

ISEM Master's
Program Orientation

Dr. Robert Pittman
Academic Program Lead

June 12, 2023

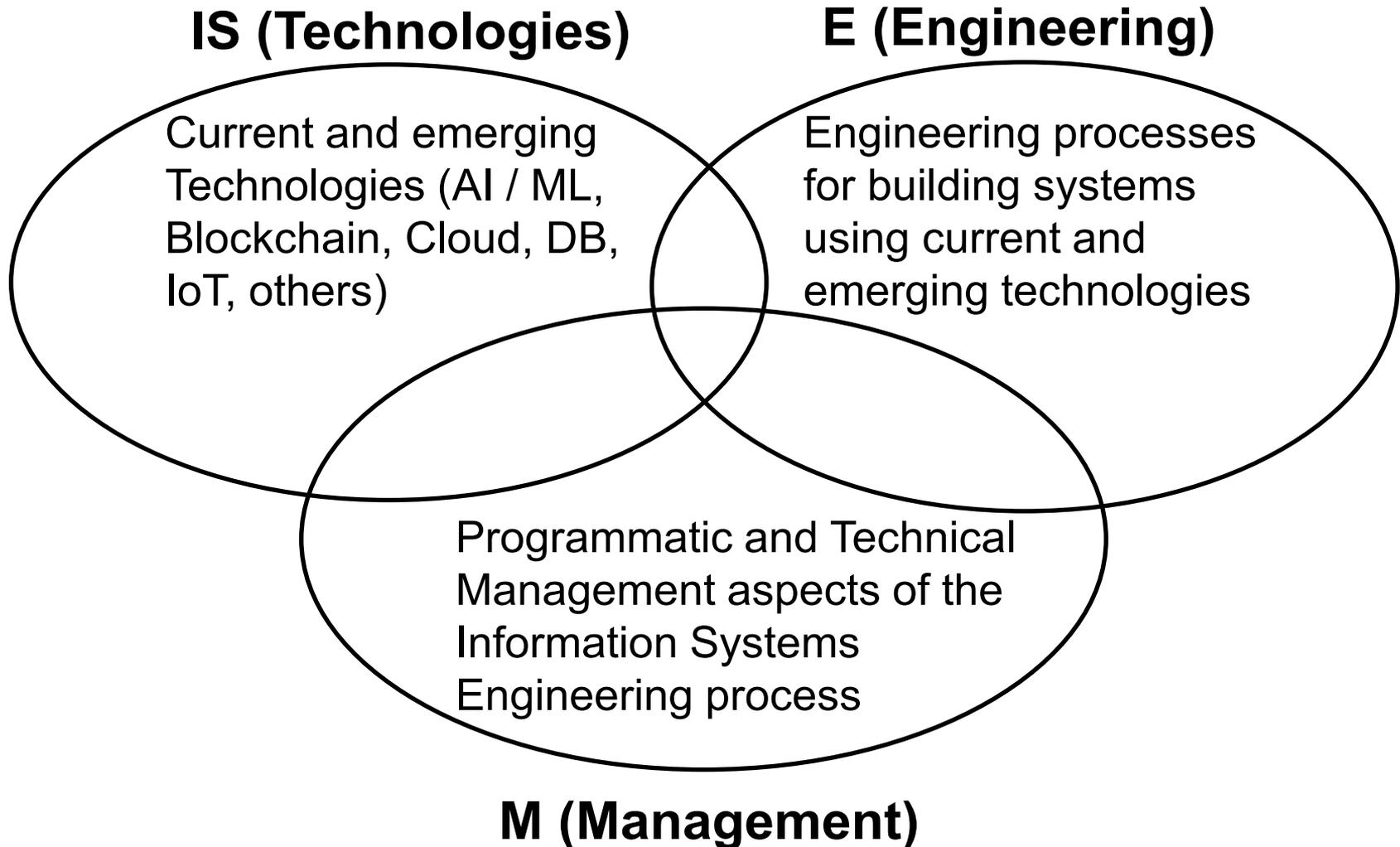


Welcome to HU and the Information System Engineering and Management (ISEM) Program!

So...what is “ISEM”?

