*NOTES ABOUT THE USE OF THIS FORM:*

* *This form is designed to be completed on a computer. Cells in the table below will expand to accommodate any amount of text … but we suggest that you keep the narrative as succinct as possible!*
* *Please keep the use of formatting to a minimum. Importing formatted text onto a virtual learning platform presents challenges!*
* *This form assumes that the “unit of learning” is a module. The module, in turn, would be included in a “course” (which is not referred to here). Each module will have a series of components which have been called “units” – they may be called something different in your design (like “weeks”, or “sections”) and you are free to change the terminology.*
* *In the section about the authors of and contributors to the course, we have provided space for 5 co-authors (or co-contributors). If there were more than six people on the team, please add additional rows to the table.*
* *Please ensure that you use student-friendly language. So the intended learning outcomes will be framed using the word “you”, and not “the student”. (This may be at odds with what you understand to be “academic” language. The aim, in online and blended learning, is to use language that includes the student to the greatest extent possible.)*
* *Please note that module-level outcomes should be “overarching” outcomes onto which the unit-level outcomes map. You should have a few (maybe 4) module-level outcomes, and a very few (two or three at the most) unit-level outcomes for each unit.*
* *The unit-level template should be copied so that there is a copy of the template for EACH unit/week/section. Thus, if there are 15 units/weeks/sections in a module, you will copy the template 14 times and complete each copy for one unit/week/section.*
* *In the unit-level template, there is a space for a detailed description of student and teacher engagement with the unit. Here we would expect to see a “blow-by-blow” account of how the unit “hangs together”. What happens first? And then? What resources would students need to access for each part of the unit’s work? Where would they find these? Where is collaboration expected to happen? How is it scaffolded? And so on? What happens in class? What happens online? How do these elements build on each other? How long should students spend on each part of the unit?*

*This is NOT a list of things that students (or teachers) do. It is a* ***detailed description*** *of the process.*

*We have used a generic set of headings in the template. You are free to change the headings to suit the particular unit, but you are* ***not*** *free to ignore any of the required information.*

*Be sure, when completing the unit-level template to contextualise the content … by which we mean that content needs to be grounded in real life – even mathematical equations need to be demonstrably linked to real life! A student needs to know* ***why*** *they are engaging with the content.*

MODULE LEVEL TEMPLATE

|  |  |
| --- | --- |
| **Details of institution that has developed the module** | |
| Name of University | Kumasi Technical University |
| Name of institutional contact | Dr Samuel King Opoku |
| Email address of institutional contact | [samuel.kopoku@kstu.edu.gh](mailto:samuel.kopoku@kstu.edu.gh) |

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| **Details of Creative Commons licence** (<https://creativecommons.org/licenses/>) | |
| Licence type | **CC BY-NC: Attribution, non – commercial** |

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| --- | --- |
| **Details of the authors of/contributors to the course and their role** | |
| Lead author | **Dr Samuel King Opoku** |
| *Responsible for:* | **Module development** |

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| **Information regarding the format of material to upload onto the OER Africa repository** | |
| Primary resource (Not PDF) | PowerPoint, Word document |
| Will a Moodle common cartridge be uploaded as well? | Yes |

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| **Course details** | | | |
| Module title: | Management Information Systems (BCT213) | | |
| Academic level: | 300 First Semester | Number of credits: | 3 |
| Class contact time (hours): | 23 |
| Private/online study hours: | 54 | Number of weeks of study: | 14 |
| Total student learning hours: | 77 | Number of units of study: | 12 |

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| Programme(s) which might include this Module: | Bachelor of Technology in Computer Technology |
| Pre-requisite student abilities and knowledge: | Basic knowledge of database, computer networks, systems analysis and operating systems with good communication skills. |
| Pre-requisite (or co-requisite) modules: | None |

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| Aim of the module: | This module aims to prepare you on how to make decisions that advance organization’s strategy and implement organizational structure and dynamics for better competitive advantage. |
| Brief description of module: | The ability to collect data from different sources, process and organize them for businesses to make strategic decisions for competitive advantage is the driving force for sustaining modern businesses. This module, thus, introduces the management of information and communication technology elements within business organizations to equip you to handle organizational challenges successfully by giving you the skills to manage various information systems to assist managers, staff and customers |

