Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

**APPENDIX GA36a**

# LEVEL 4 ASSESSMENT SPECIFICATION

| | | | |
|---|---|---|---|
| **Student name:** | | **Student ID number:** | |
| **Programme:** | **Cert HE Computing Skills for the Workplace** | | |
| **Module:** | **Analysing & Solving Problems** | | |
| **Module code:** | **ACCA4019** | **Contribution to Overall Module Assessment (%):** | **50%** |
| **Lecturer:** | **Fahad Ahmed**<br>**Redhwan Al Amiri** | **Internal Verifier:** | **Sadhana Jha** |
| **Assignment Title:** | **Component 2: Written assessment: Problem Analysis and Solution Development** | **Word count (or equivalent):** | **1500** |
| **Submission deadline:** | **22 April, 2026, 2:00PM** | **Return date of provisional marks & written feedback:** | **20 May 2026, 2:00PM** |
| **Submission method:** | All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.)<br>**Alternative submission method (if applicable):**<br>**Late submission of the assessment will result in a late penalty mark:**<br>Work which is submitted up to 1 week late will be capped at 40% for the first attempt and will be awarded a mark of 0% for re-assessment. Late submission penalties may be lifted only if there is an approved extenuating circumstances claim.<br>Work submitted more than 1 week late will be considered as a non-submission and will not be marked. The work may be considered as a submission for reassessment if offered by an Examining Board or if there is an approved extenuating circumstances claim. | | |
| **Academic honesty / referencing:** | Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment. | | |

| **Module Learning Outcomes (from module syllabus)** |
|---|
| Upon the successful completion of this module, the student should be able to: |

- Evaluate a problem and formulate requirements and constraints.
- Analyse a problem and produce a logical solution.

# TASK DESCRIPTION

**Use of Generative AI in Assessment**
(Lecturer to indicate Yes or Not against each element)

| | | |
|---|---|---|
| RESEARCH | For this assessment, you can use Generative AI to support you in research and data analysis. | Yes ☐<br>No ☒ |
| STRUCTURE | For this assessment, you can use Generative AI to support you in structuring your submission, including creating a draft argument structure, identifying parts and headings, etc. | Yes ☐<br>No ☒ |
| PROOFREADING | For this assessment, you can use Generative AI to check your own text/creation for grammatical and syntactical mistakes, including getting suggestions to rephrase your work. | Yes ☒<br>No ☐ |
| WRITING | For this assessment, you can use Generative AI to create text for submission. | Yes ☐<br>No ☒ |
| CREATIVE | For this assessment, you can use Generative AI to create creative materials, such as images. | Yes ☐<br>No ☒ |
| PROGRAMING | For this assessment, you can use Generative AI to create and check code. | Yes ☐<br>No ☒ |
| NONE | For this assessment, you are not allowed to use **any** type of Generative AI support. This includes research support, structure support, writing/proofreading support and creative support. | ☐ |

# TASK DESCRIPTION

## ASSESSMENT COMPONENT 2: Written Assessment:

You are required to analyse a real-world problem and develop a structured solution using abstract thinking and problem-solving techniques. This assignment assesses your ability to evaluate the problem, identify requirements and constraints, and design a logical, generic solution.

### Problem Scenario:

A local college is facing difficulties in managing its classroom allocations efficiently. Some rooms are overcrowded while others remain underused, leading to timetable clashes and wasted time as staff and students move between rooms. The college aims to optimise classroom allocation to make better use of available space and improve the overall learning experience.

You have been asked to develop a solution that achieves the following:

1. Efficient allocation of classrooms based on class sizes and room capacities.
2. Minimised time wasted by students and staff moving between classes.
3. Accurate timetabling to ensure all lessons start on time without scheduling conflicts.

