning outcomes	<p>This assessment addresses the following subject learning outcome(s):</p> <ul style="list-style-type: none">• Apply data science skills, knowledge and techniques to solve problems in data science NLP projects with a focus on web scraping.• Understand how to deploy data science projects into production pipelines• Effectively communicate the results of the project in a strategic insights report.
Aligned professional standards/ competencies	<p>This assessment relates to the following work-based skill:</p> <ul style="list-style-type: none">• Undertake applied industry research.• The ability to extract key values (e.g. structured data) from HTML• Image, video and text recognition (e.g. unstructured data).
Group or individual	Individual item
Weighting	40 %
Due date	Due Wednesday 1159pm 21/04/2021

ASSESSMENT ITEM 3: DESCRIPTION

Assessment 3 will be a report where students will be expected to show code, list the tools and techniques used to answer the problem question and explain the underlying algorithms deployed and their outcomes. Additionally, the assessment will contain an oral presentation covering a high-level solution design for an end-to end pipeline to deploy your work in a production environment

The assessment requires the automatic reading of specific websites (outlined in the detailed assessment content) to enhance, clean and combine that data into a final format ready for a downstream solution. The downstream solution will be a simple schematic with clear explanation proposing the final high-level solution that would be deployable for a production data science pipeline. The solution must support data updates taking into consideration:

- o Processing for NLP matching
- o Data cleansing
- o Data enhancements and visualisation to deliver an information product
- o Use of Spark transformation and action (where required).

The final information product is aimed at providing ongoing regular insights into the problem that is being addressed.

ASSESSMENT ITEM 3: CRITERIA SHEET (OR RUBRIC)

For all assessment questions, students are expected to show all necessary working. It is insufficient to write only the answer, even if it is correct, as most marks are given for the procedure and minimal marks are allocated for the correct answer alone. Also, while marks are not awarded for neatness, students may be penalised for poorly written or extremely untidy work.

All assessment questions will be marked by comparing student answers to a model set of solutions and marking scheme prepared by the lecturer.

For the full assessment criteria information, refer to the Assessment 3 rubric on LearnJCU.

4 Submission and return of assessment

4.1 Submission of assessment

All assessments are submitted through Learn Ultra.

In the case where a disruption to studies application is approved, the student may be offered an alternative assessment or may receive a mark based on the percentage mark achieved by the student in one or more other assessment tasks, at the unit convenor's discretion.

4.2 Late submissions

Note that the Learning, Teaching and Assessment [Procedure](#) (3.1.8d) outlines a uniform formula of penalties imposed for submission of an assessment item after the due date. This formula is 5% of the total possible marks for the assessment item per day including part-days, weekends, and public holidays. If submitted after 20 days, the assessment item thus would be awarded 0 marks (i.e. $5\% \times 20 = 100\%$ of total possible marks in penalties). For assessment items weighted 0% and submitted after 10 days a DNS grade is awarded.

4.3 Special Consideration (including deferrals and extensions)

JCU's Special Consideration [Procedure](#) encourages students to access equity measures if they are affected by extenuating circumstances while undertaking the subject. All students must make themselves available for assessments and examinations at the scheduled times and will not be granted an extension or a deferral for an assessment item due to previously scheduled commitments such as weddings or holidays.

4.4 Declaration of Assessment

Students are required to lodge all non-examination items of assessment with the Assessment Declaration available through LearnJCU. The Assessment Declaration contains statements relating to academic integrity under the Coursework Academic Integrity Policy and Procedures. All instances of academic misconduct are treated very seriously by the University and students may be severely penalised for committing any form of academic misconduct.

4.5 Return of assessment and feedback

The requirements for an assessment's return date, time and manner will be determined by the Subject Coordinator in line with the JCU Learning, Teaching and Assessment [Procedure](#). Feedback will be given, and students can discuss their assessment with the marker as per clause 3.5 of the Learning, Teaching and Assessment [Procedures](#). Students will be informed of their grade for every component of assessment in the subject under clause 3.5.1 and 3.5.2 of the Learning Teaching and Assessment [Procedures](#).

Feedback for students will be provided on all assessment items. Feedback on quizzes will be held during a workshop or collaborative session within seven days of the quiz due date. Feedback of written assessments will be provided within seven working days from the assessment due date. Feedback will include the assessment of each specific rubric item and may include comments related to individual aspects of each rubric item and suggestions for improvement.

4.6 Review of assessment

Students can seek a review of individual assessment pieces through the process contained in clause 3.8 of the Learning, Teaching and Assessment [Procedures](#).

Students can seek a review of the final subject result through the process contained in the Review and Appeal of a Final Subject Result [Procedure](#).

Please see the [Current Students](#) webpage for links to all student resources and support services to optimise your academic and personal success.