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| Intended learning outcomes: | *At the end of this* ***module****, you will be able to:*   1. Explain the principles of management information systems and how computers process data into information and knowledge. 2. Identify principal technologies and standards for networking communication and internet access to support business. 3. Evaluate tools and technologies for safeguarding information resources. 4. Analysing the relationship between ethical, social and political issues raised by information systems 5. Apply the various tools and skills to business’s supply-side activities to maximize customer value to gain competitive advantage in the marketplace |
| Syllabus/curriculum: | Unit 0: General Introduction to Module.  Unit 1: Overview of Management Information Systems.  Unit 2: Information Systems for Decision Making.  Unit 3: Computer Hardware and Software for Information Systems.  Unit 4: Data Communication System.  Unit 5: Database Management Technology.  Unit 6: Decision Support Systems.  Unit 7: Office Information Systems.  Unit 8: E-Commerce and Supply Chain Systems.  Unit 9: Business Intelligence and Knowledge Management.  Unit 10: Information System Management  Unit 11: Information Security |
| Form of final/summative assessment: | End of Semester examination |

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| **Assessment of module-level learning outcomes** | |
| Module-level learning outcome | Module assessment task |
| 1. Explain principles of management information system and how computers process data into information and knowledge. | Student will be able to demonstrate ability to use technology tools in interactions and assignment submissions. Students will complete the assessment questions presented at the end of each unit. In addition, they will complete e-tivities and quizzes attached to learning outcomes |
| 1. Identify principal technologies and standards for networking communication and internet access to support business. |
| 1. Evaluate tools and technologies for safeguarding information resources. |
| 1. Analysing the relationship between ethical, social and political issues raised by information systems |
| 1. Apply the various tools and skills to business’s supply-side activities to maximize customer value to gain competitive advantage in the marketplace |

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| **Significant features or elements of module** |
| Students have access to learning resources on the Learning Management System(LMS) followed by face-to-face interaction and then to the LMS for e-tivities and quizzes |

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| **Quality assurance matters** | | |
| How will feedback on module be obtained from students? | Formative and summative assessments, as well as an online survey | |
| How will student feedback be used to improve module? | Feedback will be used to improve present and future lesson design, facilitation and implementation | |
| A signed certificate confirming that the module meets the requirements of the PEBL QA rubric is attached. | | Yes  No |

UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| --- | --- |
| **Unit-level overview**  **Unit 0: General Introduction to Module** | |
| Aim of the unit: | This unit introduces you to the Management Information Systems module and provides opportunity to introduce yourself to colleagues and share expectations. |
| Brief description of unit: | The unit as a basis for the course gives overview of the content, expectations and platform for self-introduction. You will have opportunity to interact with and know colleagues better as you work with them in the next 14 weeks. You will be using padlet, a technology tool for collaboration. |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Identify what to expect during the duration of the module. |
| Syllabus/curriculum: | * Tutor and Module Introduction * Self-Introduction |

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| Overview of student activity: | You are expected to attend face-to-face class on the first day of lecture. Before that, you would have access to the Learning Management System (LMS). For assistance with LMS, contact IT & Media Services.   * Within the first week, visit LMS for course materials and Padlet link. * Create an account in Padlet for ease of identification. * Visit the Padlet page to complete the following tasks: write a self-introduction of no more than 150 words describing your background, interests, and expectations from the course; upload a personal picture; read other people's submissions. |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| Prepare learners for the module | | |
| Preparatory reading: | Number of hours | 1 |
| Course handbook | | |
| Face to face time: | Number of hours | 1 |
| * Lecturer’s self-introduction and course overview. * Demonstration of how to use padlet. * Confirmation of students ability to log on to the LMS | | |
| Online task: | Number of hours | 2 |
| Account creation on padlet | | |
| How are the learning outcomes in this unit assessed? | Number of hours |  |
| Lecturer visits padlet page to view submissions on self-introduction and responses to others | | |