### Your Task

You are required to:

1. **Deconstruct the Problem:** Break down the scenario into smaller components. Identify key requirements and constraints using tools such as the MoSCoW technique. Clearly describe the relevant variables involved.
2. **Propose a Solution:** Create a flowchart that outlines the logical steps for optimising the classroom allocation process. Accompany this with a detailed written explanation of how the solution works, including the key decision points, assumptions made, and how the approach ensures efficient room usage, minimises movement time between classes, and avoids scheduling conflicts.
3. **Reflect and Justify:** Reflect on the problem-solving techniques you used (e.g. abstract thinking, subdividing, etc). Justify why your approach is appropriate and discuss any limitations or assumptions in your solution.
4. **Engage with Literature:** You must incorporate relevant academic and professional sources throughout your report. Reference key models, techniques, and theories (e.g. MoSCoW, allocation optimisation, systems thinking) to support your analysis, design choices, and reflection.

## Submission Requirements

- Submit a single Word document via Turnitin.
- Embed your flowchart using a suitable tool (e.g. draw.io, Microsoft Visio, PowerPoint)
- Use the IEEE referencing style and include a reference list with a minimum of 4–6 academic or professional sources
- Total word count: 1500 words, distributed as follows:
    - Problem Deconstruction (~400 words)
    - Proposed Solution and Explanation (~800 words)
    - Reflection and Justification (~300 words)

## Marking Criteria

Please refer to the guidance specific to this assessment and the Student Feedback Form for detailed information on how marks are allocated across the assessment criteria.

# GUIDANCE FOR STUDENTS IN THE COMPLETION OF TASKS

**NOTE: The guidance offered below is linked to the five generic assessment criteria overleaf.**

**1. Engagement with Literature Skills**

Your work must be informed and supported by scholarly material that is *relevant* to and *focused* on the task(s) set. You should provide evidence that you have accessed an appropriate *range* of sources, which may be academic, governmental and industrial; these sources may include academic journal articles, textbooks, current news articles, organisational documents, and websites. You should consider the *credibility* of your sources; academic journals are normally highly credible sources while websites require careful consideration/selection and should be used sparingly. Any sources you use should be current and up-to-date, mostly published within the last five years or so, though seminal/important works in the field may be older. You must provide *evidence* of your research/own reading throughout your work, using a suitable referencing system, including in-text citations in the main body of your work and a reference list at the end of your work.

***Guidance specific to this assessment:*** *Support your work with relevant academic and professional sources, such as problem-solving models, optimisation techniques, and abstract thinking frameworks. Use recent and credible materials (e.g. journal articles, textbooks). Reference all sources using IEEE style.*

**2. Knowledge and Understanding Skills**

At level 4, you should be able to demonstrate knowledge of the underlying concepts and principles associated with your area(s) of study. *Knowledge* relates to the facts, information and skills you have acquired through your learning. You demonstrate your *understanding* by interpreting the meaning of the facts and information (knowledge). This means that you need to select and include in your work the concepts, techniques, models, theories, etc. appropriate to the task(s) set. You should be able to explain the theories, concepts, etc. to show your understanding. Your mark/grade will also depend upon the *extent* to which you demonstrate your knowledge and understanding.

***Guidance specific to this assessment:*** *Show a clear understanding of the problem by identifying key requirements, constraints, and variables. Apply relevant models (e.g. MoSCoW) and explain how concepts relate to the scenario.*

**3. Cognitive and Intellectual Skills**

You should be able to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of your subject(s) of study. You should be able to evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work. Your work must contain evidence of logical, analytical thinking. For example, to examine and break information down into parts, make inferences, compile, compare and contrast information. This means not just describing what! But also justifying: Why? How? When? Who? Where? At what cost? You should provide justification for your arguments and judgements using evidence that you have reflected upon the ideas of others within the subject area and that you are able to make sound judgements and arguments using data and concepts. Where relevant, alternative solutions and recommendations may be proposed.

***Guidance specific to this assessment:*** *Use critical thinking to explain your approach. Justify your decisions and reflect on the techniques used. Evaluate the strengths and limitations of your solution using logical reasoning and evidence.*

**4. Practical Skills**

At level 4, you should be able to apply the basic underlying concepts and principles to evaluate and interpret these within the context of your area of study. You should be able to demonstrate how the subject-related concepts and ideas relate to real world situations and/or a particular context. How do they work in practice?

