

TRANSFER GUIDE

AS Mathematics Suggested Curriculum transferring into BS Physics Materials & Nanophysics

Kaskaskia College Courses			
AS Mathematics Suggested Curriculum – 65 hours			
GUID 109-1	First Year College Experience	Elective-3	Fine Arts
ENGL 101-3	English Composition	HLTH 102-3	Human Health & Wellness
ENGL 102-3	English Composition	CITA 110-1	Intro to Word Processing
COMM 103-3	Fundamentals of Speech Comm	MATH 166-5	Calculus & Analytical Geometry I
MATH 136-4	General Statistics	ENGR 201-3	Computer Programming for Engr
PSYH 101-3	Psychology	MATH 236-3	Linear Algebra
Elective-3	Social/Behavioral Science	MATH 267-4	Calculus & Analytical Geometry II
PHLE 120-3	Ethics	MATH 268-4	Calculus & Analytical Geometry III
PHYS 201-5	University Physics I	MATH 269-3	Differential Equations
Elective-3	Biology Elective	PHYS 202-5	University Physics II
Southern Illinois University Carbondale Courses			
BS Physics (PHYS) Materials & Nanophysics Specialization – 58 hours			
Supp Skills Req-3	1 Additional Life Science Course	PHYS 420-3	Electricity & Magnetism II
CHEM 200,201,202-5	Intro Chem Prin w/Lab, Wkshp	PHYS 430-3	Quantum Mechanics I
1 Course-3	MATH 405, 407, 450, 455 or 475	PHYS 440-3	Quantum Mechanics II
PHYS 100-1	Undergraduate Seminar	PHYS 445-3	Thermodynamics & Statistical Mechanics
PHYS 206A,206B-2	Problem Solving	PHYS 450-3	Advanced Laboratory Techniques
PHYS 301-3	Theoretical Methods in Physics	PHYS 425-3	Solid State Physics
PHYS 305,355-4	Modern Physics w/Lab	PHYS 476M-3	Intro Materials Science & NanoPhysics
PHYS 310-3	Classical Mechanics	Matls Nano Elec-10	Select from list of approved courses
PHYS 320-3	Electricity & Magnetism I		
Total Hours to Bachelor Degree: 123 Hours			

Questions? Contact Us!

Salary Range: \$30,000-\$75,000

Possible Careers: Materials Processing Engineer
Optical Physicist/Engineer
Laser Physicist/Engineer
Imaging Scientist

Possible Graduate Studies: Astronomy
Physics/Applied Physics
Biomedical Engineering
Electrical/Computer Engineering

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Baccalaureate Degree Requirements

Each candidate for a bachelor's degree must complete the requirements listed:

Hour Requirements. Student must complete at least 120 semester hrs of credit. Each student must have at least 42 hrs in courses that number 300 or above from a four-year institution.

Residence Requirements. Student must complete the residency requirement by taking a total of 42 semester hrs at SIU Carbondale.

Grade Point Average Requirements. Student must have a C average for all work taken at SIU Carbondale. Some academic programs may require a higher graduating major GPA.

Compact Agreement

SIU Carbondale has recognized Illinois regionally accredited community college transferable baccalaureate-oriented Associate of Arts or Associate of Science degrees under the Compact Agreement since 1970. SIUC will continue to recognize the baccalaureate oriented associate degree (A.A. or A.S. degree) under the Illinois Articulation Initiative as satisfying SIU University Core Curriculum (UCC) requirements. The Associate of Applied Science (A.A.S.), Associate in Engineering Science (A.E.S.), the Associate in General Studies (A.G.S.), and the Associate in Fine Arts (A.F.A.) are not covered under the Compact Agreement and do not carry the same benefits as the A.A. and A.S. degrees.

Saluki Transfer Pathways

[Saluki Transfer Pathways](#) is the university's dual admission program that allows baccalaureate-oriented students at eligible community colleges intending to transfer to SIU Carbondale to benefit from early admission and pre-advisement for a baccalaureate program at SIUC. Saluki Transfer Pathways allows students to be conditionally admitted to SIU Carbondale up to two years in advance of their intended transfer term so they have access to transfer credit evaluation and the university's degree audit system. This allows students to address major specific requirements that may not be automatically fulfilled with the completion of an associate degree. Students apply to Saluki Transfer Pathways by completing the Application for Undergraduate Admission and indicating an interest in the program. To participate, students must have at least two semesters remaining at their community college. Direct questions about the Saluki Transfer Pathways program to transfer@siu.edu.