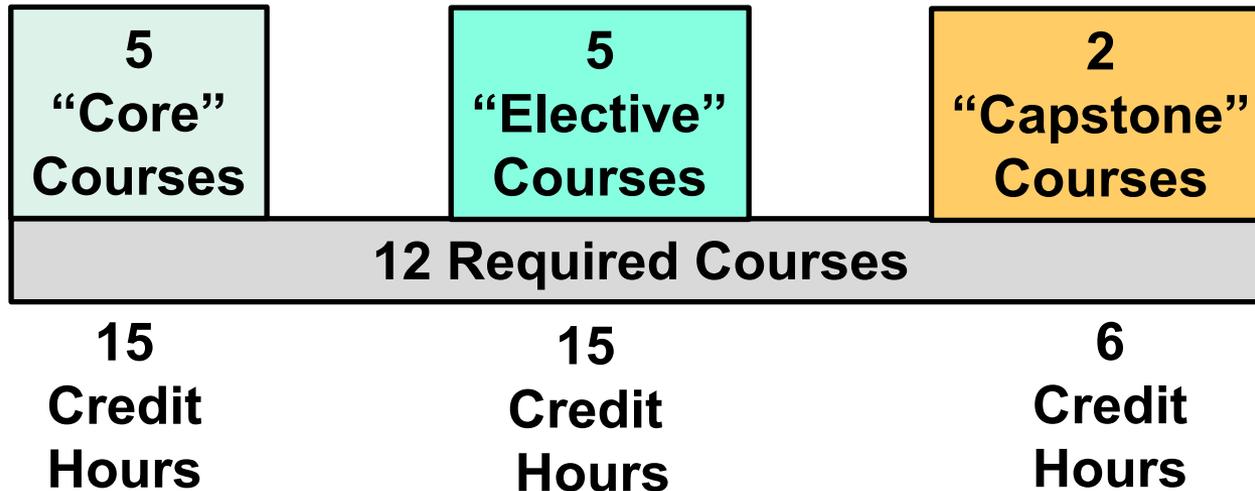
- “Information Systems Engineering and Management”
- A 2-Year, 36-credit hour, SEVP-compliant Master’s Program (MS in ISEM) aimed at developing technical leaders.
- Plus an available PhD Program
- Recent new additions:
 - 3 New Courses (available Fall 2023)
 - 5 “Concentrations”
 - Individualized (student can take any Elective)
 - AI for Business
 - Cloud Computing for Business
 - Blockchain and Cryptocurrency
 - Management Science, Strategy and Technology
 - 12 credit hour, non-degree Certificate in “Blockchain and Cryptocurrency” studies

ISEM Masters Program Perspective



Overview - ISEM Master's Program

- A 36 credit hour program
 - 12 Courses total, 3 Credit Hours per Course
 - Six (6) semesters
 - Typically 2 courses / semester (maximum 4)
- Course Requirements:



ISEM Course Path (“1 Year Core, 1 Year Electives”)

Note: All ISEM students entering Program select upon Admission an incoming Concentration from list of five (5). This can be changed only within student’s first 24 credit hours by a student-initiated “Program Change Form”.

Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.	
1	1	(Core) ISEM 500	(Core) MGMT 510	6	
	2	(Core) ISEM 540	(Core) ISEM 530 course	6	
	3	Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511			3
		Core” courses now complete. Proceed to selected “Concentration” Courses.			
		“Non-Individualized” Concentration: Pick “Concentration Course 1” from list: ISEM 503, ISEM 547, ISEM 574	“Individualized” Concentration: Pick 1 Elective courses (Elective 1 of 5)	3	
2	4	“Individualized” Path: Elective 2 of 5 “Non-Individualized ”: Concentration Course 2	“Individualized” Path: Elective 3 of 5 “Non-Individualized”: Concentration Course 3	6	
	5	“Individualized” Path: Elective 4 of 5 “Non-Individualized”: Concentration Course 4	(Capstone) GRAD 695 (in accordance with Concentration)	6	
	6	“Individualized” Path: Elective 5 of 5 “Non-Individualized”: Concentration Course 5	(Capstone) ISEM / GRAD 699 (in accordance with Concentration)	6	
	Key:	<div style="border: 1px solid black; background-color: yellow; padding: 2px;">Core Courses</div> <div style="border: 1px solid black; padding: 2px;">Concentration Course</div>	Total:	36	



ISEM Graduate Courses

- ISEM has a large catalog of available courses
- Primary goal: Educate students on how to be technical leaders in their organization, with a comprehensive understanding of technologies, processes and various aspects of management
- Most authoritative source of course offerings is the “Graduate Catalog”, found at the following URL:

[Harrisburg University of Science
and Technology - Acalog ACMS™](#)

Concentrations

- Upon entering ISEM, each student selects 1 of 5 Concentrations. Default Concentration is “Individualized”.
- A student remains in a selected Concentration unless a program change form is executed before 24 credit hours have been taken. A change in Concentration cannot extend the length of a student’s Master’s studies.
- A student must commit to taking courses and executing a Capstone Project in their selected Concentration topic area.

