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| المملكة العربية السعودية  وزارة التعليم العالي  **جامعة أم القرى**  الكلية الجامعية بالجموم – قسم الحاسب الآلي |  | Kingdom of Saudi Arabia  Ministry of Higher Education  **Umm Al-Qura University**  University College in Al-Jamoum  Computer Dept. |

Course Specification

1. **Course number and name:** (2316322-3) System Analysis and Design
2. **Credits and contact hours:** 3 Credits

(Lecture: 3/week – Practical Session: Non)

1. **Instructor’s or course coordinator’s name:** Dr. Youseef Alotaibi
2. **Text books**
3. **Main Text book:** K.E. Kendall and J.E. Kendall, Systems Analysis and Design, 9th Edition, Pearson, 2014.
4. **Reference:** J.L. Whitten, L.D. Bentley and K.C. Dittman, System Analysis and Design Methods, McGraw-Hill, 2002.
5. **Specific course information**
6. **brief description of the content of the course (Catalog Description):**

Topics covered in this course include: systems, roles, and development methodologies, system development lifecycle, understanding and modeling organizational systems, project management and creating a feasibility report, information gathering, using data flow diagrams, process specification and structured decisions, and designing effective output and input.

1. **prerequisites or co-requisites:** Introduction to Information Systems (2316102-3)
2. **indicate whether a required, elective, or selected elective course in the program:** required
3. **Specific goals for the course**

The student will be able to:

1. Present fundamental concepts such as systems, requirements, events, and objects.
2. Establish the role of information systems in organizations, and how they are related to organizational objectives and structures.
3. Understand the system development life cycle and study its phases.
4. Develop of system requirements.
5. Study the analysis and design processes, and understand the transition from analysis to design.
6. Practice various diagrams used to construct system models.

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| *Course*  *Goals* | *Program Outcomes* | | | | | | | | | | |
| SOa | SOb | SOc | SOd | SOe | SOf | SOg | SOh | SOi | SOj | SOk |
| 1 | ✓ | ✓ |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |  |
| 3 | ✓ | ✓ |  |  |  |  |  |  |  |  |  |
| 4 | ✓ | ✓ |  | ✓ |  | ✓ |  | ✓ |  |  | ✓ |
| 5 | ✓ | ✓ |  |  |  |  |  |  |  |  |  |
| 6 | ✓ | ✓ |  | ✓ |  | ✓ |  | ✓ |  |  | ✓ |

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| **Relationship of Course Goals to the Program Student Outcomes** | |
| **SOa** | An ability to apply knowledge of computing and mathematics appropriate to the discipline   * *Students apply knowledge of computing and design to a project.* |
| **SOb** | An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.   * *Students apply systems analysis to gather system requirements.* |
| **SOd** | An ability to function effectively on teams to accomplish a common goal.   * *Projects are implemented in teams.* |
| **SOf** | An ability to communicate effectively with a range of audiences.   * *The projects require communications, specifications, progress reports, and final report.* |
| **SOh** | Recognition of the need for, and an ability to engage in, continuing professional development.   * *The students often must utilize the internet to learn and apply the new technologies that they have chosen in support of their projects.* |
| **SOk** | An ability to apply design and development principles in the construction of software systems of varying complexity.   * *Projects use current computing and modeling/design tools.* |

1. **Brief list of topics to be covered**

* Systems, Roles, and Development Methodologies
* Understanding and Modeling Organizational Systems
* Project Management
* Information Gathering
* Using Data Flow Diagrams
* Process Specifications and Structured Decisions
* Designing Effective Input and Output