



PROGRAM SHEET

BACHELOR OF SCIENCE IN ENGINEERING AND MANAGEMENT SCIENCE

(BSEMS)

UNIVERSITY CORE CURRICULUM**52-53 SCH**

SSK 1201	Study Skills I: Skills for Learning and Research	2 SCH
SSK 1202	Study Skills II : Critical Reading and Problem Solving (<i>Pre-requisite: SSK 1201, SSK 1203; co-requisites: AWT 1002 and ARD1002</i>)	2 SCH
SSK 1203	Computer Skills for Independent Learning	2 SCH
SSK 1204	Applied Independent Learning Methods (<i>Pre-requisite: SSK 1201; SSK 1203; co-requisites AWT 1002 and ARD1002</i>)	2 SCH
SSK 1205	Inter-personal skills and Social interaction in an Academic Context (<i>co-requisite: ALS 1002</i>)	2 SCH
ARB 13xx series	Appropriate placement to be determined by student's entry level	3 SCH
FRN 12xx series	Appropriate placement to be determined by student's entry level	2 SCH
FRN or ARB	Appropriate placement to be determined by student's entry level	2-3 SCH
CHE 1401	General Chemistry I	4 SCH
CSC 1401	Computer Programming	4 SCH
COM 1301	Communication through Speaking (<i>Pre-requisite : ENG 1301, SSK1205 and SSK1202</i>)	3 SCH
ENG 1301	English Composition I (<i>Pre-requisite: Pass all Language Center Modules</i>)	3 SCH
ENG 1302	English Composition II (<i>Pre-requisite : ENG 1301, SSK1202 and SSK1204</i>)	3 SCH
HIS 1301 or HIS 1302 or PSC2301	History of the Arab World (<i>Pre-requisite : ENG 1301 and SSK1202</i>) or Contemporary World History or Comparative Political System (<i>Pre-requisite : ENG 1302</i>)	3 SCH
HUM 3301 or HUM 330 or HUM 3306 or LIT 2301, or PHI 2301	Introduction to Islamic Art and Architecture or Introduction to the Study of Islamic Civilization or Comparative Religion (<i>Pre-requisite: Junior standing</i>), Major Works in World Literature (<i>Pre- requisite: Sophomore classification and ENG 1302</i>) or Philosophical Thought (<i>Pre-requisite: ENG 1302</i>)	3 SCH
MTH 1303	Discrete Mathematics for Engineers	3 SCH
PED 1201	Physical Education: Fitness for Living	2 SCH
PHY 1401	Physics I (<i>Pre-requisite: MTH 1303</i>)	4 SCH
SOC1301 or PSY 1301	Introduction to Sociology, or Introduction to Psychology	3 SCH

SCHOOL CORE**27 SCH**

CHE 1402	General Chemistry II	3 SCH
EGR 4300	Internship (<i>Pre-requisite : Senior standing</i>)	3 SCH
EGR 4402	Capstone Design (<i>To be taken during the last regular semester</i>)	4 SCH
MTH 2303	Linear Algebra (<i>Pre-or- co-requisite : PHY 1402</i>)	3 SCH
MTH1303	Differencial & Integral Calculus	3 SCH
MTH 2301	Multivariable Calculus (<i>Pre-requisite : MTH 1303</i>)	3 SCH
MTH 3301	Probability & Statistics fo Engineers (<i>Pre-requisite : MTH 2301</i>)	3 SCH
PHY 1402	Physics II (<i>Pre-requisite : PHY 1401</i>)	4 SCH