“AI for Business” Concentration Course Sequence (available Late Spring 2024)

Note: All ISEM students entering Program select upon Admission an incoming Concentration from a list of five (5). This can be changed only within they student’s first 24 credit hours by a student-initiated “Program Change Form”.

Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.	
1	1	(Core) ISEM 500	(Core) MGMT 510	6	
	2	(Core) ISEM 540	(Core) ISEM 530 course	6	
	3	Semester 3: Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511		3	
Semester 3: ISEM 503 (Concentration Course 1 of 5)		3			
2	4	ISEM 564 (Concentration Course 2 of 5)	ISEM 585 (Concentration Course 3 of 5)	6	
	5	ISEM 505 (Concentration Course 4 of 5)	(Capstone) GRAD 695 (in accordance with Concentration)	6	
	6	ISEM 582 or GRAD Elective (Concentration Course 5 of 5)	(Capstone) ISEM / GRAD 699 (in accordance with Concentration)	6	
Key:		Core Courses	Concentration Course	Total:	36

Upon completion of “Core” courses in Semester 3, student takes a focused set of AI-related courses. Student will earn both a diploma and a Certificate in this Concentration upon completion of all courses and execution of their Capstone in an AI-related topic.

“Cloud Computing for Business” Concentration Course Sequence

(available Late Spring 2024)

Note: All ISEM students entering Program select upon Admission an incoming Concentration from a list of five (5). This can be changed only within they student’s first 24 credit hours by a student-initiated “Program Change Form”.

Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.	
1	1	(Core) ISEM 500	(Core) MGMT 510	6	
	2	(Core) ISEM 540	(Core) ISEM 530 course	6	
	3	Semester 3: Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511		3	
		Semester 3: ISEM 503 (Concentration Course 1 of 5)		3	
2	4	ISEM 536 (Concentration Course 2 of 5)	ISEM 564 (Concentration Course 3 of 5)	6	
	5	ISEM 582 (Concentration Course 4 of 5)	(Capstone) GRAD 695 (in accordance with Concentration)	6	
	6	ISEM 533 or GRAD Elective (Concentration Course 5 of 5)	(Capstone) ISEM / GRAD 699 (in accordance with Concentration)	6	
Key:		Core Courses	Concentration Courses	Total:	36

Upon completion of “Core” courses in Semester 3, student takes a focused set of Cloud Computing-related courses. Student will earn both a diploma and a Certificate in this Concentration upon completion of all courses and execution of their Capstone in a Cloud Computing-related topic.

“Blockchain and Cryptocurrency” Concentration Course Sequence

(available Late Spring 2024)

Note: All ISEM students entering Program select upon Admission an incoming Concentration from a list of five (5). This can be changed only within the student’s first 24 credit hours by a student-initiated “Program Change Form”.

Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.	
1	1	(Core) ISEM 500	(Core) MGMT 510	6	
	2	(Core) ISEM 540	(Core) ISEM 530 course	6	
	3	Semester 3: Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511			3
		Semester 3: ISEM 574 (Concentration Course 1 of 5)			3
2	4	ISEM 576 (Concentration Course 2 of 5)	ISEM 578 (Concentration Course 3 of 5)	6	
	5	ISEM 575 (Concentration Course 4 of 5)	(Capstone) GRAD 695 (in accordance with Concentration)	6	
	6	ISEM 577 or GRAD Elective (Concentration Course 5 of 5)	(Capstone) ISEM / GRAD 699 (in accordance with Concentration)	6	
Key:		Core Courses	Concentration Courses	Total:	36

Upon completion of “Core” courses in Semester 3, student takes a focused set of Blockchain and Cryptocurrency-related courses. Student will earn both a diploma and a Certificate in this Concentration upon completion of all courses and execution of their Capstone in a related Blockchain and Cryptocurrency topic.

