B.S. in Cybersecurity Analytics and Operations/M.S. in Informatics IUG Long-Range Planner

Come Com						ner _f	PSU ID		
Core Curriculum (3-6 credits) IST 504: Foundations of Theories and Methods for Information Sciences and Technology Research (fall) IST 505*: Foundations of Research Design in Information Sciences and Technology (spring) *OPTIONAL: if taken, counts as research methods credits.			Specialization Courses (12-18 credits) Choose courses in one or more areas to support thesis or scholarly paper. The shared UG courses will count as 6 specialization credits. The specialization courses are listed on the <u>MS Informatics Audi</u> Sheet	Cli ap	(6 cr elect two res courses to de understandir met c <u>ck here</u> to vi proved meth		Capstone Experience (3-6 credits) Choose capstone option. Thesis - IST 600 Students who select the thesis option must take IST 505 and register for 6 credits of IS 600. or Scholarly Paper - IST 594		bption. Option must redits of IST
Total Undergrad ((Do not include in-pro		-	to Date: -progress courses below)				nted IUG Cour list course & sem	•	
JUNIOR YEAR						(in retroactive,	list course & sem	iester ti	ompietet
Fall	Cr.	UG/ GR/ IUG	Spring	Cr.	UG/ GR/ IUG				
						Sumn	ner	Cr.	UG/ GR/ IUG
Undergrad (UG+IU SENIOR YEAR	G)		Undergrad (UG+IUG)			Underg	rad (UG+IUG)		
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Fall	Cr.	UG/ GR/ IUG	Spring	Cr.	UG/ GR/ IUG				
Fall	Cr.	GR/	Spring	Cr.	GR/	Sumn	ner	Cr.	UG/ GR/ IUG
Undergrad (UG+IU	G)	GR/	Undergrad (UG+IUG)		GR/	Underg	ad (UG+IUG)	Cr.	GR/
Undergrad (UG+IU Grad (GR+IU	G)	GR/			GR/		ad (UG+IUG)	Cr.	GR/
Undergrad (UG+IU Grad (GR+IU <u>FINAL YEAR</u>	G) G)	GR/ IUG	Undergrad (UG+IUG) Grad (GR+IUG)		GR/ IUG	Underg Grad (G	ad (UG+IUG)		GR/ IUG
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Undergrad (UG+IU Grad (GR+IU <u>FINAL YEAR</u>	G) G) Cr.	GR/ IUG	Undergrad (UG+IUG) Grad (GR+IUG)		GR/ IUG	Undergr Grad (G Student Sign Undergradu	ad (UG+IUG) R+IUG) quired Signa nature	tures	GR/ IUG Date

- 1. Up to 12 credits/four courses may be "double-counted" on both the undergraduate and graduate transcripts. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 or 800-level. When we talk about these courses, we talk about them as:
 - i. UG courses: appear only on the undergraduate transcript
 - ii. IUG courses: courses that appear on both the undergraduate and graduate transcript.
 - iii. GR courses: appear only on the graduate transcript.
- 2. 6 of the 18 credits (6 research methods credits + 12 specialization courses) must be in the major (IST)
- 3. Every semester, students must complete the "IUG Semester Report," obtain all signatures and submit to the Graduate School.
- 4. IUG students must maintain 12 credits to be a full-time student; 15 credits per semester is standard.

Courses eligible to double count for both Cybersecurity Analytics and Operations BS/Informatics MS

- GR courses (IST 504 required) used as CYAOP support option requirement.
- UG courses used as graduate specialization course requirement.

Course	Title					
IST 432	Legal and Regulatory Environment of Information Science and Technology	3.0				
IST 451	Network Security	3.0				
IST 454	Computer and Cyber Forensics	3.0				
IST 456	Information Security Management	3.0				
IST 504	Foundations of Theories and Methods of Information Sciences and Technology	3.0				
	Research					
One of the following, based on concentration						
IST 521	Human-Computer Interaction: The User and Technology	3.0				
IST 554	Network Management and Security	3.0				
IST 557	Data Mining: Techniques and Applications	3.0				
IST 815	Foundations of Information Security and Assurance	3.0				

**Culminating Experience – Thesis or Scholarly paper

Students may choose a thesis or scholarly paper to fulfill the culminating experience.

Thesis

Students who choose the thesis option must register for 6 credits of IST 600 or IST 610, write a satisfactory thesis accepted by the master's committee, the head of the graduate program, and the Graduate School, and pass a thesis defense. Selecting the thesis option may require more than 1-year to complete. We recommend you take IST 505 if you choose the thesis option, it can be applied as an elective.

Scholarly Paper

Students who choose the scholarly paper option must register for at least 3 credits of IST 594 and complete the scholarly paper. The scholarly paper will be a focused piece of technical work that applies the student's expertise and knowledge base, and that is documented and presented as a scholarly paper report.

Note: Students who choose the thesis or scholarly paper have the option to work on their research project in more than one semester.