James Madison University Advising Guide

BRCC Associate of Science Degree and JMU Advising Guide for a major in Integrated Science and Technology (ISAT). See ISAT Advising Notes for more information on math placement and the major.

First Year

First Semester

Course #	Course Description	Credits
ENG 111	College Composition I	3
HIS ____	History Elective	3
MTH 263	Calculus I	4
CHM 111	College Chemistry I	4
SDV _____	Student Development (100 or 101)	1

Second Semester

Course #	Course Description	Credits
ENG 112	College Composition II	3
_____	History or Social Science Elective	3
MTH 264	Calculus II	4
BIO 101	General Biology I	4

Second Year

Third Semester

Course #	Course Description	Credits
_____	Literature/Humanities/Fine Arts Elective	3
MTH 245	Statistics I	3
PHY 201 or 241	General College Physics I or University Physics I	4
CST 100 or 110	Principles of Public Speaking or Introduction to Communication	3
_____	Social Science Elective	3

Fourth Semester

Course #	Course Description	Credits
_____	Literature Elective	3
PHY 202 or 242	General College Physics I or University Physics I (see notes)	4
_____	A.S. Science Elective (see notes)	3
_____	A.S. Science Elective	3
_____	A.S. Science Elective	3

Total Credits Required for Associate of Science Degree/JMU ISAT requirements - 61

Advising Notes for ISAT

Mathematics Placement

All students in the AS Science Program complete at least one semester of calculus (MTH 263). Your first step as a science major is to work with Academic Advising to determine your mathematics placement. Placement into mathematics courses is based on multiple measures. Students should work with an advisor to determine which mathematics course is the best entry point to the program.

The Bachelor of Science degree in Integrated Science and Technology is a four-year program (120 credit hours) that offers a broad technical foundation and practical problem-solving skills needed to tackle the challenges that society faces. ISAT lets students design a course of study that fits their own particular interests, giving them far more flexibility than traditionally organized programs typically offer. ISAT majors enjoy a range of options in choosing what to study – including the option to create their own area of concentration tailored to their interests. Students choose three sectors from the following to focus on: Applied Biotechnology, Energy, Environment, Engineering/Manufacturing, Information/Knowledge Management and Telecommunication, Networking and Security. For more information on the sectors, see ISAT Sectors.

The chart below delineates preferred courses by sector:

Sector	Foundation Course	VCCS Equivalent	RBC Equivalent
Environment	ISAT 112	CHM 111	CHEM 101
Energy	ISAT 212	PHY 241-242 and MTH 263-264	PHYS 201-202
IKM	ISAT 252	ITP 110 or 112	No equivalent

- Students interested in the IKM sector can substitute ITP 110 or 112 as an A.S. elective.
- Students interested in the Energy sector will need to take MATH 265 prior to or concurrently with PHY 242.