Please see the [Learn Student Guide](#) webpage for general advice on plagiarism, referencing and examinations. Here, you can also access individual and group assessment task cover sheets.

5 Subject calendar

Please note, the sequence of some topics may change due to staff availability, resourcing, or due to unforeseen circumstances.

Week/Date/Module		Topics covered	Self-learning practicals	Collaborate tutorial session
O	Orientation	<ul style="list-style-type: none"> Open Refine setup, notebook setup (Jupyter), CDSW setup 		
1	Text as Data	<ul style="list-style-type: none"> Topic 1: Why natural language processing is important Topic 2: Language as data (NLP) Topic 3: Constructing an NLP project Topic 4: Document separation 	<ul style="list-style-type: none"> Self-learning practical 1: OpenRefine Self-learning practical 2: Lists and dictionaries in Python Self-learning practical 3: Sentiment mining in Python 	<ul style="list-style-type: none"> Week 1: TBA Location: LearnJCU – Subject Room
2	Extracting and Quantifying Informative Text	<ul style="list-style-type: none"> Topic 1: Extracting informative text Topic 2: Quantifying text Topic 3: Vocabularies and metadata 	<ul style="list-style-type: none"> Self-learning practical 1: Zipf's law using R Self-learning practical 2: Feature extraction in Python 	<ul style="list-style-type: none"> Week 2: TBA Location: LearnJCU – Subject Room
3	Natural language processing	<ul style="list-style-type: none"> Topic 1: Context-free grammar Topic 2: Parsing Topic 3: Text processing with the NLTK 	<ul style="list-style-type: none"> Self-learning practical 1: Parsing using Stanford Parser on Python Self-learning practical 2: Building a sentence segmentation Self-learning practical 3: WordNet with the NLTK 	<ul style="list-style-type: none"> Week 3: TBA Location: LearnJCU – Subject Room

Week/Date/Module		Topics covered	Self-learning practicals	Collaborate tutorial session
4	Advanced text processing and Web Scraping	<ul style="list-style-type: none"> • Topic 1: Advanced text processing with the NLTK • Topic 2: An introduction to web scraping and building a web crawler • Topic 3: Extracting information using BeautifulSoup and prettify • Topic 4: Web scraping using Selenium 	<ul style="list-style-type: none"> • Self-learning practical 1: Advanced text processing using FuzzyWuzzy • Self-learning practical 2: Building a web spider to crawl a website • Self-learning practical 3: Scrape data from a webpage using Selenium and handling output 	<ul style="list-style-type: none"> • Week 4: Thursday, TBA • Location: LearnJCU – Subject Room
5	Apache Spark and NLP	<ul style="list-style-type: none"> • Topic 1: Apache Spark • Topic 2: Spark RDD • Topic 3: PySpark in practice 	<ul style="list-style-type: none"> • Self-learning practical 1: Spark installation • Self-learning practical 2: NLTK-based text processing with Spark • Self-learning practical 3: Building an NLP application on Spark 	<ul style="list-style-type: none"> • Week 5: TBA • Location: LearnJCU – Subject Room
6	Data science model and code management	<ul style="list-style-type: none"> • Topic 1: Model development process • Topic 2: Model management and deployment • Topic 3: Using Git to collaborate on projects • Topic 4: Important notes on using Git 	<ul style="list-style-type: none"> • Self-learning practical 1: Sourcetree based code management • Self-learning practical 2: Developing a model for sentiment analysis using Tensorflow 	<ul style="list-style-type: none"> • Week 6: TBA • Location: LearnJCU – Subject Room

6 Appendix A: Assessment Methods

WRITTEN

Abstract

An abstract is a concise summary of a scholarly output, such as a research article, thesis, project report, review or conference proceeding. It outlines the content and scope of the research, its purpose and significance, methodology and findings, conclusions and/or intended results. An abstract typically comprises one paragraph of 300 words or less and appears at the beginning of a manuscript, acting as the point-of-entry for the reader.

Action plan

An action plan documents detailed action steps that must be taken in order to achieve one or more goals. Its purpose is to outline a series of specific tasks, how they will be undertaken, staff responsible for their completion, associated timelines and requisite resources and funding.

Annotated bibliography

An annotated bibliography is an alphabetical listing of the available research on a topic. For each source, there is the citation (i.e., the reference) followed by descriptive and evaluative detail (i.e., the annotation). The annotation provides a summary/synthesis of key themes and findings, and an evaluation of the quality of the source and its relevance and value in terms of the research question. An annotated bibliography may be a component of a larger research project or a stand-alone assignment.

Brief

A set of instructions which require a specific written response, including evidence-based recommendations. A creative brief/marketing brief outlines the strategy and goals of a project.

Briefing paper

A briefing paper succinctly outlines a particular issue and its background, usually for a committee, policy makers, government officials etc. It recommends improvements and proposes solutions based on evidence and concise argument. A briefing paper may be approximately four pages in length.

