

해외 우수대학 학·석사 연계과정 설명회

Combined Bachelor & Master Degree



AJOU UNIVERSITY

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해외 우수 학·석사 연계 과정이란 ?

1. 프로그램 소개

가. 우리 대학에서 6개 학기, 상대교에서 4개 학기를 수학한 후, 본교 학사 학위와 상대교 석사 학위를 모두 취득하는 제도

· 아주대 학부 3년 + 상대교 학부 1년 → 아주대 학사 학위 수여

· 상대교 석사과정 1년 → 상대교 석사 학위 수여

2. 주요사항

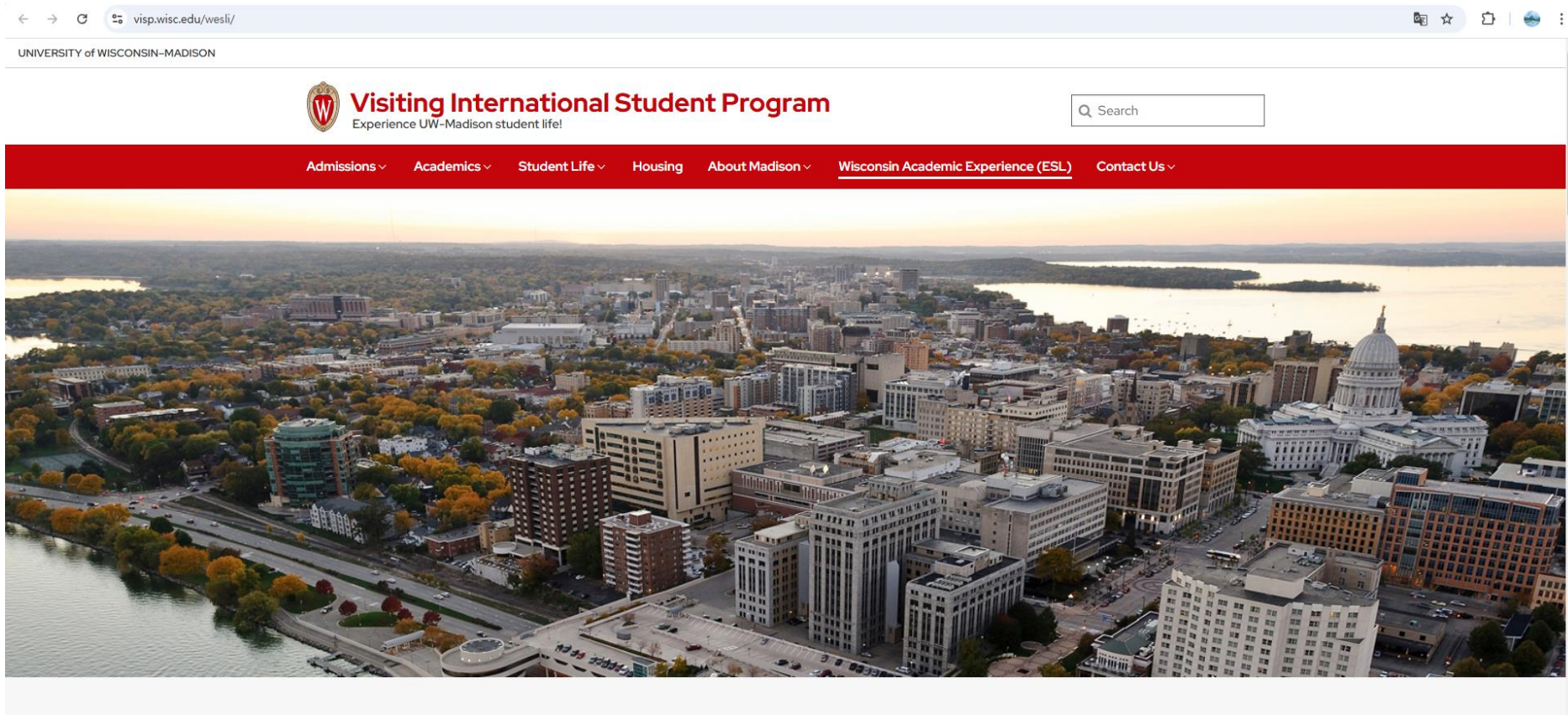
	1~6학기	7~8학기	9~10학기
수학장소	아주대학교	상대교	상대교
수강과정	본교 학부과정	상대교 학부 과정	상대교 석사과정
학점인정	본교 학점	본교 학점으로 이관	상대교 학점

