



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 (<i>Pre-requisite: AWT 1001 & ARD 1001</i>)	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
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	Met <input type="checkbox"/> not Met <input type="checkbox"/>
SSK 1203	Computer Skills for Independent Learning	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
SSK 1204	Applied Independent Learning Methods (<i>Pre-requisite: SSK 1201; SSK 1203; co-requisites AWT 1002 and ARD1002</i>)	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
SSK 1205	Inter-personal skills and Social interaction in an Academic Context (<i>co-requisite: ALS 1002</i>)	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
ARB 13xx series	Appropriate placement to be determined by student's entry level	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
FRN 12xx series	Appropriate placement to be determined by student's entry level	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
FRN or ARB	Appropriate placement to be determined by student's entry level	2-3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
CHE 1401	General Chemistry I	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
CSC 1401	Computer Programming	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
COM 1301	Communication through Speaking (<i>Pre-requisite : ENG 1301, SSK1205 and SSK1202</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
ENG 1301	English Composition I (<i>Pre-requisite: Pass all Language Center Modules</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
ENG 1302	English Composition II (<i>Pre-requisite : ENG 1301, SSK1202 and SSK1204</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
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	Met <input type="checkbox"/> not Met <input type="checkbox"/>
HUM 3301 or HUM 3302 or HUM 3306 or LIT 2301, or PH 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	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MTH 1303	Discrete Mathematics for Engineers	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
PED 1201	Physical Education: Fitness for Living	2 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
PHY 1401	Physics I (<i>Pre-requisite: MTH 1303</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
SOC1301 or PSY 1301 or SSC 1310	Introduction to Sociology, or Introduction to Psychology	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>

SCHOOL CORE**27 SCH**

CHE 1402	General Chemistry II(<i>Pre-requisite : CHE 1401</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 4300	Internship	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 4402*	Capstone Design (emphasis on business applications)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MTH 2301	Multivariable Calculus(<i>Pre-requisite : MTH 1303</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MTH 2303	Linear Algebra(<i>Pre-requisite : MTH 2301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MTH 2304	Differential Equations (<i>Pre-requisite : MTH 2301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MTH 3301	Probability and Statistics for Engineers (<i>Pre-requisite : MTH 2301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
PHY 1402	Physics II (<i>Pre-requisite : PHY 1401</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>

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

EGR 2402	Electrical Circuits (<i>Pre-requisite : PHY1402 & MTH 2304</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 3304	Materials Science (<i>Pre-requisite : PHY1402 and CHE 1402</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 3306	Engineering Instrumentation I (<i>Pre-requisite : EGR 2402</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 3308	Thermal Engineering (<i>Pre-requisite : PHY 1402</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 3331	Digital Design (<i>Co-requisite : PHY 1402</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 3402	Statics and Dynamics (<i>Pre-requisite : MTH2301 and PHY 1401</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>

MANAGEMENT CORE**19 SCH**

ACC 2301	Accounting Principles (<i>Pre-requisite: MTH 1300 or MTH1303 or MTH 1304</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
EGR 2302	Engineering Economics (<i>Pre-requisite : MTH 1303</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
FIN 3301	Business and Corporate Finance (<i>Pre-requisite : ACC 2301 and EGR 2302</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
GBU 3401	Advanced Quantitative Methods in Business (<i>Pre-requisite : junior Standing and GBU 3301; or MTH 3301</i>)	4 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MGT 3301	Principles of Management (<i>Pre-requisite : ACC 2301 and EGR 2302</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MGT 3303	Operations Management (<i>Pre-requisite : MGT 3301 and either GBU 3401 or MTH 3301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>

MINOR IN SOFTWARE ENGINEERING**15 SCH**

CSC 2302	Data Structures (<i>Pre-requisite : CSC1401 and MTH 1304 (recommended)</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
CSC 2303	Advanced Programming/Object-Oriented Programming (<i>Pre-requisite : CSC 2302</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
CSC 3324	Software Engineering I(<i>Pre-requisite : CSC 2302</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
CSC 3326	Database Systems(<i>Pre-requisite : CSC 3324</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
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	Met <input type="checkbox"/> not Met <input type="checkbox"/>

ELECTIVES**6 SCH**

Two electives will be chosen from university undergraduate courses except the followings: CHE1400, CSC1400, MTH1399, MTH1300, MTH1301, GBU 3301 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 :Junior standing</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MGT 4304	Organizational Behavior (<i>Pre-requisite: MGT 3301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MKT 3301	Principles of Marketing (<i>Pre-requisite: ACC 2301 and EGR 2302</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MIS 3302	Managing the Information Resource (<i>Pre-requisite: MGT 3301 and MIS 3301 or special permission</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MKT 3302	Advertising and Promotion Management (<i>Pre-requisite: MKT 3301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MKT 3303	Consumer Behavior (<i>Pre-requisite: MKT 3301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MKT 4304	Marketing Research (<i>Pre-requisite: MKT 3301 and one of: GBU 3301, SSC2401, MTH 3301</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MKT 4305	Financial Intermediation (<i>Pre-requisite: FIN 3302 and FIN 3303</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>
MGT 4309	Logistics and Supply Chain Management (<i>Pre-requisite: MGT 3303</i>)	3 SCH	Met <input type="checkbox"/> not Met <input type="checkbox"/>

Total**139-140 SCH**Met not Met

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).

