

# Data Science and Digital Solutions (DSD315124)

## *External Assessment Specifications*

External Assessment Specifications inform the development of external assessments and must be read in conjunction with the Data Science and Digital Solutions course document on the [TASC Courses](#) webpage. The primary audience for this document is the course Marking Coordinators, markers, teachers and students.

The external assessment consists of one component:

- a folio.

The *TASC Frequently Asked Questions – Externally assessed folios* document on the [TASC Folio Assessment](#) webpage, provides general information for all students and teachers about externally assessed folios.

Information about academic integrity requirements is available on the [TASC Academic Integrity](#) webpage.

The final folio must be electronically submitted by the student to their provider for external assessment. The provider **must** submit the folio to TASC via TRACS by the published *due to TASC* date, available on the [TASC Folio Assessment](#) webpage.

# FORMAT AND STRUCTURE

The folio includes one component:

- one folio consisting of an extended digital solutions project, including a:
  - project proposal (internally assessed)
  - reflective journal (internally assessed)
  - learner project (externally assessed).

## CRITERIA TO BE ASSESSED

The folio will be assessed externally by TASC to determine ratings on:

- Criterion 1: apply a systematic process to analyse problems and produce a digital solution\*
- Criterion 2: explain and apply knowledge and understanding of information systems to provide effective digital solutions
- Criterion 3: select and apply data interpretation techniques to inform the design of user centered solutions
- Criterion 4: communicates for technical and non-technical audiences
- Criterion 8: explain the ethical, legal and sustainability considerations that impact the design and implementation of digital solutions.

The project assesses course content from all modules for criteria 1, 2, 3 and 4.

The extended design project assesses course content from module 3 for criterion 8.

### Item type

Students will submit a multimodal (digital) and word-processed product. All components are compulsory.

### Time allocation

Maximum of 40 hours of class time including internal and external components.

### Rating allocation

Extended ratings of A+, A, A- ... B+, B, B- ... C+, C, C- ... t+, t, t- or z for each Criterion 1, 2, 4, and 8.

# ADVICE TO STUDENTS

You are required to submit a folio (digital solutions project) of your work consisting of:

1. a title page
2. a project proposal
3. a design brief
4. feasibility study
5. systems analysis of the systems development process
6. a research analysis essay (1500 – 2000 words)
7. a resolved digital solution (product, service or system)
8. reflective journal to support the progression of your work
9. a list of references.

TASC will assess the folio to determine the course external assessment rating for Criteria 1, 2, 3, 4 and 8. If you do not submit a folio, you cannot achieve more than a Preliminary Achievement (PA) for this course.

When producing your folio the following points must be noted:

- Develop and provide a clear, concise project proposal that includes all defined elements (Part 1)
  - identified research problem
  - background research
  - evidence of following a project management approach
  - stakeholder engagement plan
  - pitch or presentation.
- Develop a digital solution to the identified problem (Part 2)
  - a research analysis essay (1500 – 2000 words)
  - a feasibility study
  - a systems analysis and design process as typically applied in a professional setting of the systems development.
    - note: you should provide evidence of following a systems analysis process including scribed interviews, surveys, analysis of current system, data analysis (data flow, data structures), use case development, prototypes, risk analysis, stakeholder communications.
- Include a reflective journal (Part 3)
  - the reflective journal must be dated and include a sufficient amount of information that demonstrates:

- progression of the folio
  - reflection of areas for improvement
  - future actions and self-assessment
  - contextual details (time, date, location and other relevant information to provide a complete picture of your project progression).
- When choosing the subject of your digital solutions project you must identify a potential user or client.
  - You should consider existing products and practice, social, ethical, economic and environmental issues and professional standards.
  - You must justify your choice in the documentation of the design process and your teacher must approve it.
  - Appendices that include any supporting documentation that is relevant to the project.

## Digital solution development

The design development must include articulation of the process (diagrams, sketches, photographs, annotations):

- ideation
- consideration of alternative solutions and reasons for selection
- production drawings and plans.

Planning and design ideas are to be analysed to articulate the positive and negative aspects of each when assessed against the design brief and needs.

## Digital solution production

The digital solution production must include:

- photographs/screen grabs and supportive annotations that explain the project production process used to generate your design context. This will help to prove the project is your original work
- prototype(s) development and selection.

