

BA and BS Sample Schedules (Biomedical Imaging Concentration)
for DATA SCIENCE

Key:	PREREQUISITE	CORE	APPLICATION AREA *	CLUSTER	BS SUPPLEMENTAL
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BIOMEDICAL IMAGING Concentration Examples

Example BA in Data Science using MTH 161-162 series with BME 230 (Biomedical Signals and Systems) or CSC249 (Machine Vision)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	DSC 201 <i>recommended</i>	DSC 262	DSC 265	free elective	free elective
Social Science Cluster	WRT 105	Humanities Cluster	Social Science Cluster	WRT 273	Humanities Cluster	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	free elective	free elective	PHY 122	BME 210	BME 230/CSC249	free elective
PHY 099		BME 101	PHY 121				

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Example BS in Data Science using MTH 161-162 series with BME 230 (Biomedical Signals and Systems) or CSC249 (Machine Vision)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	DSC 265	MTH 201	MTH 203	CSC Supplementary Course *	free elective
Social Science Cluster	WRT 105	DSC 262	Social Science Cluster	WRT 273	Humanities Cluster	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	Humanities Cluster	DSC 201 <i>recommended</i>	PHY 122	BME 210	BME 230/CSC249	free elective
PHY 099		BME 101	PHY 121				

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Example BA in Data Science using MTH 161-162 series with BME 274 (Biomedical Sensors)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	Social Science Cluster	DSC 262	DSC 265	free elective	free elective
Social Science Cluster	WRT 105	ECE 111	ECE 113	WRT 273	Humanities Cluster	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	PHY 122	BME 210	BME 230	free elective	BME 274	Humanities Cluster

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Example BS in Data Science using MTH 161-162 series with BME 274 (Biomedical Sensors)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	Social Science Cluster	DSC 262	DSC 265	MTH 201	MTH 203
Social Science Cluster	WRT 105	ECE 111	ECE 113	WRT 273	Humanities Cluster	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	PHY 122	BME 210	BME 230	CSC Supplementary Course *	BME 274	Humanities Cluster

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Example BA in Data Science using MTH 161-162 series with BME253 (Ultrasound Imaging)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	DSC 201 <i>recommended</i>	DSC 262	DSC 265	free elective	free elective
Social Science Cluster	WRT 105	Humanities Cluster	Social Science Cluster	WRT 273	Humanities Cluster	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	PHY 122	BME 210	BME 230	free elective	BME 253	free elective

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Example BS in Data Science using MTH 161-162 series with BME253 (Ultrasound Imaging)

FIRST YEAR		SOPHOMORE		JUNIOR		SENIOR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
MTH 161	MTH 162	CSC 172	CSC 242	DSC 240	DSC 261	CSC 282 or DSC 201 or DSC 275	DSC 383W
MTH 150	CSC 171	MTH 165	DSC 265	MTH 201	MTH 203	CSC Supplementary Course *	Humanities Cluster
Social Science Cluster	WRT 105	DSC 262	Social Science Cluster	WRT 273	DSC 201 <i>recommended</i>	Humanities Cluster	Social Science Cluster
BME 101	PHY 121	PHY 122	BME 210	BME 230	free elective	BME 253	free elective

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Course no BME 101	Course Title Introduction to Biomedical Engineering	Pre-Req not part of current Data Science requirements	Freshman/Sophomore Fall
BME 210	Biomedical circuits	PHY 122, PHY 121 (PHY 099), MTH 162, BME 201P (can be waived for data science students who BME correspondence)	Junior Year Spring
BME 230	Biomedical signals and systems	BME 210, MATH 165	Senior Year Fall
BME 274	Biomedical sensors	BME 230, ECE113 (ECE111 co-reqs)	Fall Semester
BME 253	Ultrasound Imaging	MTH 165 and PHY 122	Fall Semester
CSC 249	Machine Vision	BME 230 CSC 242, MTH 165	Spring

Options for BME 201P (Introduction to MATLAB)

Data science students have strong programming experience they can get up to speed on MATLAB relatively quickly or do the assignments in another related programming language such as R or Python (with permission of instructor).

Or, they can take a MATLAB boot camp with CIRG in early Winter