Business plan

A business plan is a written document that describes in detail how a business, usually a new one, is going to achieve its goals. A business plan lays out a written plan from a marketing, financial and operational viewpoint. Sometimes, a business plan is prepared for an established business that is moving in a new direction.

Case notes

Depending on the disciplinary context, a case note may be: (in law) a summary and analysis of the facts of a legal case, especially to illustrate or debate some aspect of law; (in clinical practice) a record of the condition or treatment of a patient or client receiving medical or health related attention; (in social work) a chronological record of interactions, observations and actions, relating to a particular client.

Case report

(in medicine) A case report is a detailed report of the demographic profile, symptoms, signs, diagnosis, treatment and follow-up of an individual patient.

Case study analysis

A case study analysis involves students assessing the details of a realistic and often complex case, in order to try and understand what has happened and why, or to identify the major problems that exist and recommend solutions to these problems.

(in business) A case study is a description of an administrative situation, wherein students may be required to assume the role of the manager and engage in processes that include defining the issue(s), analysing the case data, generating alternative solutions, identifying decision criteria, evaluating alternatives, selecting the preferred solution, and developing an action/implementation plan.

Client report

The written presentation of results/performance to a specific audience.

Concept map

A concept map is a diagram that depicts the most important concepts and relationships relating to a particular focus/topic. The map encloses the concepts in circles or boxes and indicates relationships between them by connecting lines or arrows. Words on the lines/arrows, referred to as linking words or phrases (such as causes, requires, or contributes to) specify the relationship between the concepts. Concepts are represented in a hierarchical fashion, typically with the most inclusive/general concepts at the top of the map and the more specific concepts arranged hierarchically below.

Critical appraisal/review

A critical appraisal presents findings from a systematic process used to identify the strengths and weaknesses of a research article. The most important components of a critical appraisal are an evaluation of the appropriateness of the study design, in relation to the research question, and of the key methodological features of the design, so as to assess the usefulness and validity of the research findings.

A critical review is a type of essay wherein the quality of a research article, an artwork or some other type of work is evaluated.

(of a text) Students may be required to synthesise key themes of the text and evaluate the strength of the author's arguments, interpretations, and conclusions, based on the evidence presented and with reference to other literature, identifying potential biases and/or limitations in scope.

(of an artwork) Students may be required to assess the quality of the work, identifying flaws/problems with the work, proposing alternative approaches, and/or defending the work against the critiques of others.

Critical incident analysis

Critical incident analysis involves focusing on an event, including analysing the circumstances surrounding it, the actions of those involved, responses to the event and the outcomes. The result should be a better understanding of how practice can be improved.

Dilemma

A dilemma is a situation in which the student must choose between courses of action and no matter what choice of action is taken, some ethical principle will be compromised or transgressed. [Ethical principles are standards that are used by members of a profession or group to determine the right course of action in a situation].

eBook

An eBook is a book consisting of text, images, or both, composed in or converted to digital format for display on a computer screen or handheld device. Students may be required to author or co-author an interactive eBook. An interactive eBook may use videos, three-dimensional diagrams, interactive infographics, animation, text mark-ups and/or quizzes.

ePoster

An ePoster is intended to display information in an innovative way that is not possible with a traditional printed poster. Information is communicated by embedding multimedia content, along with static elements, such as titles, logos, and summaries. Examples of dynamic visual elements include videos, slideshows, animated charts, and graphs, scrolling text and three dimensional rotations of models.

Educational resource

An evidence-based report on written materials/resources needed for effective teaching in different situations and disciplines. It can also involve the development of a new resource or approach.

Essay

An essay is a short literary composition on a particular theme or subject, typically comprising an introduction, body, and conclusion. The introduction orients the reader to the author's position or thesis and the essay's key themes, scope, and organisational structure. In the body of the essay, the author's argument or response is developed and substantiated by way of logical reasoning and reference to authoritative sources and/or research data. The conclusion provides a synthesis of the

position taken and key supporting evidence and may outline implications of the findings, limitations of the essay's scope and recommendations for future research or practice.

Examination (centrally administered)

An assessment of students' knowledge, understanding and skills, in a pre-determined, in a restricted time span under invigilated conditions. A centrally administered examination is typically face-to-face and occurs in the official examination period at the end of the study period.

Examination (College administered)

A College examination is an assessment of students' knowledge, understanding and skills, and which is administered by a College.