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| --- | --- |
| = Total number of hours | 4 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? |  |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access the course handbook. Other resources such as links will be made available to student. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share what they expect from the module, their background and experience on padlet. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. The addition of video tutorials will assist students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

*You should copy sufficient unit templates so that there is one for each unit of your module in the space below.*

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| **Unit-level overview**  Unit 1: Overview of Management Information Systems (MIS) | |
| Aim of the unit: | The unit introduces you to the need of management, information and systems to the successfulness of business organisations |
| Brief description of unit: | Relationship among management, information and systems, framework for management information systems, information needs and its economics, approaches to systems and development of MIS |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Distinguish among management, information and system. 2. Describe information processing cycle 3. Explain information classifications 4. Explain approaches to MIS development |
| Syllabus/curriculum: | * Discuss management, information and systems * Explain MIS * Outline Framework for MIS organisation * Discuss information needs and its economics * System approach * Approaches of MIS development |

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| Overview of student activity: | * Reading the lecture materials and other online resources (out of class) * Read an article on applying innovative projects in Information Systems and discuss the role of innovation in managing Information Systems * Watch short video on “MIS Basic Concepts” before coming to class from <https://www.youtube.com/watch?v=mLR0Xgxa7qc> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class. |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| The unit introduces you to the need of management, information and systems to the successfulness of business organisations. | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 1.5 |
| Read an article  Watch video tutorials | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| --- | --- |
| = Total number of hours | 6 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Okhunov, M., & Minamatov, Y. (2021). Application of Innovative Projects in Information Systems. *European Journal of Life Safety and Stability (2660-9630)*, *11*, 167-168. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources such as OERs and free articles and links will be made available to student. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information read from the articles on the application of innovative projects in information systems. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 2: Information Systems for Decision Making | |
| Aim of the unit: | The unit aims to introduce you to different types of information systems required by mangers at different levels for different kinds of decisions |
| Brief description of unit: | Types of information systems and their characteristics, explanation of the term decision, decision making process, and types of decisions |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Outline types of information systems for business organisations 2. Discuss types of intelligent support systems 3. Discuss transaction processing systems 4. Discuss office automation systems |
| Syllabus/curriculum: | * Types of information systems * Transaction processing systems * Management information systems * Intelligent support systems * Office automation systems |

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| Overview of student activity: | * Read an article on the role of information systems in decision making and discuss the types of information systems required for decision making * Watch short video on “Types of Information Systems” before coming to class from <https://www.youtube.com/watch?v=nQ4Q3iN7TMM> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| The unit aims to introduce you to different types of information systems required by mangers at different levels for different kinds of decisions | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| * Read and discuss the role of information systems in decision making * Watch video | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 6.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Saleh, S., & Al-athwari, B. (2022). The Role of Information Systems in Decision-Making: Case Study of the Supreme Judicial Council of the Republic of Yemen. In *International conference on smart computing and cyber security: strategic foresight, security challenges and innovation* (pp. 139-155). Springer, Singapore. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information read from the article on the role of information systems in decision making. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. The addition of video links will assist students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 3: Computer Hardware and Software for Information Systems | |
| Aim of the unit: | The unit introduces you to hardware and software features of information systems and criteria for investment in hardware and software |
| Brief description of unit: | Data representation, types of computers, components of computer systems, factors to buy personal computer, programming languages, classification of software and criteria for investment in hardware and software |
| Intended learning outcomes: | *At the end of this unit, you will be able to:*   1. Explain data representation in the computer system 2. Outline types of computers 3. Distinguish among components of computer system 4. Outline factors to buy Personal Computer (PC) 5. Distinguish among programming language types 6. Distinguish among software classifications 7. Outline criteria for investment in hardware and software |
| Syllabus/curriculum: | * Data representation * Types of computers * Components of computer system * Factors to buy PC * Programming languages * Classifications of software * Criteria for investment in hardware and software |

