

# 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.

## MTH 167 (Precalculus) Start

### First Semester (Fall I)

Course #	Course Description	Credits
ENG 111	College Composition I	3
MTH 167	Precalculus with Trigonometry	5
SDV 101	Student Development (100 or 101)	1
CHEM 111	College Chemistry I	4
HIS _____	History Elective	3

### Second Semester (Spring I)

Course #	Course Description	Credits
ENG 112	College Composition II	3
MTH 263	Calculus I	4
BIO 101	General Biology I	4
_____	Social Science Elective	3

### Summer Math Sequence Catch-up

Course #	Course Description	Credits
MTH 264	Calculus II	4

### Third Semester (Fall II)

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

### Fourth Semester (Spring II)

Course #	Course Description	Credits
PHY 202 or 242	College Physics II or University Physics II	4
_____	Literature Elective	3
_____	History or Social Science Elective	3
_____	Approved A.S. Elective	4

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.