Examination methods:

Online Exam

- a) An Online Exam in LearnJCU is an exam accessed through the LearnJCU subject site and which allows students to sit an exam at their own computer. This could include a quiz, test or short answer.
- b) An Online Exam in LearnJCU is an exam which requires equations/graphs/drawings and is accessed through the LearnJCU subject site. Some questions in this exam will require you to handwrite equations/graphs/drawings. Students will take a photo of your equations/graphs/drawings, save the image to your computer and upload the image to the question in your exam. Extra time will be allocated for students to save and upload the image.
- c) A Take Home Exam is non-editable exam script released for students to download from the LearnJCU subject site at a scheduled date and time. Students will answer the questions in a separate document in the format indicated in the exam, and upload the completed document via the relevant safe assignment drop box on the LearnJCU subject site before the published submission deadline.
- d) The alternative online exam is an exam accessed through the LearnJCU subject site. Submission requires the student to install a PDF Image Converter app. This exam enables students to demonstrate equations, graphs and drawings. On completion, the student will take a photograph of their work, transfer the image to a PDF via the PDF app. and then upload the file to the exam submission box. Further information on the application and installation of a PDF Image Converter app will be provided to the student. Extra time will be allowed for students to transfer the image to PDF.
- e) An Online Assignment with exam conditions is an exam accessed through the LearnJCU subject site and opened for a specified time frame. Once accessed, the exam must be completed and submitted within the specified exam duration. You can only access the exam once.
- f) An Online Assignment with exam conditions is an exam accessed through the LearnJCU subject site, and opened within a specified time frame. You can complete and submit the exam at any time during the specified time frame.
- g) An Online Exam in LearnJCU with Respondus Lockdown Browser is an exam that is accessed through the LearnJCU subject site and requires the installation of Respondus Lockdown Browser software. The Respondus Lockdown Browser prevents access to any website, email, apps., or documents (including copying and printing) during the online exam.
- h) An Online Exam using Respondus Monitor is an exam that is accessed through the LearnJCU subject site and requires the installation of Respondus Lockdown Browser software, an internal or external webcam, and a microphone. The Respondus Lockdown browser prevents access to any website, email, apps., or documents (including copying and printing) during the online exam. The Respondus Monitor is a video monitoring service in Lockdown Browser that records students during their exam. It is reviewed by the lecturer/subject coordinator after the exam takes place.
- i) An Online Oral Exam is an oral exam that allows questions to be asked using Collaborate. Students will access this exam through the Collaborate subject room in the LearnJcu subject site, and the oral exam is recorded.
- j) An Assignment Submission is an assessment scheduled for submission in the LearnJCU subject site during the exam period. It is timetabled to ensure no direct clashes.

Field notes

Field notes are recorded during or after students' observations of a specific phenomenon during field work. Field notes may also include sketches, diagrams, and other drawings.

Field report

A field report consists of a description of what has been seen or observed in the field and an analysis of the observations in light of theoretical frameworks or principles.

(in science) A field report may present the purpose of field experiments, their location, methodologies, results, interpretations and conclusions.

(in social sciences) A field report may present observations of people, places and/or events and analyses of that observation data, in order to identify and categorize common themes, in relation to the research problem or question.

Job application

A job application usually includes submission of a cover letter, curriculum vitae/resume and response to selection criteria. A cover letter explains the applicant's credentials and interest in the position. A curriculum vitae outlines the applicant's education, qualifications, and previous employment history. A selection criteria statement comprises succinct responses to each of the selection criteria i.e. how the applicant possesses the particular knowledge, attributes, qualifications, and experience needed to successfully carry out the job.

Journal

A journal is a record of occurrences, experiences and/or reflections kept on a regular basis.

Journal article

A journal article is written by scholars or professionals, who are experts in their fields, with the purpose of presenting new research or critiquing existing research. It is typically reviewed by independent peers, who evaluate the quality of the scholarship, reliability of findings, relevance to the field and/or appropriateness for the journal.

Lab/Practical report

A laboratory report is written in the format of the traditional scientific report. Depending on the type of laboratory task or scientific research investigation, the sections of the report may vary and include title, abstract, aims and hypotheses, introduction, materials and methods, results, discussion, references, and appendices.

Learning plan

The creation of an action plan which outlines learning and development activities. It can be applied to any discipline.

Lesson plan

The development of a plan which outlines what students/school children/professionals are expected to learn, how the learning will take place, and how that learning will be measured. It can be applied to any discipline.

Letter/memorandum

A letter is a written or printed communication addressed to a person or organisation. A memorandum is a short note designating something to be remembered, especially something to be done or acted upon in the future. Depending on the disciplinary context, a memorandum may be: (in law) a short document outlining the terms of an agreement, especially as a draft leading to a formal, detailed contract; (in diplomacy) a brief, unsigned diplomatic communication, including a summary of the state of an issue and the reasons for decisions agreed upon; (in business) an informal message, especially one sent between two or more employees of the same company, concerning company business.