You must include testing methods and/or methods for obtaining stakeholder feedback:

- testing methodology and/or experimental design
- evidence of data collection and data analysis.

You must describe how prototyping and testing are to be used to articulate the positive and negative aspects of each when assessed against the design brief and needs:

- refinement of solution
- allowances will not be made for technological failures including software and hardware malfunctions.

## References

This section must include:

- all in-text referencing
- a reference list.

## Folio length and word count

- Maximum of 40 A4 equivalent pages (includes research, evidence of planning, concept sketches with annotations, photographs, charts/diagrams, etc.).
- Not included in this maximum limit:
  - a cover page (containing only the inquiry question and the candidate's TASC ID)
  - references.
- The research analysis essay (1500 – 2000 words) is included in the 40 pages.

## Presentation of folio

Electronic submission: the folio must be submitted to the teacher electronically as one (1) PDF file and, where appropriate one (1) video file. See the TASC Frequently Asked Questions – Externally Assessed folios document on the [TASC Folio Assessment](#) webpage, or the [TRACS Resources](#) webpage for detailed submission instructions.

When presenting your folio, the following must be noted:

- The folio must be a single coherent folio presentation.
- The folio must be submitted as a single ZIP file no larger than 500 megabytes in total size, not a series of separate files. This must include:
  - a title page
  - a project proposal
  - a design brief
  - feasibility study
  - systems analysis of the systems development process
  - a research analysis essay (1500 – 2000 words)
  - a resolved digital solution (product, service or system)
  - reflective journal to support the progression of your work
  - a list of references.
- Your teacher is required to see all versions of your work, so it is essential to 'Save as' each time you produce a new draft of your work.

- Proofreading and editing are an essential part of the process. Careful attention needs to be given to correct spelling of all proper nouns.
- Quotations must be presented as outlined in the referencing system used.
- Your digital design solution **must** use 1.5 line spacing and a clear, legible font of approximately 11-point size, to support readability on electronic devices.
- Your TASC ID **must** appear on every page of the folio as a header.
- Every page must be paginated.
- Borders, decorations and 'project' style covers do not add to the integrity of the extended design project and must not be used.
- **Do not** include any identifying information, including your name, your teacher's name, or the name of your school anywhere in your submission. This includes the document content, file name, headers, footers, or cover pages.

## REFERENCING

- For this course a recognised referencing system must be acknowledged and applied.
- Regardless of the formal referencing style chosen, you must consistently use a single referencing style in all components of your folio.
- Refer to [Academic Integrity information](#) on the TASC website for information about referencing styles, frequently asked questions, and tips and hints for correct referencing.
- A detailed list of works cited must be shown in the reference list.

## DECLARATION FORM

Students must complete and submit to their provider the Student folio declaration available under the *Supporting documents* on the relevant course page on the TASC website before submitting their folio. Further information for students and providers on the Student folio declaration form is available in the *Student folio declaration form information sheet* on the [Folio assessment](#) webpage.

## ADVICE TO TEACHERS

For each of your students you are required to:

- encourage the selection of a digital solutions project topic that links with an area of genuine interest to them
- approve the digital solution project topic
- advise students to rein in the scope of the digital solution project rather than encourage the choice of expansive and overly ambitious topics. It is vital that students are advised to produce a completed solution. To ensure this, you should:
  - consult with your students regularly during the development of their project

- make sure the presentation and content requirements for the folio and the penalties for not meeting them are well known
- ensure the students are aware that the project must have rigor in terms of design and design process, including context and purpose.

## Submission of folio

The provider **must** submit the folio to TASC via TRACS as one complete electronic document by the published *due to TASC* date, available on the [TASC Folio Assessment](#) webpage.

TRACS submission requirements are available on the [TRACS Resources webpage](#).

## ADVICE TO MARKERS

The Criteria to be assessed through the marking of the Folio are:

### Project Proposal

- Criterion 1, 2, 3, 4, 8

### Project Folio

- Criterion 1, 2, 3, 4, 8

### Reflective Journal

- Criterion 1, 2, 3, 4, 8

## PENALTIES

TASC takes the issue of academic integrity very seriously. If it is found that you breached the external assessment rules and have not maintained academic integrity when submitting your work for assessment a penalty may be applied.

The following penalties will be applicable through the marking process:

- folios that exceed the 40-page limit will only have the first 40 pages assessed.