



**FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY CURRICULUM COMMITTEE**

Proposal for a New Course

DO NOT TYPE IN THIS BOX

Bulletin # : _____

Academic Year : _____

1. **School/College** Engineering and Computing
Div./Dept. in Which Taught Knight Foundation School of Computing and Information Sciences
2. **COT** 4 **CIP Code** (Leave this blank): _____

Alpha Prefix	1st Digit	Last 3 Digits	"C"-lec-lab "L"-Lab	3 Cr. Hrs.	
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3. **Grading Method (select one):** Graded Pass/Fail
- 4a. **Course Title** Introduction to Quantum Information and Probability
- b. **Abbreviated course Title** (for computer class schedules, transcripts) Intro to Quantum Info
LIMITED TO 25 Characters (including spaces)
5. **Statewide Course Numbering Subject Matter Area** Computation Theory (COT)
6. **Catalog Description/Major Topics** (not to exceed 200 characters including spaces)
College of Medicine and College of Law: Attach description not exceeding 1,000 characters including spaces.

Introduction to quantum information theory and probability; Introduction to quantum error correction, communication, and security.
7. **Attach detailed syllabus course outline and course justification on separate page(s).**
8. **Prerequisite(s):** (COT 3100 or MAD 2104) and (STA 2023 or STA 2122 or STA 3033)
9. **Corequisite(s):** _____
10. **Objective(s) of Course:**

Describe fundamental concepts in quantum information theory
 Discuss quantum channel capacity
 Design quantum error correction codes
 Discuss secure quantum key distribution

11. **Does this course duplicate/overlap other courses at FIU?** No Yes
 If yes, please explain: _____

12. **What other closely related department(s) have been consulted about this course?**

13. **Is this course used for the assessment of a program or a certificate (if yes, then send a notification to assessment@fiu.edu)?** No Yes

PROPOSAL REQUESTED BY:

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Chairperson (Dept./Div.) <u>Jason Liu</u>	<u><i>Jason Liu</i></u>	<u>11</u> / <u>1</u> / <u>2023</u>
(Type name)	(Signature)	
Chairperson (Curr. Comm.) _____	_____ / _____ / 2023	
(Type name)	(Signature)	
College/School Dean _____	_____ / _____ / 2023	
(Type name)	(Signature)	

Submit one original form. Attach one copy of the course justification and course syllabus, course description, objectives, major topics and textbooks.