DegreeWorks

DegreeWorks is an easy-to-use, online degree audit tool specifically designed for students. Once admitted to SIU Carbondale, you can use it monitor your progress toward your degree in [Salukinet](#).

Saluki Transfer Estimator Portal (STEP)

The [Saluki Transfer Estimator Portal](#) (STEP) is a web-based tool that integrates institutional course equivalency and degree audit data to provide an unofficial credit estimation and a more seamless transfer process. STEP gives transfer students a clear roadmap for timely degree completion by providing key information about how transfer credits apply to your intended program at SIU.

PROGRAM ARTICULATION DEGREE PLAN				
Kaskaskia College	2024-2025		Southern Illinois University Carbondale	
AS Mathematics Suggested Curriculum - 65 hours			BS Physics (PHYS) Materials & Nanophysics Specialization - 120 hours	
			University Core Curriculum (UCC) - 39 hrs *	
		Hrs		Hrs
			UNIV 101	Saluki Success
COMM 103	Fundamentals of Speech Comm	3	CMST 101	Intro to Oral Communication
ENGL 101	English Composition	3	ENGL 101	English Composition I
ENGL 102	English Composition	3	ENGL 102	English Composition II
MATH 136	General Statistics	4	MATH 282	Intro to Statistics
PSYH 101	Psychology	3	PSYC 102	Intro to Psychology
	Social/Behavioral Science	3	SOCIAL SCIENCE	See SIUC Transfer Equivalency Guide
PHLE 120	Ethics	3	PHIL 104	Ethics
			HUMANITIES	
PHYS 201	University Physics I	5	PHYS 205A -and- 255A	University Physics w/Lab
	Biology	3	LIFE SCIENCE	See SIUC Transfer Equivalency Guide
	Fine Arts	3	FINE ARTS	See SIUC Transfer Equivalency Guide
HLTH 102	Human Health & Wellness	3	PH 101	Foundations of Human Health
			MULTICULTURAL	See SIUC Transfer Equivalency Guide
		36		0
			*An AS from a regionally accredited Illinois community college satisfies UCC requirements	
Program Requirements			Program Requirements	
GUID 109	First Year College Experience	1	Any unarticulated courses will be used to satisfy general elective credit	
CITA 110	Intro to Word Processing	1		
ENGR 201	Computer Programming for Engineer	3	CS 202	Intro to Computer Science
MATH 166	Calculus & Analytical Geometry I	5	MATH 150	Calculus I
MATH 236	Linear Algebra	3	MATH 221	Intro to Linear Algebra
MATH 267	Calculus & Analytical Geometry II	4	MATH 250	Calculus II
MATH 268	Calculus & Analytical Geometry III	4	MATH 251	Calculus III
MATH 269	Differential Equations	3	MATH 305	Intro to Differential Equations
PHYS 202	University Physics II	5	PHYS 205B -and- 255B	University Physics w/Lab
		29		
			Supportive Skills Requirement	Select 1 additional Life Science course
			CHEM 200, 201 -and- 202	Intro to Chemical Principles w/Lab & Workshop
			Select 1 Course:	MATH 405, 407, 450, 455 -or- 475
			PHYS 100	Undergraduate Seminar
			PHYS 206A -and- 206B	Problem Solving
			PHYS 301	Theoretical Methods in Physics
			PHYS 305 -and- 355	Modern Physics w/Lab
			PHYS 310	Classical Mechanics
			PHYS 320	Electricity & Magnetism I
			PHYS 420	Electricity & Magnetism II
			PHYS 430	Quantum Mechanics I
			PHYS 440	Quantum Mechanics II
			PHYS 445	Thermodynamics & Statistical Mechanics
			PHYS 450	Advanced Laboratory Techniques
			PHYS 425	Solid State Physics
			PHYS 476M	Intro to Materials Science & NanoPhysics
			Materials & Nanophysics Electives	Choose a minimum of 10 hrs from: PHYS 390, 424, 428, 431, 432, 458, 470, 476B, 476C, 476Q, 490; CS 215, 220, 475
			* Students must complete 42 credit hours of 300/400 level courses	
				58
Total semester hrs completed with AS degree:		65	Total semester hrs completed with BS degree:	
				58
			Total semester hrs to BS degree:	
				123
<i>Degree Plan updated on 7/31/24 by SG</i>				