

**Plan of Study**

Semester 1		
UHR1012 Islamic & Asian Civilization	2	
BUM2133 Ordinary Differential Equation	3	
UQB1**1 Co-curriculum 1	1	
UHL2400 English for Technical Communication (based on EPT)	0	
BTP1113 Organic Chemistry	3	
BTP1213 Biology for Engineers	3	
BTP1712 Computer Programming for Engineers	2	
BTP1312 Material and Process	2	
BTP1513 Engineering Science	3	
Total	19	

Semester 2		
UHL2412 English for Academic Communication	2	
BUM2123 Applied Calculus	3	
BTP2323 Fluid Mechanics	3	
BTP1613 Introduction to Pharmaceutical Science	3	
BTP2333 Thermodynamics	3	
BTP2232 Contamination Control & Clean Room	2	
BTP1523 Electrical Fundamentals	3	
Total	19	

Semester 3		
UHL2422 English for Technical Communication	2	
BUM2413 Applied Statistics	3	
BTP2632 Good Manufacturing Practices & Quality Assurance	2	
UHS1021 Softskill 1	1	
BTP2533 Electrical Power Systems	3	
BTP2223 Protein Biochemistry & Biotechnology	3	
BTP1133 Process Chem & Pharma Engineering	3	
BTP2412 Numerical Methods & Optimization	2	
Total	19	

Semester 4		
UHL2432 English for Professional Communication	2	
UQ*2**1 Co-curriculum 2	1	
UHS2021 Softskill 2	1	
BTP1623 Manufacturing & Processing Technology	3	
BTP1143 Environmental Technology (Elective)	3	
BTP2723 Industrial Networks	3	
BTP2543 Control & Instrumentation	3	
BTP2153 Pharmaceutical Formulation Methods	3	
Total	19	

Semester 5		
UHM2022 Ethnic Relations	2	
UHF11*1 Foreign Language 1-	1	
BTP3243 Process Biotechnology Techniques	3	
BTP3163 Process Chem & Pharma Engineering 2	3	
BTP3732 Facilities Management Systems	2	
BTP3643 Regulatory Affairs and Validation for Engineers	3	
BTP3422 Industrial Statistics for Pharmaceutical Engineers	2	
BTP4253 Bio And Pharma Analytical Techniques	3	
Total		

Semester 6		
UHF21*1 Foreign Language 2	1	
UGE2002 Technopreneurship	2	
BTP3353 Automation Systems	3	
BTP3652 Comtemporary Trends in Pharma Industry	2	
BTP3742 Technology Transfer	2	
BTP38*3 Elective 1	3	
BTP38*3 Elective 2	3	
BTP3363 Manufacturing Systems Lean Six Sigma	3	
Total	19	

Semester 7		
BTP4753 Tech Inno for Pharma Eng	3	
BTP4173 Process Control	3	
BTP38*2 Elective 3	2	
BTP4663 Systems Validation	3	
BTP4678 Pharma Project	8	
Total	19	

Semester 8		
BTP4812 Industrial Training	12	
Total	12	

TOTAL CREDIT HOURS FOR GRADUATION: 145

Revised March 2015

Completing graduation requirements is solely the responsibility of the student.