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| --- | --- |
| Overview of student activity: | * Read the article on advantages to disadvantages of cloud computing for small-sized business and discuss the effect of online data storage on business organisations. * Watch short video on “Components of a Computer Systems” before coming to class from <https://www.youtube.com/watch?v=peas75zRolo> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| To introduce you to hardware and software features of information systems and criteria for investment in hardware and software | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| * Read and discuss the effect of online data storage on business organization * Watch video | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| --- | --- |
| = Total number of hours | 6.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Abdalla, P. A., & Varol, A. (2019, June). Advantages to disadvantages of cloud computing for small-sized business. In *2019 7th International Symposium on Digital Forensics and Security (ISDFS)* (pp. 1-6). IEEE. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information read from the articles on online data storage |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. The addition of video links will assist students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| --- | --- |
| **Unit-level overview**  Unit 4: Data Communication and Internet Technology | |
| Aim of the unit: | This unit introduces you to the mechanisms of data communication between devices |
| Brief description of unit: | Discussion of telecommunication systems, types of communication systems, and topologies, protocols, architecture and management of computer network |
| Intended learning outcomes: | *At the end of this unit, you will be able to:*   1. Outline components of telecommunications system 2. Explain types of communication network 3. Design computer network |
| Syllabus/curriculum: | * Components of telecommunications system * Types of communication networks * Topologies of computer network * Protocols and network architecture * Open system interconnection (OSI) |

|  |  |
| --- | --- |
| Overview of student activity: | * Watch short videos on “Introduction of Data Communication and Computer Networking” and “OSI Model Explained” before coming to class from <https://www.youtube.com/watch?v=OmYHJShD_QM> and <https://www.youtube.com/watch?v=vv4y_uOneC0> * Discuss the areas you are interested in the watched videos * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class * Group project: You will be required to design a computer network for a small business with four offices. All the offices are located within a 50 meter radius. |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to the mechanisms of data communication between devices | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 1 |
| * Watch video | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 2 |
| End of unit quiz  Project | | |

|  |  |
| --- | --- |
| = Total number of hours | 7 |

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| --- | --- |
| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Sarumi, J. A. A Review of Encryption Methods for Secure Data Communication. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after watching the video. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. The addition of video links will assist students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

|  |  |
| --- | --- |
| **Unit-level overview**  Unit 5: Database Management Technology | |
| Aim of the unit: | This unit introduces you to how to organize, maintain and retrieve data efficiently and effectively. |
| Brief description of unit: | Discussion of data hierarch, methods of organising data in files, database management systems (BDMS), Entity-relationship diagram and database administration |
| Intended learning outcomes: | *At the end of this unit, you will be able to:*   1. Outline data hierarchy 2. Explain methods for organizing data in files 3. Outline components of DBMS 4. Design database models 5. Outline roles of database administrator |
| Syllabus/curriculum: | * Data and information * Data Hierarchy * Methods of organizing data in files * Limitations of file based systems * Database and database management systems (DBMS) * Entity-Relationship Diagram * Database Administrator |

|  |  |
| --- | --- |
| Overview of student activity: | * Read and discuss the articles on managing data resources * Watch short videos on “Introduction to DBMS” <https://www.youtube.com/watch?v=T7AxM7Vqvaw> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

|  |  |  |  |
| --- | --- | --- | --- |
| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| Introduces students to how to organize, maintain and retrieve data efficiently and effectively | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| * Watch video * Read online articles | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

|  |  |
| --- | --- |
| = Total number of hours | 6.5 |

|  |  |
| --- | --- |
| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Horgan, L. (2022). *Becoming Data-Driven: Managing Data, Resources, and Affect in the Smart City* (Doctoral dissertation, UC Irvine). * Liu, Q., Feng, G., Tayi, G. K., & Tian, J. (2021). Managing data quality of the data warehouse: A chance-constrained programming approach. *Information Systems Frontiers*, *23*(2), 375-389. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information read from the articles on data resources. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 6: Decision Support Systems (DSS) | |
| Aim of the unit: | This unit introduces you to systems for making decisions in business organisations, the characteristics of these systems and their relationship with MIS |
| Brief description of unit: | Overview of DSS, components of DSS, characteristics of DSS, development of DSS and applications of DSS |
| Intended learning outcomes: | *At the end of this unit, you will be able to:*   1. Explain DSS 2. Outline classifications of DSS 3. Outline components of DSS 4. Outline characteristics of DSS 5. Explain functions of DSS |
| Syllabus/curriculum: | * Overview of DSS * Classification of DSS * Characteristics of DSS * Components of a DSS * Functions of a DSS * Development of DSS * Applications of a DSS |

