



**FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY CURRICULUM COMMITTEE**

Proposal for a New Course

DO NOT TYPE IN THIS BOX

Bulletin # : _____

Academic Year : _____

1. **School/College** Click to select

Div./Dept. in Which Taught Knight Foundation School of Computing and Information Sciences

2. **COT** 5 **CIP Code (Leave this blank):** _____

<u>Alpha</u> Prefix	<u>1st</u> Digit	<u>Last 3</u> Digits	<u>"C"-lec-lab</u> "L"-Lab	<u>3</u> Cr. Hrs.
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3. **Grading Method (select one):** Graded Pass/Fail

4a. **Course Title** Quantum Algorithms

b. **Abbreviated course Title (for computer class schedules, transcripts)** Quantum Algorithms
LIMITED TO 25 Characters (including spaces)

5. **Statewide Course Numbering Subject Matter Area** Computing Theory

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 theory and a survey of standard and advanced quantum algorithms; implementation of algorithms on a simulated or real quantum system.

7. **Attach detailed syllabus course outline and course justification on separate page(s).**

8. **Prerequisite(s):** COT 5407 or COT 6405

9. **Corequisite(s):** _____

10. **Objective(s) of Course:**

Describe fundamental concepts of quantum computing
Discuss quantum computer architecture
Analyze standard and advanced quantum algorithms
Design and evaluate implementation of quantum algorithms

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?**
Department of Electrical and Computer Engineering

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:

Faculty Contact <u>Nagarajan Prabkar</u>	<small>DocuSigned by:</small> <u>Nagarajan Prabakar</u>	<u>11 / 14 / 2022</u>
(Type name)	(Signature)	
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(Email address)	(Phone number)	
Chairperson (Dept./Div.) <u>Jason Liu</u>	_____	<u>_____ / _____ / 2022</u>
(Type name)	(Signature)	
Chairperson (Curr. Comm.) _____	_____	<u>_____ / _____ / 2022</u>
(Type name)	(Signature)	
College/School Dean <u>John Volakis</u>	_____	<u>_____ / _____ / 2022</u>
(Type name)	(Signature)	

Submit one original form. Attach one copy of the course justification and a draft of the course syllabus for this New Course Proposal. The syllabus should include the course description, objectives, learning outcomes, major topics, and textbooks.