Literature review

A literature review is a critical assessment of a body of research, related to a particular research question/focus. All works included in the review are read, evaluated and analysed (as is the case for an annotated bibliography), and relationships between the literature are identified and articulated, with respect to the research question. A literature review may be incorporated into an article, thesis, research report or project report or may be a stand-alone assignment.

Log/log book

A log is an official documentation of activities or events in a systematic record (e.g. daily or hourly basis).

Manual

A manual is a small handbook that provides practical instructions on how to implement, do or use something.

Media article

A written media article usually requires students to produce non-fiction copy that is well-researched and objective. Media articles can also include press releases, and subjective texts such as advertorials and opinion pieces.

Medication calculation

A medication calculation examination requires students to undertake accurate and quick drug calculations, under invigilated conditions.

Minutes

Minutes are permanent, formal, and detailed (although not a verbatim) record of resolutions adopted or business transacted at an official meeting. Once written up and approved at the next meeting, the minutes are accepted as a true representation of proceedings.

Peer assessment

Peer assessment is the evaluation of students' work by other students of equal status, against a predetermined set of criteria.

Peer review

Peer review is the evaluation of students' work by other students of equal status, against a predetermined set of criteria. Peer review may be undertaken in the context of group assessment. Typically, group members assess the performance of their peers in terms of their contribution to group processes and submitted work.

Podcast

A podcast is a creative audio (or video = vodcast) digital broadcast which requires students to analyse storytelling and broadcasting techniques and then publish their own work online.

Poster

A research poster summarises research concisely and attractively in order to publicise it and generate discussion. It is usually a combination of text and tables, graphs, pictures and other presentation formats. At a conference, the researcher stands by the poster display while other participants view the poster and interact with the author.

Problem task

A problem task requires students to engage in processes wherein they identify or respond to a problem, collect relevant information and data, identify the cause, generate possible solutions, appraise the best solution, plan for implementation and, where possible, implement and evaluate.

Project plan

A project plan presents an overview of the project, its aims and objectives, stakeholders, scheduled activities, resources, timelines and opportunities for dissemination, reflection and evaluation. It may be a plan for a capstone or service learning project.

(in business) A project plan is a formal, approved document used to guide both project execution and project control. The key purposes of the project plan are to outline planning assumptions and decisions, facilitate communication among project stakeholders, and document approved scope, cost and schedule baselines.

Project report

A project report typically presents an overview of the project, its aims and objectives, activities, outcomes conclusions, reflections, and evaluation.

Proposal

A research proposal is a concise and coherent summary of a proposed research project. It outlines the central research problem or question with reference to the existing evidence base, significance and limitations, research methodology and anticipated outcomes and impacts.

A research protocol is a predefined, written procedural method in the design and implementation of experiments. A protocol is written whenever it is desirable to standardise a laboratory method to ensure successful replication of results by others in the same laboratory or by other laboratories.

A clinical research protocol explains the purpose and function of a clinical study, as well as how to carry it out. It details the reason for the study, the number of participants, inclusion and exclusion criteria, details of the intervention or therapy that the participants will receive (e.g. frequency and dosages), what data will be gathered, steps for clinical caregivers to carry out, and the study endpoints.

A biosafety proposal outlines a formal plan to utilise techniques and equipment in order to maintain safe conditions in research, preventing personal, laboratory and environmental exposure to potentially infectious agents or biohazards.

An ethics proposal provides details relating to a research project, including background and significance, aims, methodology and data collection techniques, data retention and storage, funding sources, roles and expertise of investigators, research participants (e.g., recruitment, consent, confidentiality) and/or use of animals (e.g., housing, care and husbandry).

A grant proposal is a formal document submitted to a government department, corporation, foundation or trust, which proposes a research project and constitutes a request for funding. It outlines details relating to a research project, including aims, significance, methodology, research team, anticipated outcomes and impacts, budgetary requirements, timelines for deliverables and/or evaluation measures.

Reflection/reflective task

A reflection or reflective task typically requires students to describe and critically analyse professional experiences or practice, in light of theoretical literature or available evidence, with a view to enhancement of future practice.

Research report

A research report is a structured document designed so readers are able to readily extract information about the aims and significance, methodology, findings, and conclusions of a research project. It describes the research methodology in sufficient detail for it to be verified by others and presents the research questions, interpretations of results, conclusions, and recommendations, in the context of related work in the field.

Self-reflection task

Self-assessment or self-reflection can serve as a powerful meta-cognitive tool. It engages students in the learning process, developing their capacity to critically evaluate their own work, against a predetermined set of criteria.

Technical report

A technical report is used in industry to communicate technical information and research about technical concepts, as well as graphical depictions of designs and data. This information assists in decision making (e.g. in the purchase of equipment or finding solutions to technical problems). An important consideration when preparing technical reports is the audience and purpose of the report (e.g. to brief managers or to provide technical background information for lay people associated with the project). These factors determine the degree of technicality of the language and concepts involved. At university, technical report writing is frequently used in faculties of engineering and in the applied sciences.