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| Overview of student activity: | * Read the articles on decision support systems and discuss the implementation of decision support systems in business organisations * Watch short videos on “Decision support system” <https://www.youtube.com/watch?v=5ssrUx-jivc> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to systems for making decisions in business organisations, the characteristics of these systems and their relationship with MIS | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2.5 |
| * Watch Video * Read articles on decision support systems | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 7 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Leung, K. H., Luk, C. C., Choy, K. L., Lam, H. Y., & Lee, C. K. (2019). A B2B flexible pricing decision support system for managing the request for quotation process under e-commerce business environment. *International Journal of Production Research*, *57*(20), 6528-6551. * Oppong, S. O., Asamoah, D., Oppong, E. O., & Lamptey, D. (2019). Business Decision Support System based on Sentiment Analysis. *International Journal of Information Engineering & Electronic Business*, *11*(1). |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after reading the articles on decision support systems |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 7: Office Information Systems | |
| Aim of the unit: | The unit introduces you to the need and types of office automation systems |
| Brief description of unit: | Office and office systems, types of office automation systems and integrated office |
| Intended learning outcomes: | *At the end of this unit, you will be able to:*   1. Explain office automation 2. Outline types of office automation systems 3. Explain integrated office |
| Syllabus/curriculum: | * Office automation * Offices and office systems * Types of office automation system * Integrated office |

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| Overview of student activity: | * Read an article on technology readiness for office automation and discuss the findings of the research. * Watch short videos on “Office Automation System” <https://www.youtube.com/watch?v=xpuD9ozfaz8> * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| The unit introduces you to the need and types of office automation systems | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 1 |
| * Watch video | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 5.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? | * Yuniarto, D., & Rahman, A. A. (2020). Technology readiness and usability of office automation system in suburban areas. *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, *18*(2), 676-684. |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after reading the article on technology readiness and usability of office automation systems |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive formative feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 8: E-Commerce and Supply Chain Systems | |
| Aim of the unit: | This unit introduces you to ways of doing business on the world wide web and ethical issues for inter-organizational information systems. |
| Brief description of unit: | Doing business on the World Wide Web (WWW), web technologies, supply chain management, inter-organizational information systems, and ethics of supply chain information sharing. |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Discuss doing business on the WWW. 2. Explain web technologies 3. Describe supply chain management. 4. State the inter-organisation Information System 5. Analyse the ethics of supply chain management |
| Syllabus/curriculum: | * Doing business on the World Wide Web (WWW). * Web technologies * Supply chain management * Inter-organizational information systems * Ethics of supply chain information sharing |

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| Overview of student activity: | * Watch short videos on “What is ecommerce” <https://www.youtube.com/watch?v=Zzs6kLlkAUQ> and “What is supply chain management” on <https://www.youtube.com/watch?v=WdnDD75dgfY> and discuss how e-commerce streamline supply chain * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to ways of doing business on the world wide web and ethical issues for inter-organizational information systems. | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| Watch Videos and discuss how e-commerce streamlines supply chain management | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 6.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? |  |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after watching the video |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive *formative* feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 9: Business Intelligence and Knowledge Management | |
| Aim of the unit: | This unit introduces you to building business solutions through knowledge management systems. |
| Brief description of unit: | Developing Business/IT solutions, data warehouse and data marts, data mining and knowledge management. |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Design business solutions. 2. Manage data warehouses and data marts 3. Explain data mining 4. Examine knowledge management |
| Syllabus/curriculum: | * Developing Business/IT solutions. * Data warehouse and data marts. * Data mining * Knowledge management. |

