STEM, CERTIFICATE

This is an interdisciplinary certificate intended for students interested in gaining introductory-level knowledge base in STEM (Science, Technology, Engineering, and Mathematics) disciplines

Student Learning Outcomes

- Students will develop and demonstrate critical thinking skills as it relates to the STEM fields, especially the ability to discern the accurateness of information presented by the media.
- Students will learn to use creativity to address real world problems (such as climate change, homelessness, green energy, etc.).
- Students will hone problem solving skills by analyzing data, writing code, solving equations, etc.
- Students will become curious about science in the world around them and be able to answer questions with knowledge gained in STEM courses.

This certificate requires a minimum of 12 credit hours in approved science courses from four different disciplines. Courses designated as General Education may be counted towards this certificate, but only two courses (up to 8 credit hours) taken may count for both general education and this certificate. Students must have a grade of "C" or better in each course. A minimum of six hours used to meet the certificate requirements must be earned in residence at Washburn University. Students may request alternate coursework be accepted toward the certificate. Students should make these requests prior to completing coursework. Students may request alternate coursework be accepted toward the certificate. Students should make these requests prior to completing coursework.

Code	Title	Hours
AN 114	Introduction to Archaeology	3
AN 116	Biological Anthropology	3
AN 118	Introduction to Forensic Science	3
AN 334	Archaeological Myths, Frauds, and Controversies	3
AN 371	Field and Lab Methods in Archaeology	3
AS 101	Introduction to Astronomy/Cosmology	3
AS 102	Introduction to Astronomy - Solar System	3
AS 104	Life in the Universe	3
BI 100 & BI 101	Human Biology and Human Biology Laboratory	5
BI 106	Everyday Biology	5
BI 140	Introduction to Forensic Biology	3
BI 150	Evolution	3
BI 202	Biology of Behavior	3
BI 203	Human Impact on the Environment	3
CH 103	Introduction to Forensic Chemistry	3
CH 111	Chemistry in Everyday Life	5
CH 121	General, Organic, and Biological Chemistry	5
CM 105	Introduction to Computer Science	3
CM 111	Introduction to Structured Programming	4
CM 290	Introduction to Python Programming	3
GL 101	Physical Geology	3
GL 103	Historical Geology	3
MA 112	Contemporary College Mathematics	3
MA 116	College Algebra	3
MA 140	Statistics	3
PS 101	Physics in Everyday Life	5
PS 120	Meteorology	3
PS 126	Physical Science for Elementary Educators (includes lab)	5
PS 131 & PS 132	Biological Physics for the Health and Life Sciences and Biological Physics for the Health and Life Sciences Laboratory	4