Test/Quiz

A short test or quiz taken face-to-face or online. It can have yes/no answers, true/false questions, multiple choice, extended matching questions, key feature questions, problems/computational questions, and short or long (extended) answer questions.

Thesis/dissertation

A thesis or dissertation is a document submitted in support of candidature for an academic degree or professional qualification, presenting the research purpose and significance, review of the literature, research methodology, results, discussion and conclusion.

Tutorial task

A tutorial preparation task requires students to undertake some orienting/preliminary activities, in order to most effectively engage in the active, hands-on, peer-to-peer and independent learning opportunities, within the tutorial program.

Workbook

A workbook may contain exercises, problems, and practice material to clarify and reinforce knowledge and skills within a subject of study.

ORAL

Debate

A debate is a formal contest in which the affirmative and negative sides of a proposition are advocated by opposing speakers.

Elevator pitch

An elevator pitch is very short presentation of a product or a company, with the aim of providing clarity or attracting attention.

Guided discussion

A guided discussion may require students to facilitate engagement of their peers in an interactive process of sharing their understanding, perspectives, and experiences, related to achieving an instructional objective.

Interview

An interview is a formal meeting in which one or more persons question, consult or evaluate the interviewee. Students may be required to assume the role of interviewer or interviewee.

Oral defence

A method that is used to clarify and discuss an assessment item to facilitate understanding from an examiner/subject coordinator, or supervisor. An oral defence in a thesis is used to make recommendations as to progression/awards.

Presentation – in-class

An in-class presentation is the delivery of a formal address to an audience of peers. A Pecha Kucha (Japanese for 'sound of conversation/chit-chat/chatter') is a presentation style in which 20 slides are shown for 20 seconds each (6 minutes and 40 seconds in total). The images advance automatically while the student presents to the audience. This format keeps presentations concise and fast-paced.

A video presentation may require students to present to camera or capture real life movements and interactions complemented by an audio commentary. Students are able to capture video on mobile devices.

A narrated slideshow includes an audio recording synchronised to slide images. The narration can be directly recorded into PowerPoint. A digital story is similar to a narrated slideshow. It usually runs for a short duration (e.g. 3-5 minutes) and utilises a script (e.g., 300-400 words) that is complemented by still photographs (e.g., 10-15 images). The narration and still images enhance each other to convey meaning.

Viva

A viva voce is typically a defence of a thesis or another project conducted by an oral examination. (In healthcare sciences) A viva voce may require students to respond orally to questioning based on a specified case scenario.

PERFORMANCE/PRACTICE/PRODUCT

Clinical assessment

A clinical assessment is an evaluation of a patient's physical condition and prognosis based on information gathered from physical and laboratory examinations and the patient's medical history.

Clinical evaluation exercise (CEX)

A clinical evaluation exercise is an exam format that involves a relatively long, pre-planned single patient encounter in a clinical setting. A clinician observes the student taking a history and performing a physical examination. The student presents the findings and decides on the diagnosis and the treatment plan. Additionally, a written patient report is produced. The examiner gives feedback.

Clinical placement performance

A clinical placement experience is undertaken in a clinical workplace or community context and affords students the opportunity to integrate theory with the practice of clinical work. Clinical placements are typically aligned with professional standards that are developed and assured over the duration a course. Both the academic supervisor and professional/industry supervisor may contribute to assessment of students' performance throughout the clinical placement experience. The clinical placement performance assessment may comprise a variety of elements such as level of attainment of clinical and professional competencies, attainment of specific clinical placement hours, completion of reflective tasks and evaluations.

Creative performance

A creative performance is an enacted, real-time performance event of creative work in which there is the physical co-presence of performer and audience.

Creative work

A creative work is an original work – a tangible product of creative effort. A recorded or rendered creative work is an original work presented through a recording or rendering medium.

Directly Observed Procedural Skills (DOPS)

Directly Observed Procedural Skills (DOPS), also referred to as Direct Observation of Procedural Skills or clinical skill competency, is designed specifically to assess practical skills in a workplace setting. A student is observed and scored by an

assessor while performing a routine practical procedure during normal clinical work. The assessor uses a standard DOPS form to score the technique. For any particular skill, the student has to pass one or a number of assessments to be signed off as competent at that skill.

Exhibition

An exhibition is a curated or produced exhibition or event, which involves an organised presentation and display of a selection of items.

Internship performance

An internship is a carefully monitored work experience in which interns are afforded the opportunity to integrate theory with the practice of work. Interns work for a fixed period of time, usually three to six months. Intended learning outcomes and associated activities may be articulated in a work plan.

Manufactured component

A manufactured component is an individual part, with a view to manufacturing others to the same specifications.