You will deploy models, methods, techniques, and/or theories, in that context, to assess current situations, perhaps to formulate plans or solutions to solve problems, or to create artefacts. This is likely to involve, for instance, the use of real world artefacts, examples and cases, the application of a model within an organisation and/or benchmarking one theory or organisation against others based on stated criteria.

***Guidance specific to this assessment:*** *Apply theory to practice by designing a clear flowchart and explaining how it solves the delivery issue. Demonstrate how abstract thinking and logical steps were used to build a practical solution.*

**5. Transferable Skills for Life and Professional Practice**

Your work must provide evidence of the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility. This includes demonstrating: that you can communicate the results of your study/work accurately and reliably, and with structured and coherent arguments; that you can initiate and complete tasks and procedures, whether individually and/or collaboratively; fluency of expression; clarity and effectiveness in presentation and organisation. Work should be coherent and well-structured in presentation and organisation.

***Guidance specific to this assessment:*** *Present your work clearly, professionally, and with good structure. Use appropriate formatting and visual elements. Communicate your ideas logically and with academic tone throughout. Use passive voice.*

# STUDENT FEEDBACK FORM

This section details the *extent* to which the assessment criteria are demonstrated by you, which in turn determines your mark. The marks available for each category of skill are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

| **Generic Assessment Criteria** | **Marks available** | **Marks awarded** |
|---|---|---|
| **1. Engagement with Literature Skills** | | |
| Demonstrates use of relevant academic or professional sources throughout the assignment to support problem analysis, solution design, and reflection. | 15 | |
| **2. Knowledge and Understanding Skills** | | |
| A detailed breakdown of the problem scenario, including identification of constraints and requirements using MoSCoW or similar (15%)<br><br>Identification and explanation of key variables involved (10%) | 25 | |
| **3. Cognitive and Intellectual Skills** | | |
| Reflection on techniques used, such as subdividing the problem and abstract thinking (10%)<br>Justification for the solution approach and discussion of limitations (10%) | 20 | |
| **4. Practical Application Skills** | | |
| A flowchart outlining the logical process for optimising the allocation (20%)<br><br>A written explanation of the flowchart and how it solves the problem (10%) | 30 | |
| **5. Transferable Skills for Life and Professional Practice** | | |
| Report structure, written clarity, visual presentation, passive voice. | 10 | |

| **Assessment Mark** (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed. ) | **Late Submission Penalties (tick if appropriate)** | | **%** |
|---|---|---|---|
| | Up to 1 week late (40% Max) | | |
| | Over 1 week late (0%) | | |

## GENERIC ASSESSMENT CRITERIA

**Level 4**

In accordance with the Framework for Higher Education Qualifications, at the end of Level 4 students will be expected to have demonstrated knowledge of the basic underlying concepts and principles of a subject, and an ability to evaluate and interpret these within the context of that area of study. They should be able to present, evaluate and interpret qualitative and quantitative data in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of their subject(s) of study. They will have learned how to evaluate different approaches to solving problems, and will be able to communicate the results of their study/work accurately and reliably, and with structured and coherent arguments. They will be able to undertake further training and develop new skills within a structured and managed environment and will have the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.