파견 모집 예정 학과

국가	파견교	인원	학업 기간	상대교 모집 학과	본교 지원가능학과
미국	University of Illinois Chicago	10명 내외	2025년 가을 학기부터~ (약 2년)*	· Electrical Engineering	· 전자공학과, · 소프트웨어학과 · 사이버보안학과 · 디지털미디어학과 등
				· Statistics	· 전자공학과, 소프트웨어학과 · 수학과 · 경영학과, 경영인텔리전스, 금융공학과 등
				· Public Administration	· 행정학과 등
	University Wisconsin Madison			· Industrial Engineering	· 산업공학과, 기계공학과, 수학과, 전자공학과 , 소프트웨어학과, 사이버보안학과, 디지털미디어학과
				· Physics	· 물리학과
				· Economics	· 경제학과

* 학업기간은 개인별로 달라질 수 있음

대학정보 U. of Wisconsin Madison



- 위치 [Madison, Wisconsin](#)
- 설립년도 1848 (First class: February 1849)
- 학생 수 Undergraduate: 36,902, Graduate: 10,445, Special: 2,181, Professional: 2,569, Total: 52,097

학과 수 Schools and colleges: 13

주요 랭킹 : THE 56, QS 116

1. U. of Wisconsin Madison Industrial Engineering

VISP (Visiting International Students Program) 교육과정

Industrial Engineering 대학원 진학예정자 : VISP Program 권장교육과정

Student backgrounds	Math/Stats/Physics/Computer science or similar major		Semester	Credits
Fall 25 / Spring 26 [suggested 4 courses, students can enroll up to 6 courses]	ISyE 412	Fundamentals of Industrial Data Analytics	Fall 25 & Spring 26	3
	ISyE 521	Machine Learning in Action for Industrial Engineers	Fall 25	3
	ISyE/Comp Sci/ECE 524	Introduction to Optimization	Fall 25 & Spring 26	3
	ISyE/Comp Sci/Math/Stat 525	Linear Optimization	Fall 25 & Spring 26	3
	ISyE 699 (under Prof. Hantang Qin)	Advanced Independent Study (Research or Capstone)	Fall 25 & Spring 26	3
Student backgrounds	Mechanical/electrical/industrial or other engineering major			Credits
Fall 25 / Spring 26 [suggested 4 courses, students can enroll up to 6 courses]	ISyE 415	Introduction to Manufacturing Systems, Design and Analysis	TBD, Fall or Spring, once per year	3
	ISyE/ME 510	Facilities Planning	Fall 25	3
	ISyE/ME 512	Inspection, Quality Control and Reliability	Fall 25 & Spring 26	3
	ISyE 530	Introduction to Biomanufacturing & Design Principles	Spring 26	3
	ISyE 699 (under Prof. Hantang Qin)	Advanced Independent Study (Research or Capstone)	Fall 25 & Spring 26	3
Other course options	ISyE 313	Engineering Economic Analysis	Fall 25 & Spring 26	3
	ISyE 315	Production Planning and Control	Fall 25 & Spring 26	3
	ISyE 320	Simulation and Probabilistic Modeling	Fall 25 & Spring 26	3
	ISyE 323	Operations Research - Deterministic Modeling	Fall 25 & Spring 26	3
	ISyE 417	Health Systems Engineering	TBD, Fall or Spring, once per year	3
	Courses from other departments as needed.			