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| Overview of student activity: | Watch short video on “Data Mining, Data Warehouse, Data Marts and Data Warehouse Schema” <https://www.youtube.com/watch?v=Bu5TjYspkuc> and discuss the relationship between data mining, data warehouse and data marts   * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to building business solutions through knowledge management systems | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| Watch Videos and discuss the relationship between data mining, data warehouse and data marts | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 7 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? |  |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after watching the video |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive *formative* feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 10: Information Systems Management | |
| Aim of the unit: | This unit introduces you to planning and managing computing infrastructure, enterprise application whilst addressing user rights and responsibilities. |
| Brief description of unit: | Planning the use of IT, managing the computing infrastructure, enterprise applications, outsourcing and user rights and responsibilities. |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Plan the user of IT. 2. Manage the computing infrastructure 3. Manage enterprise applications 4. Formulate outsourcing user rights and responsibilities. |
| Syllabus/curriculum: | * Planning the use of IT * Managing the computing infrastructure. * Enterprise applications. * Outsourcing. * User rights and responsibilities. |

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| Overview of student activity: | Watch short video on “Enterprise applications” on <https://www.youtube.com/watch?v=h44QNQj9-8s> and how to manage enterprise applications   * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in class |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to planning and managing computing infrastructure, enterprise application whilst addressing user rights and responsibilities. | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| Watch video and discuss how to manage enterprise applications | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz  End of unit project | | |

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| = Total number of hours | 6.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? |  |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information after completing their project work |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive *formative* feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE

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| **Unit-level overview**  Unit 11: Information Security | |
| Aim of the unit: | This unit introduces you to handling security threats in business organisation |
| Brief description of unit: | Security threats, senior management role in security programs, data safeguards, human safeguards, disaster preparedness. |
| Intended learning outcomes: | *At the end of this* ***unit****, you will be able to:*   1. Identify security threats. 2. Evaluate senior management role in security programs. 3. Assess data safeguards. 4. Assess human safeguards. 5. Assess disaster preparedness. |
| Syllabus/curriculum: | * Security threats * Senior management role in security programs * Data safeguards * Human safeguards * Disaster preparedness. |

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| Overview of student activity: | Watch short video on “Disaster preparedness” on <https://www.youtube.com/watch?v=FVwvbS-0q18> and discuss how to plan for disaster   * Access and read course material from LMS * Harmonise watched video with lecture notes to be discussed in cla |

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| Detailed explanation of ALL student and teacher engagement with the unit:  *(This should be presented in the order that the activities take place. So if students do work online* ***before*** *coming to the lecture, that should be shown ahead of what happens in class.*  *If there is more than one opportunity for face-to-face contact, or more than one online task, there should be a separate section for each instance, and they should be presented in the template in the same order that students encounter them.)*  ***Content*** *– such as lecture material – can EITHER be shown here OR added as* ***clearly identifiable*** *addenda to the document. If you plan to use addenda, you should ensure that this are cross-referenced in this section.)* | Purpose of the unit/week/section: | | |
| This unit introduces you to handling security threats in business organisation | | |
| Preparatory reading: | Number of hours | 2 |
| Access and read course material on the LMS | | |
| Face to face time: | Number of hours | 2 |
| * Lecture * Discussion | | |
| Online task: | Number of hours | 2 |
| Watch video and discuss how to plan for a disaster preparedness and planning | | |
| How are the learning outcomes in this unit assessed? | Number of hours | 0.5 |
| End of unit quiz | | |

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| = Total number of hours | 6.5 |

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| **Some important questions** | |
| Which learning resources/ references will scaffold the students’ learning? |  |
| How are students enabled to access the resources? | All students will be enrolled in the LMS, this will enable them to access all the uploaded contents to the respective course. Other resources required by the students will be given to them. |
| Where in this unit are students expected to work collaboratively? | Students are expected to share information on how to prepare for disaster after watching the video. |
| How has an inclusive approach been incorporated in this unit? | Browsers and learning materials can be adjusted to any font size to assist all students with disability. |
| How will feedback on unit be obtained from students? | The feedback in the unit will be obtained in different ways such as peer to peer feedback, teacher to students’ feedback through online and face-to-face. |
| How will student feedback be used to improve unit? | The feedbacks obtained from students will be used to improve on module facilitation as well as in designing the contents of the current course. |
| At which point(s) will students receive *formative* feedback on the work they have done in the unit? | Feedback will be provided at the end of each task assigned. |

END OF UNIT/WEEK/SECTION-LEVEL TEMPLATE