PROGRAM CORE**ENGINEERING CORE****20 SCH**

EGR 2402	Electrical Circuits (<i>Pre-requisite : PHY1402</i>)	4 SCH
EGR 3304	Materials Science (<i>Pre-requisite : PHY1402 and CHE 1402</i>)	3 SCH
EGR 3306	Engineering Instrumentation I (<i>Pre-requisite : EGR 2402</i>)	3 SCH
EGR 3308	Thermal Engineering(<i>Pre-requisite : PHY 1402</i>)	3 SCH
EGR 3331	Digital Design (<i>Co-requisite : PHY 1402</i>)	3 SCH
EGR 3402	Statics and Dynamics (<i>Pre-requisite : MTH2301 and PHY 1401</i>)	4 SCH

MANAGEMENT CORE	19 SCH
------------------------	---------------

ACC 2301	Accounting Principles (<i>Pre-requisite: MTH 1300 or MTH1303 or MTH 1304</i>)	3 SCH
EGR 2302	Engineering Economics (<i>Pre-requisite : MTH 1303</i>)	3 SCH
FIN 3301	Business and Corporate Finance (<i>Pre-requisite : ACC 2301 and EGR 2302</i>)	3 SCH
GBU 3401	Advanced Quantitative Methods in Business (<i>Pre-requisite : junior Standing and GBU 3301; or MTH 3301</i>)	4 SCH
MGT 3301	Principles of Management (<i>Pre-requisite : ACC 2301 and EGR 2302</i>)	3 SCH
MGT 3303	Operations Management (<i>Pre-requisite : MGT 3301 and either GBU 3401 or MTH 3301</i>)	3 SCH

MINOR IN SOFTWARE ENGINEERING	15 SCH
--------------------------------------	---------------

CSC 2302	Data Structures (<i>Pre-requisite : CSC1401 and MTH 1304 (recommended)</i>)	3 SCH
CSC 2303	Advanced Programming/Object-Oriented Programming(<i>Pre-requisite : CSC 2302</i>)	3 SCH
CSC 3324	Software Engineering I(<i>Pre-requisite : CSC 2303 and EGR 3332</i>)	3 SCH
CSC 3326	Database Systems(<i>Pre-requisite : CSC 3324</i>)	3 SCH
CSC 3323 or CSC 3325	Algorithm Analysis (<i>Pre-requisite : CSC 2303</i>) or Software Engineering II (<i>Pre-requisite : CSC 3324</i>)	3 SCH

ELECTIVES	6 SCH
------------------	--------------

Two electives will be chosen from university undergraduate courses except the followings: CHE1400, CSC1400, MTH1399, MTH1300, MTH1301, and PHY1400. Graduate courses in the major may be taken as electives after special permission from the Dean.

The recommended **Business Administration** electives are the followings:

GBU 3302	Legal Environment (<i>Pre-requisite :Jjunior standing</i>)	3 SCH
MGT 4304	Organizational Behavior (<i>Pre-requisite: MGT 3301</i>)	3 SCH
MKT 3301	Principles of Marketing (<i>Pre-requisite: ACC 2301 and EGR 2302</i>)	3 SCH
MGT 3302	Entrepreneurship (<i>Pre-requisite: MGT 3301</i>)	3 SCH
MIS 3302	Managing the Information Resource (<i>Pre-requisite: MGT 3301 and MIS 3301 or special permission</i>)	3 SCH
MKT 3302	Advertising and Promotion Management (<i>Pre-requisite: MKT 3301</i>)	3 SCH
MKT 3303	Consumer Behavior (<i>Pre-requisite: MKT 3301</i>)	3 SCH
MKT 4304	Marketing Research (<i>Pre-requisite: MKT 3301 and one of: GBU 3301, SSC2401, MTH 3301</i>)	3 SCH
MKT 4305	Financial Intermediation (<i>Pre-requisite: FIN 3302 and FIN 3303</i>)	3 SCH
MGT 4309	Logistics and Supply Chain Management (<i>Pre-requisite: MGT 3303</i>)	3 SCH

Total	139-140 SCH
--------------	--------------------

NB. The combined BS/MS program allows qualified EMS students to pass directly from the BS to the MS in Software Engineering and Management Science (for more details refer to the catalog).