- 위 VISP 교육과정 중 최소 12학점/학기 당 이수 권장(18학점까지/학기) 취득 가능
- 이 중 300번 대 이상 취득 과목 6~9 학점을 대학원 과목으로도 인정
- VISP 과정에서 취득예정인 학점이 아주대에서도 인정된다는 사전 학점인정계획을 입학 전 제출 하여야 함 (지도교수님과 상의 요)

Industrial Engineering 입학정보 및 수업료



VISP Program

- 예상 수학기간 : 1.5년 ~ 2년
- 입학요건 : 평점 평균 3.5/ 4.5, 토플 80점 이상, IELTS 6.5 이상
- 수업료 및 생활비용
- 장학금 : 최대 \$7,000 지급
 - 정착지원금 \$ 2,000, 1학기 3.85/4.0 이상 시 \$2,500, 대학원 과정 입학 시 \$2,500 지급
 - 3.85/4.0 이상 시 대학원 입학 보장, 3.85 이하 평점도 학과 심사를 통하여 대학원 입학 가능

2024-25 Academic Year	Fall or Spring	Academic or Calendar Year	Scholarship
Undergraduate Level(VISP)	(1 semester)	(2 semesters)	(Upon arrival)
Tuition & Segregated Fees	\$21,551	\$43,102	\$2,000
Based on minimum enrollment of 12 credits each term			
Estimated Living Expenses	\$9,964	\$20,226	
Total Estimated Cost	\$31,515	\$63,328	
Graduate Level			
30 Credits * 1200USD		\$36,000	
Estimated Living Expenses	\$9,964	\$20,226	\$2,500

2025-26 금액
<https://visp.wisc.edu/cost/>














Industrial Engineering 입학정보 및 수업료

대학원 산업공학과

<https://pdc.wisc.edu/degrees/industrial-engineering-systems-engineering-analytics-ms/>

Education that works for you

The Systems Engineering and Analytics master's program at UW-Madison teaches methods and models for data analytics and data-driven decision-making so you can solve problems in engineering systems.

 Program type Master's degree  Explore program types	 Degree awarded Master of Science in Industrial Engineering	 Commitment 12-16 months
 Tuition \$1,200 per credit	 Format Accelerated  Face-to-face 	 Credits 30 graduate credits
 Admission terms Program admits for fall and spring terms	 Offered by College of Engineering	 STEM opt eligible Yes
 Supports F-1 Visa Yes Learn more		



Industrial Engineering Subjects (붉은색은 VISP에 있는 과목)

- ISyE 191 – The Practice of Industrial Engineering; 2-credit.
- ISyE 210 – Introduction to Industrial Statistics; 3-credit.
- ISyE 312 – Data Management and Analysis for Industrial Engineers; 3-credit.
- ISyE 315 – **Production Planning and Control; 3-credit.**
- ISyE 320 – **Simulation and Probabilistic Modeling; 3-credit.**
- ISyE 323 – **Operations Research - Deterministic Modeling; 3-credit.**
- ISyE 349 – Introduction to Human Factors; 3-credit.
- ISyE 412 – **Fundamentals of Industrial Data Analytics; 3-credit.**
- ISyE 417 – **Health Systems Engineering; 3-credit.**
- ISyE 415 – **Introduction to Manufacturing Systems, Design and Analysis; 3-credit.**
- ISyE 468 – Introduction to Industrial Engineering Research; 1-credit.
- ISyE 489 – Honors in Research; 3-credit.
- ISyE 512 – **Inspection, Quality Control and Reliability; 3-credit.**
- ISyE 521 – **Machine Learning in Action for Industrial Engineers; 3-credit.**
- ISyE 602 – Special topics in Human Factors; 3-credit.
- ISyE 603 – Special topics in Engineering Analytics and Operations Research; 3-credit.
- ISyE 604 – Special topics in Manufacturing and Supply Chain Management; 3-credit.
- ISyE 961 – Graduate Seminar in Industrial Engineering; 1-credit.