| Level 4 | FAIL | MARGINAL FAIL | SATISFACTORY (3rd / Pass) | GOOD (2.2 / Pass) | VERY GOOD (2.1 / Merit) | EXCELLENT (1st / Distinction) | EXCEPTIONAL (1st / Distinction) |
|---|---|---|---|---|---|---|---|
| **Category** | **0-29%** | **30-39%** | **40-49%** | **50-59%** | **60-69%** | **70-84%** | **85-100%** |
| **Engagement with literature** (including reading, referencing, academic conventions and academic honesty) | Little or no evidence of reading and/or reliance on inappropriate sources. Views and findings mostly unsupported and non-authoritative. Referencing conventions used incoherently or largely absent. | Poor engagement with essential reading. No evidence of wider reading. Reliance on inappropriate sources, and/or indiscriminate use of sources. Heavily reliant on information gained through class contact. Inconsistent and weak use of referencing. | Engagement with a limited range of mostly relevant and credible sources but with some reliance on information gained through class contact. Some omissions and minor errors. Referencing conventions evident though not always applied accurately or consistently. | Engagement with an appropriate range of literature, including sources retrieved independently. Some over-reliance on texts rather than other sources. Referencing may show minor inaccuracies or inconsistencies. | Engagement with a wide range of literature, including sources retrieved independently. Selection of relevant and credible sources. Generally sound referencing, with no/very few inaccuracies or inconsistencies. | Engagement with an extensive range of relevant and credible literature. Consistently accurate application of referencing. | Exceptional engagement with an extensive range of relevant and credible literature. High-level referencing skills consistently applied. |
| **Knowledge and understanding** (Knowledge of the basic underlying concepts and | Major gaps in knowledge and understanding of the basic underlying concepts and | Gaps in knowledge of the basic underlying concepts and principles, with flawed or | Limited knowledge and understanding of the basic underlying concepts and | Knowledge of the basic underlying concepts and principles is accurate with a | Competent knowledge of the basic underlying concepts and principles. Exhibits very | Excellent knowledge and understanding of the basic underlying concepts and | Exceptional, detailed knowledge and understanding of the basic underlying |

| Level 4 | FAIL | MARGINAL FAIL | SATISFACTORY (3rd / Pass) | GOOD (2.2 / Pass) | VERY GOOD (2.1 / Merit) | EXCELLENT (1st / Distinction) | EXCEPTIONAL (1st / Distinction) |
|---|---|---|---|---|---|---|---|
| **Category** | **0-29%** | **30-39%** | **40-49%** | **50-59%** | **60-69%** | **70-84%** | **85-100%** |
| principles of a subject.) | principles of the subject matter. Inclusion of irrelevant material. Substantial inaccuracies. | superficial understanding. Some significant inaccuracies and/or irrelevant material. | principles within the subject area. Some elements may be missing. | good understanding of the field of study but lacks depth and/or breadth. | good understanding. | principles of the subject. | concepts and principles |
| **Cognitive and intellectual skills** (Evaluate underlying concepts and principles of a subject and interpret qualitative and quantitative data in order to develop lines of argument and make sound judgements.) | Wholly or almost wholly descriptive work. Little or no evaluation of the underlying concepts and principles. Failure to develop arguments, leading to illogical or invalid judgements. Minimal or no use of evidence to back up views. | Largely descriptive work, with superficial evaluation of the underlying concepts and principles. Weak interpretation of data, flawed development of arguments and judgements. Information accepted uncritically, uses generalised statements made with scant evidence and unsubstantiated opinions. Ideas sometimes illogical and contradictory. | Limited attempt at evaluation of the underlying concepts and principles, tending towards description. Can interpret qualitative and quantitative data but with some errors. Some evidence to support emerging arguments and judgements but these may be underdeveloped or with a little inconsistency / mis-interpretation. | Good evaluation of the underlying concepts and principles. Can interpret qualitative and quantitative data, with minor errors. An emerging ability to use evidence to support the argument. Mostly valid arguments and logical judgements. | Sound evaluation of the underlying concepts and principles. Can interpret qualitative and quantitative data accurately. Ability to devise arguments using evidence to make mostly appropriate and valid judgements. | Excellent evaluation of the underlying concepts and principles. Can interpret qualitative and quantitative data accurately and with some insight. Excellent ability to devise arguments using evidence and make appropriate and valid judgements. | Exceptional evaluation of the underlying concepts and principles based evidence. Outstanding interpretation of qualitative and quantitative data. Exceptional ability to devise arguments using evidence and make wholly appropriate and valid judgements. |
| **Practical skills** (Different approaches to solving problems in particular contexts.) | Limited or no use of taught, basic methods, materials, tools and/or techniques. Little or no appreciation of the context of the application. | Rudimentary application of taught, basic methods, materials, tools and/or techniques but without consideration and | An adequate awareness and mostly appropriate application of basic methods, materials, tools and/or techniques. | A good and appropriate application of basic methods, materials, tools and/or techniques. Clear appreciation of | A very good application of a range of basic methods, materials, tools and/or techniques. Very good consideration of the context of | An advanced application of a range of taught, basic methods, materials, tools and/or techniques. The context of the application is | Exceptional levels of application and deployment skills in particular practical contexts. Outstanding identification of |