Mini-clinical evaluation exercise (mini-CEX)

The mini-CEX is designed to assess students' clinical competencies and facilitate feedback to drive learning. It involves an assessor/supervisor observing the student interact with a patient, in an unrehearsed clinical encounter. The assessor's evaluation is typically recorded on a structured checklist, which enables immediate provision of feedback to the student. The mini-CEX is used for both formative and summative assessment purposes.

Model/artefact

(conceptual) A model is a representation of an event, theoretical position or phenomenon.

(physical) A model is a three-dimensional representation of an object or proposed structure, typically on a smaller scale than the original.

(in science) A model is a systematic description of an object or phenomenon that shares important characteristics with the object or phenomenon. Scientific models can be material, visual, mathematical or computational and are often used in the construction of scientific theories.

Mooting/moot court

A moot court involves law students taking part in simulated court proceedings, drafting memorials or memoranda and participating in oral argument.

Multi-media production

A multi/blended media production involves a narration or audio file that is enhanced by an integration of still images, slow moving images ('slowmotion') and/or video (fast moving images).

Multi-station Assessment Task (MSAT)

A Multi-Station Assessment Task (MSAT) requires students to demonstrate core clinical competencies to examiners across a series of tasks.

Objective Structured Clinical Examination (OSCE)

An Objective Structured Clinical Examination involves students moving around multiple mini-stations in sequence, completing a variety of tasks that test a range of skills. The student reads the scenario, then enters the station and undertakes the task. The task is of typically short duration.

Portfolio

A portfolio is a collection of evidence of students' learning and achievement. Evidence may include written samples, photos, videos, project artefacts, observations/assessments by mentors and peers, and personal reflections, regarding why particular artefacts were chosen and what was learnt. e-Portfolios can be maintained dynamically over time.

Practical assessment/practical skills demonstration

The practical assessment, or 'Spot' test, involves students moving around a series of stations consisting of, for example, a specimen, a labelled dissection or radiograph. The response to the station activity may be a one word answer or require some level of deduction or diagnostic skill.

Professional placement performance

A placement experience is undertaken in a workplace or community context and affords students the opportunity to integrate theory with the practice of work. Professional experience placements are typically aligned with professional standards that are developed and assured over the duration a course. Both the academic supervisor and professional/industry supervisor may contribute to assessment of students' performance in placements/professional experience.

Prototype

A prototype is a first or preliminary version of a device or vehicle from which other forms are developed.

(in software development) A prototype is a rudimentary working model of a product or information system, usually built for demonstration purposes or as part of the development process.

Role-play

A role play requires students to assume the attitudes, actions, and discourses of others, in adopted roles, in an effort to understand differing points of view or social interactions.

Scenario-based learning activity

A scenario-based learning activity involves students working through a real-world scenario or storyline, usually based around an ill-structured or complex problem, which they are required to solve. In the process, students are required to apply their knowledge and critical thinking and problem solving skills. Scenario-based learning is often non-linear and can provide numerous feedback opportunities to students, based on the decisions they make at each stage in the process. Scenario-based learning may be self-contained, in that completing the scenario is the entire task, or it may be the first part of a larger assessment item.

Simulation activity

A simulation activity is an action within a model or reproduction of a workplace or other real world environment.

Software development/creation

Software comprises the programs, programming languages and data, which direct the operations of a computer system.

Website development/creation

An assessment method where students develop/create webpages, websites, web apps., e-business services and social network services.

PARTICIPATION

Class participation

Class participation involves demonstrating a grasp on a topic and its application through active participation in in-class activities; for example, debate or discussion.

Observation

Observations involve the active acquisition of information from a primary source through the senses or scientific tools and instruments. Observations may comprise data recorded during an experiment or assessment.

Online participation

A discussion forum is organised into topics by 'threads'. Students may be required to start a thread on a topic of their choosing or reply to a discussion taking place.

MULTI-METHOD

Multi-method

A combination of other methods listed in this Appendix. A multi-method assessment, for example, could include a written method and an oral assessment method.

OTHER

Other

Any assessment method not otherwise included in Appendix A.

7 Appendix B: Sample rubric for written communication

Source: College of Arts, Society and Education, James Cook University

For full rubric for written communication (including D and C standards descriptors) and task specific adaptations of rubric for written communication, visit [staff resource](#)

Note, this rubric also presents as an [interactive tool for students](#) to support development of their written communication skills.

There is facility in LearnJCU to create assessment rubrics, mark online and run reports of student achievement. Visit the LearnJCU Guide [Using rubrics for assessment marking and feedback](#).

