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| **Approval date:**  |  | **Philadelphia University** |
| **Issue:** | **Faculty: Science** |
| **Credit hours: 3**  | **Department: Mathematic** |
| **Bachelor** | **Course Syllabus** | **Academic year: 2023/2024** |

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| **Course Information** |
| **Prerequisite** | **Course title** | **Course#** |
| **0250202** | **Set Theory**  | **0250251** |
| **Course type** |
| ☐ University Requirement ☐Faculty Requirement ☐ Major Requirement ☐ Elective ☒ Compulsory |
| **Teaching Environment** |
| ☒Classroom ☐ laboratory ☐Learning platform ☐Other |
| **Learning Model** |
|  ☐ Synchronous ☐ Asynchronous ☒ Physical 100% |
| **Instructors Information** |
| **Meeting Time** | **Room** | **Section** | **Office Hours** | **E-mail** | **Office No.** | **Name** |
| 11:15-12:30Saturday\Monday | 21009 | 2 | Sa/Mo1:00 – 2:00&Su/Tu09:45 - 10:45 | ralseidi@philadelphia.edu.jo | **1017** | **Dr. Rola Alseidi** |
| 9:45-11:00Sunday\Tuesday | 21005 | 3 | Sa/Mo10:00-11:00&Su/Tu11:00 - 12:00 | ahamdan@philadelphia.edu.jo | **819** | **Mr. Ahmad Hamdan** |
| **Learning Resources** |
| **A step toward Advanced Mathematics** by Marouf Samhan (Notes) | **Course textbook** |
|  | **Supporting References** |
| **Course Description** |
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| **Course Learning Outcomes with Learning and Assessment Methods** |
| **Assessment Method** | **Learning Method** | **Corresponding Program outcomes**  | **Outcomes** | **Number** |
|  |  | **Knowledge**  |
| Quizzes & Homeworks | Lecture | Kp1 | Understand propositional logic and quantifiers.  | **K1** |
| Quizzes & Homeworks | Lecture | Kp1 | Understand the techniques of mathematical proof. | **K2** |
| Quizzes & Homeworks | Lecture | Kp1 | Understand the concept of sets and relations. | **K3** |
| Quizzes & Homeworks | Lecture | Kp1 | Know some basic properties of functions. | **K4** |
|  |  | **Skills**  |
| Quizzes & Homeworks | Lecture | Sp1 | Prove mathematical statements by using different methods of proof. | **S1** |
| Quizzes & Homeworks | Lecture | Sp2 | Finding examples and counter-examples to given propositional theorems. | **S2** |
|  |  | **Competencies** |
| Final Exam | Lecture | Cp1 | Recognize sequences and series of real numbers and their convergence. | **C2** |
| Final Exam | Lecture | Cp1 | Recognize real-valued functions, their limits and continuity, and their differentiability.  | **C3** |

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| **COURSE OUTLINE / CALENDAR** |
| **Tasks** | **Learning Method** | **Topic** | **Week** |
|  | Lecture | Propositional Logic | **1****Oct 14 – Oct 18** |
| **Quiz. 1** | Lecture | **2****Oct 21 – Oct 25** |
|  | Lecture |  | **3****Oct 28 – Nov 1** |
| **HW. 1** | Lecture | **4****Nov 4 - Nov 8** |
|  | Lecture |  | **5****Nov 11 - Nov 15** |
| **Quiz. 2** | Lecture | **6****Nov 18 - Nov 22** |
|  | Lecture |  | **7****Nov 25 - Nov 29** |
| **Weeks 7 & 8: Midterm Exams Nov 25-Dec 6** |
| **H.W 2** | Lecture |  | **8****Dec 2 - Dec 6** |
|  | Lecture |  | **9****Dec 9 - Dec 13** |
| **Quiz. 3** | Lecture |  | **10****Dec 16 - Dec 20** |
|  | Lecture |  | **11****Dec 23 - Dec 27** |
| **Off Day: Monday Dec 25 (Christmas)** |
| **H.W 3** | Lecture |  | **12****Dec 30 – Jan 3** |
| **Off Day: Monday Jan 1 (First day of the new year)** |
|  | Lecture |  | **13****Jan 6 – Jan 10** |
| **Last Day to Drop the Course: Jan 17** |
| **Quiz 4** | Lecture |  | **14****Jan 13 – Jan 17** |
|  | Lecture |  | **15****Jan 20 – Jan 24** |
| **Final Exams: Jan 27 – Feb 4** |

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| **Assessment Methods and Grade Distribution** |
| **Link to Course Outcomes** | **Assessment Time****(Week No.)** | **Grade Weight** | **Assessment Methods** |
| All Learning Outcomes | During the semester | 20% | Quizzes |
| All Learning Outcomes | During the semester | 10% | Homeworks |
| K1, K2 | Week 8 | 30% | Midterm Exam |
| K1, K2 K3, K4 | Week 16 | 40% | Final Exam |
|  |  | 100% | Total |

1. **Approximately 70% of the problems in quizzes and Exams are from the Homework problems!**
2. **Students are not allowed to take any of the quizzes that they miss.**
3. **Homework problems will be assigned on Microsoft Teams. Students are required to submit their solutions before the assigned due dates. Late submissions will not be accepted.**
4. **Students are not allowed to copy solutions for homework problems from other students or any other resources. However, it is okay to discuss problems with other students!**
5. **Final Exam will cover all topics that are presented in the syllabus.**

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| **Course Polices** |
|  **Policy Requirements** | **Policy** |
| The minimum passing grade for the course is (50%). | **Passing Grade** |
| * Missing an exam without a valid excuse will result in a zero grade to be assigned to the exam or assessment.
* A Student who misses an exam or scheduled assessment, for a legitimate reason, must submit an official written excuse within a week from the exam or assessment due date.
* A student who has an excuse for missing a final exam should submit the excuse to the dean within three days of the missed exam date.
 | **Missing Exams** |
| The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lectures days. If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory excuse accepted by the dean of the faculty, she/he will be prohibited from taking the final exam and the grade in that course is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college, then withdrawal grade will be recorded. | **Attendance** |
| Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as: cheating, plagiarism (academic theft), collusion, and violating intellectual property rights. | **Academic Honesty** |