2. U. of Wisconsin Madison Economics

VISP Academics & Course Offerings


- Plan 1:
- With one 7xx level MS-GF course taken in the spring of the VISP year
- Year 1 (The VISP Year)
- **Fall Term – UW**
 - Minimum 12 credits of 3xx – 6xx level coursework from the following list of courses:
- Econ 442 Macroeconomic policy
- Econ 450 Wages and the Labor Market
- Econ 461 International Macroeconomics
- Econ 464 International Trade
- Econ 475 Economics of Growth
- Econ 521 Game Theory and Economic Analysis
- Econ 530 Insuring Life's Risks: Health, Aging, and Policy
- Econ 623 Population Economics
- Econ 664 Issues in International Trade
- Econ 704: Econometrics I (3 credits); and

- **Spring Term – UW**
-
- Econ 704: Econometrics I (3 credits); and
-
- Minimum 9 credits of 3xx – 6xx level coursework from the following list of courses:
- Econ 442 Macroeconomic policy
- Econ 450 Wages and the Labor Market
- Econ 461 International Macroeconomics
- Econ 464 International Trade
- Econ 475 Economics of Growth
- Econ 521 Game Theory and Economic Analysis
- Econ 530 Insuring Life's Risks: Health, Aging, and Policy
- Econ 623 Population Economics
- Econ 664 Issues in International Trade
- **Fall term – Spring Term 최대 12학점 까지 대학원 학점으로 반영**
- **Spring term 의 700 Level 한 과목을 반드시 이수해야 대학원 과정 을 1년으로 단축할 수 있음. 미 이수시 대학원과정 1년 6개월 이수**
- **본교(아주대) 에서 수강과목 이수 과목은 듣지 않아야 함**

- **VISP**
- **Year 2**
- **Fall Term – UW**
 - Econ 700 Mathematics for Economists
 - Econ 701 Microeconomics I
 - Econ 705 Econometrics II
 -
- **Spring Term – UW**
 -
 - Econ 702 Macroeconomics I
 - Econ 708 Microeconomics II
 - One elective

Economics MS-GF(Master of Science – Graduate Foundations) 입학정보 및 수업료

VISP Program

- 
- 예상 수학기한 : 총 2년 ~ 2.5년
 - 입학요건 :
calculus(산술학) and linear algebra(기하학) 이수자 ,
introductory Microeconomics and introductory Macroeconomics 이수자
평점 평균 3.5/ 4.5, 토플 92점 이상, IELTS 7.50 이상
 - 수업료 및 생활비용

VISP/Special: Undergraduate

	Semester	Academic Year	Summer
Tuition	\$20,802	\$41,604	varies by program
Living Expenses*	\$10,120	\$20,241	\$2,530 per month
International Student Fee	\$100	\$200	\$100
Health Insurance	\$745	\$1,788	included for academic year
Total Expenses	\$31,767	\$63,833	

*Living expenses include room, board, books, and incidentals such as transportation, clothing, and personal items.

Economics MS–GF(Master of Science – Graduate Foundations) 입학정보 및 수업료

대학원 과정

GRADUATE

Master's or Doctorate (Ph.D.) Degree
Dissertator
Master's: MBA
Master's: Global Real Estate (GREM) and Master's: Business Analytics
Master's: Statistics (Data Science), Physics (Quantum Computing) & Computer Science (Data Engineering)
Master's: Economics (Graduate Foundations)

	Semester	Academic Year
Tuition	\$16,781	\$33,562
Living Expenses*	\$10,120	\$20,241
International Student Fee	\$100	\$200
Health Insurance	\$745	\$1,788
Total Expenses	\$27,746	\$55,791

*Living expenses include room, board, books, and incidentals such as transportation, clothing, and personal items.

Industrial Engineering 입학정보 및 수업료



VISP Program

- 예상 수학기간 : 1.5년 ~ 2년
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- 수업료 및 생활비용
- 장학금 : 최대 \$7,000 지급
 - 정착지원금 \$ 2,000, 1학기 3.85/4.0 이상 시 \$2,500, 대학원 과정 입학 시 \$2,500 지급
 - 3.85/4.0 이상 시 대학원 입학 보장, 3.85 이하 평점도 학과 심사를 통하여 대학원 입학 가능

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2025-26 금액
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3. U. of Wisconsin Madison Quantum Computing and Physics

