

MATHEMATICS, SCIENCE AND IT ACADEMY

SEMESTER 1 2018

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|---------------------|--------------------------------------------------------|--------------------|-----------------|
| Course Title | Information Technology (A) | Course Code | 1219 (A) |
| Unit Title | Relational Databases and Spreadsheets (Unit value 1.0) | Unit Code | 13049 |
| Term 1 Unit | Spreadsheets (Unit value 0.5) | Unit Code | 13037 |
| Term 2 Unit | Relational Databases (Unit value 0.5) | Unit Code | 13036 |

GOALS

The specific goals of this unit are for students to:

- examine the appropriate ethical uses of relational databases and the associated implications for society
- develop a plan for a relational database using appropriate design tools
- devise, use and manage relational database tables
- use a relational database query language
- use and devise relational database queries
- describe the purpose and structure of spreadsheets
- develop a plan for a spreadsheet
- implement data entry and data management in a simple spreadsheet
- apply a variety of functions and formulae
- use a variety of data analysis tools

CONTENT SUMMARY

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| Ethical use of relational databases |
| Implications of relational database use for society |
| Purpose of relational databases |
| Relational database design tools, such as entity-relationship (E-R) diagrams or other schemas |
| Available sources of assistance, such as online help, manuals, forums |
| Relational database file creation |
| Relational database tables |
| Data entry/editing, importing and exporting data |
| Sorting and indexing |
| Linking a relational database to an external application |
| Relational database query language |
| Queries involving single and multiple tables, including inner and outer joins. |
| User Interface |

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| Maintenance of a relational database |
| Purpose of spreadsheets |
| Structure of spreadsheets, e.g. workbooks, worksheets, cells, columns, rows, cell ranges |
| Planning a spreadsheet, e.g. concept drawings, UI design |
| Data entry, importing data, exporting data |
| Data management, e.g. data validation, linking |
| Formulae: <ul style="list-style-type: none"> • structuring, e.g. operators, cell referencing • functions, e.g. financial, mathematical, string, etc. |
| Data analysis tools, e.g. charts, pivot tables |

MATERIALS REQUIRED: Earphones for video tutorials, access to google classroom.

ASSESSMENT

| TASK | DUE DATE | WEIGHTING |
|--------------|-----------|-----------|
| Assignment 1 | Week 7 | 25% |
| Exam 1 | Exam week | 25% |
| Assignment 2 | Week 16 | 25% |
| Exam 2 | Exam week | 25% |

Specific Entry & Exit Requirements for Term Units

It is possible to enter this course at Term 2. Entry into this course for Term 2 is by negotiation with the Executive teacher. To exit at Term 1 you must complete both Exam 1 and Assignment 1.

ASSESSMENT CRITERIA FOR ASSESSMENT AND REPORTING OF STUDENT ACHIEVEMENT

Students will be assessed on the degree to which they demonstrate:

- knowledge, understanding, application, analysis and evaluation
- planning, designing, creating and implementing
- communication and interpersonal skills
- flexible, adaptive and creative thinking

Teachers will consider, when allocating grades, the degree to which students demonstrate their ability to complete and submit tasks within a specified time frame.

ATTENDANCE AND PARTICIPATION

Students are expected to submit all assessment items and attend all classes, participate in a positive manner and seek support whenever it is required. Excursions, simulations and presentations by visitors (including lunchtime) may form part of classwork. It is your responsibility to catch up on missed work when absent from class.

Any student whose attendance falls below the 90% of the scheduled classes/contact time and has not provided substantial documentary evidence to cover the absence will be awarded a V grade. This means that 4 unexplained absences in a term or 8 unexplained absences in a semester could mean that a V grade may be awarded. However, the Principal has the right to exercise discretion in special circumstances if satisfactory documentation is supplied.

LATE SUBMISSION OF WORK

Students are encouraged to submit work on time, as it is a valuable organisational skill. Students are also encouraged to complete work even if it is late, as there are educational benefits in doing so.

Late work will receive a penalty of 5% (of possible marks) per calendar day late, unless an extension is granted by the class teacher prior to the deadline. This means that 5% is taken off the possible marks that could have been achieved eg. If a student achieved a score of 75/100, and the item is one day late, then five marks (5% of 100) would be taken from 75, which

leaves the score as 70/100. 'Per calendar day late' means each day late whether it be a weekend or public holiday. Items due on any date must be submitted to the class teacher, faculty staff room, or front office at the college by 3.30pm on that day. After 3.30pm, the item will attract the late penalty. Submission of work on a weekend or public holiday is not acceptable. If you do not submit your work to your class teacher, make sure that it is signed and dated by either another member of staff in the faculty staffroom, or a member of the front office staff.

Achievement in Accredited Courses is reported to the Board of Senior Secondary Studies and students with a Grade A-E. Late work submitted without approval will have an impact on the grade awarded to a student.

No work will be accepted after marked work has been returned, or accepted after the unit has completed. Computer and/or printer failure will not be accepted as a valid reason for late work. Make sure you backup, keep hard copies and rough notes.

Unless prior approval is granted, any student who fails to submit assessment tasks worth in total 70% or more of the assessment for the unit, will be considered to be unable to be assessed and will receive a V grade. The Principal has the right to exercise discretion in the application of the late penalty in special circumstances where satisfactory documentation is supplied.

CHEATING AND DISHONEST PRACTICE

The integrity of the College's assessment system relies upon all involved acting in accordance with the highest standards of honesty and fairness. Any departure from such standards will be viewed very seriously." Accordingly:

- Plagiarism - claiming authorship of someone else's work (intentionally or otherwise) - is a serious misdemeanour, and attracts severe penalties.
- Students are required to acknowledge the source of all material that is incorporated into their own work.
- Students may not submit the same item for assessment in more than one unit, unless specific agreement has been reached with the class teacher.

MODERATION

Throughout the semester, moderation in the form of common marking schemes, cross marking and joint marking occurs across all units in the Moderation Group to ensure comparability of standards. Moderation is a process whereby student's work is compared so that student performance can be graded fairly and consistently. Moderation takes some time, and so students may not receive their work back until ACT wide moderation of grades across all colleges has occurred. Small Group Moderation is carried out in courses with small class sizes.

RIGHT TO APPEAL

You can appeal against your assessment if you feel that the result you obtained is not fair. You should first talk to your class teacher, and if you are not satisfied with the explanation you must discuss the situation with the Executive Teacher of the faculty concerned. If you still do not feel that your result is fair you should talk to the Deputy Principal Programs for further advice on the 'appeal process'.

Executive Teacher: Ruth Edge

Signature: _____

Date: February, 2018