| Level 4 | FAIL | MARGINAL FAIL | SATISFACTORY (3rd / Pass) | GOOD (2.2 / Pass) | VERY GOOD (2.1 / Merit) | EXCELLENT (1st / Distinction) | EXCEPTIONAL (1st / Distinction) |
|---|---|---|---|---|---|---|---|
| **Category** | **0-29%** | **30-39%** | **40-49%** | **50-59%** | **60-69%** | **70-84%** | **85-100%** |
| | Very weak evidence of different approaches to problem-solving in particular contexts. | competence. Flawed appreciation of the context of the application. Weak evidence of different approaches to problem-solving in particular contexts. | Basic appreciation of the context of the application. Can identify problems in particular contexts and propose basic alternative approaches or solutions though there may be errors. | the context of the application. Good evidence of different approaches to problem-solving in particular contexts and proposes mostly appropriate solutions. | the application. Very good evidence of different approaches to problem-solving in particular contexts and proposes appropriate solutions. | well considered, and insightful. Excellent evidence of different approaches to problem-solving in particular contexts and proposes appropriate solutions. | problems in particular contexts and formulation of wholly appropriate, thoughtful solutions / different approaches. |
| **Transferable skills for life and professional practice** (Communicate the results of their study/work accurately and reliably, and with structured and coherent arguments; the qualities needed for employment requiring the exercise of some personal responsibility within a structured and managed environment.) | Work is poorly structured, disorganised, inaccurate and/or confusingly expressed. Very weak use of language and/or very inappropriate style. Failure to work effectively individual or as part of a group. Little or no evidence of the skills for employment requiring the exercise of some personal responsibility. | Work is poorly presented in a disjointed manner. It is loosely, and at times incoherently, structured, with information and ideas often poorly expressed. Weak use of language and/or inappropriate style. Flawed approach to individual or group work, meeting only partial obligations to others. Limited evidence of the skills for employment requiring the | Mostly ordered presentation and structure in which relevant ideas / concepts are reasonably expressed. Work may lack coherence and/or accuracy in places. Can work as part of a group, meeting most obligations to others but perhaps with limited involvement in group activities. Demonstrates the basic skills for employment requiring the exercise of some personal responsibility, with some areas | Mostly coherent, organised and accurate work, in a suitable structure and is for the most part clearly expressed. Can work effectively independently and/or as part of a team, with clear contribution to group activities. Demonstrates the skills for employment requiring the exercise of some personal responsibility, with some areas of strength and some of minor weakness. | Work is accurate, coherent, fluent, well-structured and organised. Can work effectively independently and/or as part of a team, with very good contribution to group activities. Demonstrates very good skills for employment requiring the exercise of some personal responsibility, with just occasional minor weakness. | Work is coherent, very fluent and is presented professionally. Can work effectively independently and/or as part of a team, with an excellent contribution to group activities. Demonstrates excellent skills for employment requiring the exercise of some personal responsibility with an appetite for further development. | Work is accurate, exceptionally coherent, very fluent and presented well. Can work effectively independently and/or as part of a team, with an exceptional contribution to group activities. Demonstrates exceptional skills for employment requiring the exercise of some personal responsibility with an appetite for further development. |

| Level 4 | FAIL | MARGINAL FAIL | SATISFACTORY (3rd / Pass) | GOOD (2.2 / Pass) | VERY GOOD (2.1 / Merit) | EXCELLENT (1st / Distinction) | EXCEPTIONAL (1st / Distinction) |
|---|---|---|---|---|---|---|---|
| **Category** | **0-29%** | **30-39%** | **40-49%** | **50-59%** | **60-69%** | **70-84%** | **85-100%** |
| | | exercise of some personal responsibility. | of minor weakness. | | | | |

**THIS DOCUMENT IS ALSO AVAILABLE IN WELSH**