Courses that can transfer from Physics VISP to MSPQC program

Typically any Physics course 300 and above

Basic Electives – Undergraduate level courses

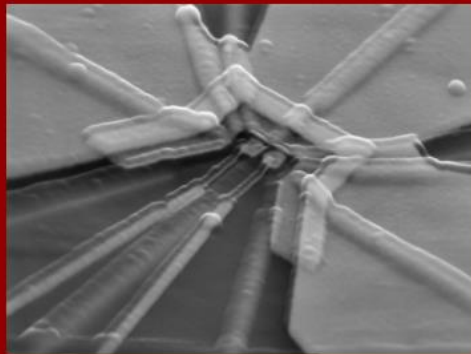
- Machine Learning (PHYS 361)
- Atomic and Quantum Physics (PHYS 448)
- Atomic and Quantum Physics (PHYS 449)
- Introduction to Quantum Mechanics (PHYS 531)
- Introduction to Atomic Structure (PHYS 545)
- Solid State Physics (PHYS 551)
- Electronic Aids to Measurement (PHYS 623 – 4cr)
- Applied Optics (PHYS 625 – 4cr)

Advanced Electives – Graduate level courses

- Introduction to Quantum Computing (PHYS 709)
- Quantum Mechanics (PHYS 731)
- Quantum Mechanics (PHYS 732)
- Advanced Quantum Computing (PHYS 779)

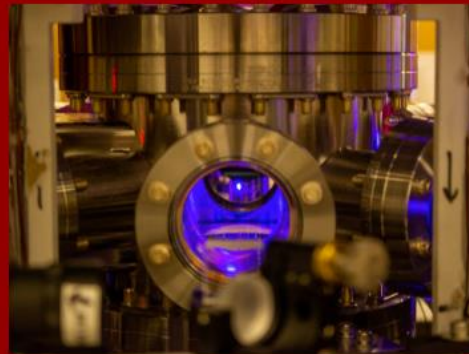
Research Opportunities during MSPQC program

- More than 30 faculty affiliated with the Wisconsin Quantum Institute
- Approximately half are in the Physics department
- Other departments: Chem, CS, ECE, MSE, Math, Stat



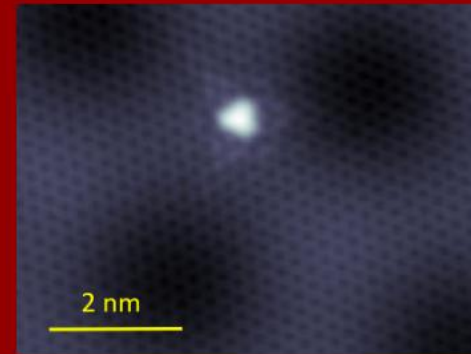
Quantum Computing and Networking

Quantum computing research at WQI focuses on the design and implementation of superconducting, semiconducting and neutral atom qubits. Research also includes algorithmic design for quantum computation on discrete qubit- and continuous qudit-based quantum architectures.



Quantum Sensing

Quantum sensing makes use of the unique and counter-intuitive properties of matter and light when it is governed by quantum physics, such as quantization of energy levels, particle-wave duality, coherent superposition, and entanglement, to make precision sensors and measurements.



Quantum Materials

Quantum materials research focuses on designing, growing and measuring materials where quantum interactions are macroscopically observable.

<https://wqi.wisc.edu/>

3+1+1 Program typical structure

- Participate at VISP program at UW-Madison
- If you take the majority of courses in Physics (~8cr) during the VISP semester(s) then you can be a Physics VISP student
- Apply for the MSPQC program by March 15 while you are a Physics VISP student
- If admitted, 12 credits from Physics courses taken during your VISP year can transfer to the MSPQC program
- You can complete MSPQC program in 1 year with 18 credits

Useful Links

<https://www.physics.wisc.edu/research/> - list of all research activities in the Physics department

<https://www.physics.wisc.edu/courses/> - list of all courses offered in the Physics department

<https://wqi.wisc.edu/> - Wisconsin Quantum Institute Website

<https://www.physics.wisc.edu/graduate/mspqc-program/> - MSPQC Program

University of Illinois Chicago

- **Public Administration**

- -Civic Analytics
- -Public Administration

- **Statistics (STEM)**

- -Mathematics
- -IT & Software
- -Big Data

- **Electrical Engineering (STEM)**

- -Computer Science Engineering
- -AI

•감사합니다.

• 자세한 모집 요강 및 일정은 추후 공지 예정