

PAtENT: Pathways to Entrepreneurship

An alternate roadmap for STEM PhD students at UNC Charlotte

Pathways to Entrepreneurship (PAtENT) pilot program

- Proposed pilot program in which Doctoral candidates in STEM fields will satisfy Ph.D. requirements through the development of potentially patentable technology
- This will provide an alternative to the current requirement of journal publications in archival, peer-reviewed journals
- Long-term goal is to establish a separate '*entrepreneur track*' for STEM PhD students

**Current
Ph.D.
Roadmap**

**Appointment of Ph.D.
advisor/Committee**



**Qualifying
exam/Coursework**



**Research
Topic/Proposal Defense**



**Research → Journal
publications**



Final defense



**Current
Ph.D.
Roadmap**

**Appointment of Ph.D.
advisor/Committee**



**Qualifying
exam/Coursework**



**Research
Topic/Proposal Defense**



**Research → Journal
publications**

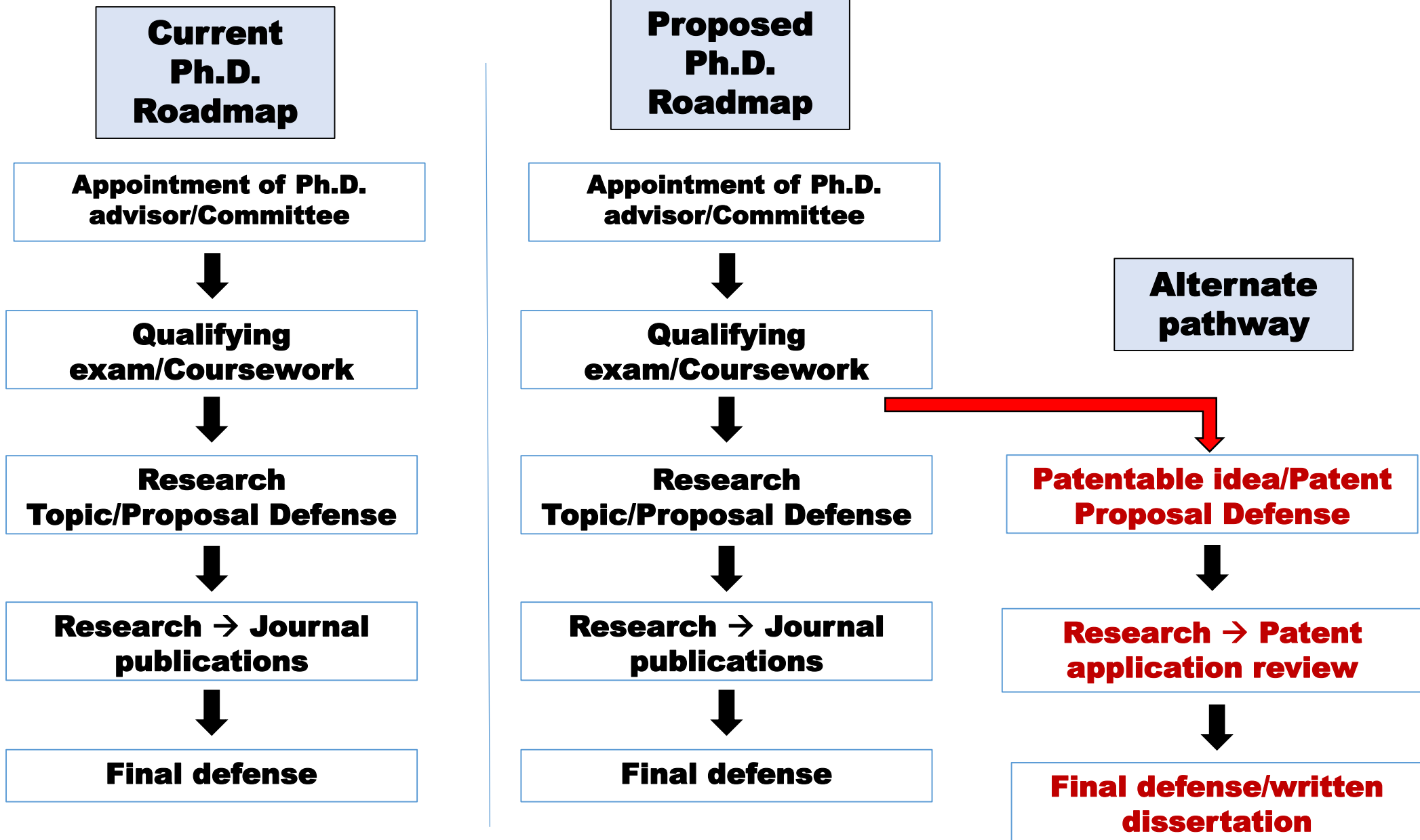


Final defense

**Majority of STEM PhDs do not
work in Academia, and a growing
number are employed in the
industry or as entrepreneurs →
current PhD model does not cater
to their differentiated needs**

**For Ph.D. research that produces a
technology/product output, the need
to protect proprietary information can
conflict with the need to publish → A
separate pathway is needed for such
candidates**

**Entrepreneurship-based Ph.D. can
catalyze innovation and investment in
technology-based startups and require
STEM programs to rethink/adapt their
coursework to serve this population of
students**



A proposal based on these ideas was funded by NSF:
Innovations in Graduate Education (IGE) program

Project team:

Praveen Ramaprabhu (MEES), Terry Xu (MEES), Mesbah Uddin (MEES), Harish Cherukuri (MEES), Audrey Rorrer (CCI), David Pugalee (Center for STEM education)

Objective of the project is to investigate whether this approach can provide a viable alternative for PhD students working on patentable research, and if it can be scaled to other institutions

Benefits to participating faculty and students

- Each faculty-student team is provided \$ 5k/year towards research equipment, materials and supplies, travel, faculty salaries (student salaries are not allowed)
- The modified capstone requirement benefits students, since their research leading to technology that is potentially patentable also can satisfy their degree requirements
- Students can participate in Ventureprise (NSF I-Corps site) on-campus training modules and professional development programs for aspiring entrepreneurs, mentoring by commercialization experts, customer discovery. This includes opportunities to network with the Charlotte area angel investor network.
- Students will have the opportunity to enroll in two business school courses (offered by Dr. Justin Webb) on Entrepreneurial Decisions, Entrepreneurial Strategy – students taking a total of 4 courses will also be eligible to receive a graduate certificate in Entrepreneurship and Innovation.

Who is this program for?

- If you are working with a student on any stage of a project with potential for patentable outcomes, please consider participating in this program
- If you need additional information about the program, please contact me praveen.ramaprabhu@uncc.edu