



| <b>Drug Discovery and Development</b>  |     |
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| <b>Title:</b> Drug Discovery and Development   |     |
| <b>Subject code:</b> 323 PHC   |     |
| <b>Semester:</b> Sixth Semester (Third year).  |     |
| <b>Duration:</b> 1+ 0 Units (1 contact hours) per week.  |     |
| <b>Aims:</b> To enable the student to know the synthesis and development of drugs.   |     |
| <b>Objectives:</b> At the end of the course the student should know the basic concept of drug design and development of drugs from lead compounds.   |     |
| <b>Contents:</b> Genesis of drugs ( Natural sources, Semisynthetic drugs and synthetic drugs), Serendipity, Random screening, Rationally directed random screening, Rationally directed metabolic approach, General processes (Simplification), Replication (hybridization), Special processes, Soft and Hard drugs, Methods of lead optimization, Drug latention, Antimetabolite approach |     |
| <b>Minimum course requirements:</b> 15 (1 x 15) Unit lectures (15 contact hours) per level.  |     |
| <b>Evaluation methods:</b>   |     |
| - Quizzes  | 15% |
| - Mid term examination (Written)   | 25% |
| - Final examination (written)  | 60% |
| <b>Books (latest editions):</b>  |     |
| 1) New drug discovery and development by Daniel Lednicer   |     |
| 2) Drug discovery and development by Humphrey Rang., Elsevier publication  |     |
| 3) The process of new drug discovery and development by Charles G. Smith   |     |

**Kingdom of Saudi Arabia  
Ministry of Education  
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