

COURSE OUTLINES: Intermediate Excel

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|---|--------------------|-----------------|---|
| Academic Year | AY 2022-2023 | Semester | 2 |
| Course Coordinator | Marc Low | | |
| Course Code | AB1403 | | |
| Course Title | Intermediate Excel | | |
| Pre-requisites | None | | |
| No of AUs | 1 (Pass/Fail) | | |
| Contact Hours | 13 | | |
| A) Course Aims | | | |
| <p>This course focuses on teaching introductory through intermediate techniques in Excel. No prior knowledge in programming or advanced math skills are necessary. Upon completion of the course, students will gain skills in Excel, data management and real-world problem solving.</p> | | | |
| B) Intended Learning Outcomes (ILO)/Objectives | | | |
| <p>By the end of this course, you should be able to:</p> <ol style="list-style-type: none"> 1. Edit and format Excel worksheets; 2. Implement basic to advanced Excel functions (mathematical, statistical, logical, lookup, error-checking, text functions); 3. Explain how to manage data sets (filter, remove duplicates, consolidate data, sort data, and validate data) 4. Explain how to effectively visualize data through Excel charts and pivot tables. 5. Explain how to perform Goal seeking and What if Analysis 6. Explain how to automate work using Macros | | | |
| C) Course Content | | | |
| <p>This course focuses on the following key topics:</p> <p>Topic 1: Excel concepts, e.g. cell, addressing Topic 2: Formatting, e.g. text, alignment, shading, conditional formatting, etc Topic 3: Formulae and managing data, e.g. mathematical, statistical, logical, lookup, error checking, text, date/time, filtering, sorting Topic 4: Working across spreadsheets Topic 5: Data visualization (Excel Charts and Tableau) Topic 6: Pivot Tables Topic 7: Goal seeking and What If analysis Topic 8: Combining formulae to solve business problems Topic 9: Introduction to Excel macros (work automation)</p> <p>Some topics (e.g. formulae, combining formulae to solve business problems, and Excel macros) may be covered across two or more sessions.</p> | | | |

D) Assessment (includes both continuous and summative assessment)

| Component | ILO Tested | NBS Learning Goal (Refer to Appendix 1 for list) | Weightage | # Team/Individual | Assessment Rubrics (attach rubrics in appendix) |
|--------------------------|------------|--|-----------|-------------------|---|
| Quizzes after each topic | ILO1-6 | Acquisition of Knowledge | 50 | Individual | - |
| Course Project | ILO2, ILO4 | Problem Solving and Decision Making | 50 | Individual | Rubric 1 in Annex B |
| Total | | | 100% | | |

Each week you are required to watch some videos and complete a quiz. Each quiz will be in the form of a MCQ which will be graded and adds towards 50% of the total score of the course. The other 50% of the course will be in the form of a course project which tests the skills in using individual as well as combining multiple functions to solve more complex problems. Both MCQ and course project are individual component.

Students are required to complete the quiz for each week. 2 attempts are allowed for each quiz. The score for each quiz will be the average of the 2 attempts. There are a total of 12 quizzes in the course. The overall quiz score is the average of all the 12 quiz scores. This overall quiz score contributes 50% of the total score for the course. The other 50% will come from the course project, also known as the Final Assessment. To obtain a pass for the course, the course project must be submitted and the combined score of the overall quiz score (50%) and the course project (50%) must be at least 60%.

E) Formative feedback

The formative feedback provided is students' performance on topical quizzes.

F) Learning and Teaching approach

| Approach | How does this approach support you in achieving the learning outcomes? |
|----------------------------|--|
| Online Lectures | This course is divided into 9 modules. Each module is delivered via pre-recorded videos. |
| Quizzes and Course Project | At the end of each module, students are required to complete a Quiz. Students are also required to complete a comprehensive project covering all the topics. |

G) Reading and References

Readings are provided by the Instructor.

H) Course Policies and Student Responsibilities

The course is organized into 9 topics. Some topics may be covered across two or more sessions.

Students need to complete quizzes after each topic and complete a course project.

I) Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

J) Course Instructors

| Instructor | Office Location | Phone | Email | Consultation Hours |
|------------|-----------------|-------|-------------------|--------------------------------|
| Marc Low | | | acwlow@ntu.edu.sg | By prior appointment via email |

K) Planned Weekly Schedule

| Week | Topic | ILO | Readings/ Activities |
|------|---|----------|----------------------|
| 1 | Excel Basics (I) | ILO 1 | Quiz 1 |
| 2 | Excel Basics (II) | ILO 1 | Quiz 2 |
| 3 | Formulas and Functions (I) | ILO 2 | Quiz 3 |
| 4 | Formulas and Functions (II) | ILO 2 | Quiz 4 |
| 5 | Working with Data | ILO 3 | Quiz 5 |
| 6 | Working with Multiple Worksheets | ILO 3 | Quiz 6 |
| 7 | Data Visualization | ILO 4 | Quiz 7 |
| 8 | Pivot Tables | ILO 5 | Quiz 8 |
| 9 | What-IF Analysis | ILO 5 | Quiz 9 |
| 10 | Combining Functions to solve business problems (I) | ILO 2 | Quiz 10 |
| 11 | Combining Functions to solve business problems (II) | ILO 2 | Quiz 11 |
| 12 | Macros | ILO 6 | Quiz 12 |
| 13 | Final Assessment | Rubric 1 | Final Assessment |

ANNEX B: ASSESSMENT CRITERIA**Rubric 1 (Course Project – assess Problem Solving & Decision Making)**

| Traits | Performance | | | | | |
|--|--|--|--|--|--|--|
| Uses and applies IT to solve business problems | Not Yet Does not demonstrates understanding of the IT tool. | Substantially Developed Excellent use of the IT tools and effective application of the IT tool to solving routine business problems | | | | |
| | Evaluation: Not Yet 1 2 3 4 5 Substantially | | | | | |
| Analyses and evaluates problem and implements appropriate solution | Not Yet No analysis of problem and no solution is provided. Contradicting analysis is given. | Substantially Developed Excellent analysis of problem and propose well supported solution. Solution illustrates coherent understanding to solve the problem. Provides convincing analysis and solution. | | | | |
| | Evaluation: Not Yet 1 2 3 4 5 Substantially Developed | | | | | |
| Identifies and assesses the quality of data given and provides additional analysis related to the issue. | Not Yet Merely repeats information provided, taking it as truth, or denies evidence without adequate justification. Analyses inadequately and understanding of the data. | Substantially Developed Examines the data and source of evidence; questions its accuracy, precision, relevance, and completeness. Carefully examines data with substantiated analysis supported by evidence. | | | | |
| | Evaluation: Not Yet 1 2 3 4 5 Substantially Developed | | | | | |