**MIS 201 Lab Sessions**

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| **Instructor**: | Nourah AlBanamay |
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| **Office Hours**:  | Sun. Tue,Thu (9-10) |
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| **Section number**: | **52193** |
| **Lab timetable**: | 2 hour of practical sessions in the lab |

**MIS 201 Lab description**: This course’s lab is designed to help students to develop and sharpen working skills in using latest and relevant software applications and information technology tools. In this course, students will learn basics of programming languages, with practice on Python programming language. In addition, students will learn how to use advanced features of Microsoft Excel and Access, which are necessary for development of large-scale information systems and documentation.

**Learning outcomes**: By the end of the lab sessions, students will acquire working skills for logical reasoning, collecting, analyzing, managing and using data, and review and gain knowledge of information systems applications. Students will explore the tools and techniques associated with the process of management information systems that align with organizational demands and needs.

After completing the course, students are expected to be able to:

* Learn and perform basics of computer programming using Python
* Use spreadsheet software to collect, manage, and analyze data
* Build simple databases, forms and reports, and use queries to filter data
* Apply creative thinking and problem-solving skills to design and implement solutions

**Lab Topics**

1. Programming with Python
* Why programming?
* Python basics: comments, numbers, strings, and variables
* Operations and expression: logical operators, order of execution, and expressions
* Control flow: conditional execution using “if” statements
1. Practice with Excel
* Functions: performing calculations and using business related functions
* Charts: Creating several types of charts
* Advanced topics: what-if analysis, filter data, and find information
1. Databases using Microsoft Access
* Creating and handling databases, tables, queries, forms, and reports