CRITERIA	HD	P	N
PURPOSE Topic Thesis Context Audience Genre	The writing demonstrates a sophisticated and highly discriminating understanding of purpose. This is characterised by an exceptionally clear and insightful: <ul style="list-style-type: none"> • topic • thesis that is very well-developed in relation to the: <ul style="list-style-type: none"> • context • audience • genre 	The writing demonstrates a basic understanding of purpose. This is characterised by some evidence of a: <ul style="list-style-type: none"> • topic • thesis that relates to the: <ul style="list-style-type: none"> • context • audience • genre 	The writing demonstrates a very limited understanding of purpose. This is characterised by an inaccurate or unidentifiable: <ul style="list-style-type: none"> • topic and/or • thesis that is poorly developed in relation to the: <ul style="list-style-type: none"> • context • audience • genre
CONTENT Information and data Conceptual knowledge Examples and illustrations Sources	The writing demonstrates a comprehensive and highly relevant selection of content and sources. This is characterised by highly relevant, authoritative and accurate: <ul style="list-style-type: none"> • information and data • conceptual knowledge • examples • sources 	The writing demonstrates a basic yet relevant selection of content and sources. This is characterised by occasionally relevant, authoritative and accurate: <ul style="list-style-type: none"> • information and data • conceptual knowledge • examples • sources 	The writing demonstrates a very limited and/or irrelevant selection of content and sources. This is characterised by often irrelevant and/or inaccurate: <ul style="list-style-type: none"> • information and data • conceptual knowledge • examples • sources
ANALYSIS Logic Evidence Specificity Creativity Criticality Reflexivity Evaluation	The writing demonstrates a highly discriminating and convincing analysis and synthesis of content. This is characterised by masterful use of: <ul style="list-style-type: none"> • logical claims • evidence • specific claims • original claims • critical claims • reflective claims • evaluation 	The writing demonstrates a basic analysis and synthesis of content. This is characterised by occasional use of: <ul style="list-style-type: none"> • logical claims • evidence • specific claims • original claims • critical claims • reflective claims • evaluation 	The writing demonstrates a very limited analysis and synthesis of content. This is characterised by: <ul style="list-style-type: none"> illogical claims lack of evidence over-generalised claims unoriginal claims uncritical claims non-reflective claims lack of evaluation
STRUCTURE Section Paragraph Sequence Cohesive ties	The writing demonstrates highly effective and elegant structuring and sequencing of content and analysis. This is characterised by masterfully clear and conventional use of: <ul style="list-style-type: none"> • sections • paragraphing • sequencing • cohesive ties 	The writing demonstrates a basic structuring and sequencing of content and analysis. This is characterised by some unconventional and inaccurate use of: <ul style="list-style-type: none"> • sections • paragraphing • sequencing • cohesive ties 	The writing demonstrates a very limited structuring and sequencing of content and analysis. This is characterised by incomplete or inaccurate use of: <ul style="list-style-type: none"> • sections • paragraphing • sequencing • cohesive ties

STYLE Clarity Tenor Tense Vocabulary Literary devices Referencing Formatting Length	The writing demonstrates a highly effective and mature style. This is characterised by masterfully conventional and accurate: <ul style="list-style-type: none"> • expression • tenor • tense • vocabulary • literary devices • referencing • formatting • length 	The writing generally demonstrates an appropriate and conventional style. This is characterised by some unconventional and inaccurate: <ul style="list-style-type: none"> • expression • tenor • tense • vocabulary • literary devices • referencing • formatting • length 	The writing demonstrates an inappropriate and unconventional style. This is characterised by unconventional and inaccurate: <ul style="list-style-type: none"> • expression • tenor • tense • vocabulary • literary devices • referencing • formatting • length
SYNTAX Sentences Word Classes	The writing demonstrates mature and sophisticated syntax. This is characterised by masterfully accurate use of: <ul style="list-style-type: none"> • sentence structures • pronouns • prepositions • articles • conjunctions 	The writing demonstrates conventional but basic syntax. This is characterised by some incorrect or unconventional use of: <ul style="list-style-type: none"> • sentence structures • pronouns • prepositions • articles • conjunctions 	The writing demonstrates inappropriate and unconventional syntax. This is characterised by frequently incorrect or unconventional use of: <ul style="list-style-type: none"> • sentence structures • pronouns • prepositions • articles • conjunctions
MECHANICS Spelling Punctuation Editing	The writing demonstrates flawless mechanics of writing. This is characterised in complex writing by masterfully accurate: <ul style="list-style-type: none"> • spelling • punctuation There is excellent evidence of effective editing.	The writing demonstrates basic but conventional mechanics of writing. This is characterised by intrusive but infrequent errors in: <ul style="list-style-type: none"> • spelling • punctuation Many errors could have been identified with basic editing.	The writing demonstrates inappropriate and unconventional mechanics of writing. This is characterised by frequent errors in: <ul style="list-style-type: none"> • spelling • punctuation Many errors could have been identified with basic editing.