**Course Specification**

For Guidance on the completion of this template, please refer to of Handbook 2 Internal Quality Assurance Arrangements

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| Institution: King Saud University |
| College/Department: Pharmacy/ Pharmaceutics |

1. Course Identification and General Information

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| 1. Course title and code: Pharmaceutical calculations (PHT 210) |
| 2. Credit hours: 3(2+1) |
| 3. Program(s) in which the course is offered.  (If general elective available in many programs indicate this rather than list programs):  Doctor of Pharmacy |
| 4. Name of faculty member responsible for the course: |
| 5. Level/year at which this course is offered: Level 3 |
| 6. Pre-requisites for this course (if any): MATH 140, PHYS 145 |
| 7. Co-requisites for this course (if any): None |
| 8. Location if not on main campus: NA |
| 9. Course language: English. |

1. Objectives:

The objectives of this course are included the following:

* 1. Provides the pharmacy student a basic underpinning of calculations applicable to pharmacy practice.
  2. Gives the pharmacy student; skills in handling calculations concerning concentration expressions, density and specific gravity, reducing and enlarging formula, isotonicity, buffers and reaction kinetics.
  3. Provides the pharmacy student; skills in handling medicinal prescription and its pertaining calculations.
  4. Provides the pharmacy student knowledge about different systems (international and common) used in weights and measures and inter- and intra- conversion between different systems.

1. Course description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

This course is designed to introduce the quantitative and basic principles of pharmaceutical calculations to pharmacy students that can be applied to pharmacy practice and pharmaceutical sciences. The following subjects will be covered: interpretation of prescription, fundamentals of measurement and calculation, calculation of doses, concentration expressions, calculations of pH and buffer of capacity, and an calculation of isotonicity, and an introduction to reaction kinetic. .

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| 1. Topics to be Covered | | |
| Topic | No of Weeks | Contact hours |
| Introduction | 1/2    1/2 | 1 |
| Fundamental of calculations | 1 |
| International system of units Common systems of measurements | 1 | 2 |
| Common systems of measurements  Inter- and intra- conversion between different systems. | 1 | 2 |
| Inter- and intra- conversion between different systems.  Percentage, ratio strength | 1 | 2 |
| Percentage, ratio strength  Dilution, concentration, and allegation | 1 | 2 |
| Dilution, concentration, and allegation | 1 | 2 |
| Density, specific gravity and specific volume | 1 | 2 |
| Prescriptions, use of abbreviations and symbols | 1 | 2 |
| Calculation of doses | 1 | 2 |
| Calculation of doses Buffer solutions | 1/2 | 1 |