“Management Science, Strategy and Technology” Concentration Course Sequence

(available Late Spring 2024)

Note: All ISEM students entering Program select upon Admission an incoming Concentration from a list of five (5). This can be changed only within they student’s first 24 credit hours by a student-initiated “Program Change Form”.

Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.
1	1	(Core) ISEM 500	(Core) MGMT 510	6
	2	(Core) ISEM 540	(Core) ISEM 530 course	6
	3	Semester 3: Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511		3
Semester 3: ISEM 547 (Concentration Course 1 of 5)		3		
2	4	MGMT 512 (Concentration Course 2 of 5)	MGMT 513 (Concentration Course 3 of 5)	6
	5	ISEM 585 (Concentration Course 4 of 5)	(Capstone) GRAD 695 (in accordance with Concentration)	6
	6	GRAD Elective (Concentration Course 5 of 5)	(Capstone) ISEM / GRAD 699 (in accordance with Concentration)	6
Key:		Core Courses	Concentration Courses	Total: 36

Upon completion of “Core” courses in Semester 3, student takes a focused set of Management Science-related courses. Student will earn both a diploma and a Certificate in this Concentration upon completion of all courses and execution of their Capstone in a related Management Science topic.

“Individualized” “Concentration” Course Sequence

Note: <u>All</u> ISEM students entering Program select upon Admission an incoming <u>Concentration</u> from a list of five (5). This can be changed only within they student’s first 24 credit hours by a student-initiated “Program Change Form”.				
Yr.	Sem.	Semester Course 1	Semester Course 2	Hrs.
1	1	(Core) ISEM 500	(Core) MGMT 510	6
	2	(Core) ISEM 540	(Core) ISEM 530 course	6
	3	Semester 3: Pick 1 “Core” course from list: ISEM 502, ISEM 534, ISEM 551, ISEM 570, MGMT 511		3
Semester 3: “Individualized” Path. (Elective 1 of 5)		3		
2	4	“Individualized” Path: Elective 2 of 5	“Individualized” Path: Elective 3 of 5	6
	5	“Individualized” Path: Elective 4 of 5	(Capstone) GRAD 695	6
	6	“Individualized” Path: Elective 5 of 5	(Capstone) ISEM / GRAD 699	6
Key:		Core Courses	Concentration Coursed	Total: 36

Upon completion of “Core” courses in Semester 3, student can then take any applicable University graduate course. This is the most flexible Concentration.

Certificate in Blockchain and Cryptocurrency

- 12-semester hour Certificate Program
- Available as a non-degree option
- Four (4) Courses:
 - ISEM 574 – Bitcoin Blockchain
 - ISEM 575 – Ethereum Blockchain
 - ISEM 576 – Cryptocurrency and Regulation
 - ISEM 578 – Decentralized Finance

Affiliated ISEM Relationships

- HU “4+1” streamlined “BS-to-MS” 5-year path to an ISEM Master’s degree
- “Bachelors-to-PhD” Pathway
 - For students entering HU with a BS degree and intent on achieving a PhD degree

ISEM PhD Program

For Those Interested – How to Prepare for a PhD in ISEM while in Master's Program

- Very selective. Student must apply and agree to be interviewed.
- Participation in ISEM Masters Program is not an automatic entry point into the ISEM PhD Program.
- Competitive - so student must do very well in Master's Program studies
- To best prepare:
 - Complete and do very well in all ISEM “Core” Courses
 - Capstone should be in your anticipated “Research Thesis” option. You can discuss this with your ISEM advisor.
 - Successfully take these courses if a Master's candidate:
 - ISEM 530 Systems Engineering Principles
 - ISEM 503 Artificial Intelligence
 - GRAD 509 Research Methods
 - Capstone (GRAD 695 + GRAD 699) in proposed research area

Thank you!

For more ISEM Master's Program Information or for answers to specific questions, please:

- Consult the HU ISEM Web Link
- Review the current version of “Graduate Catalog: Master and Doctorate Degrees”
- Students can talk to individual ISEM course instructors or assigned Advisor
- If you still need assistance, contact the ISEM Academic Program lead via e-mail:

Dr. Robert Pittman

RPittman@Harrisburgu.edu