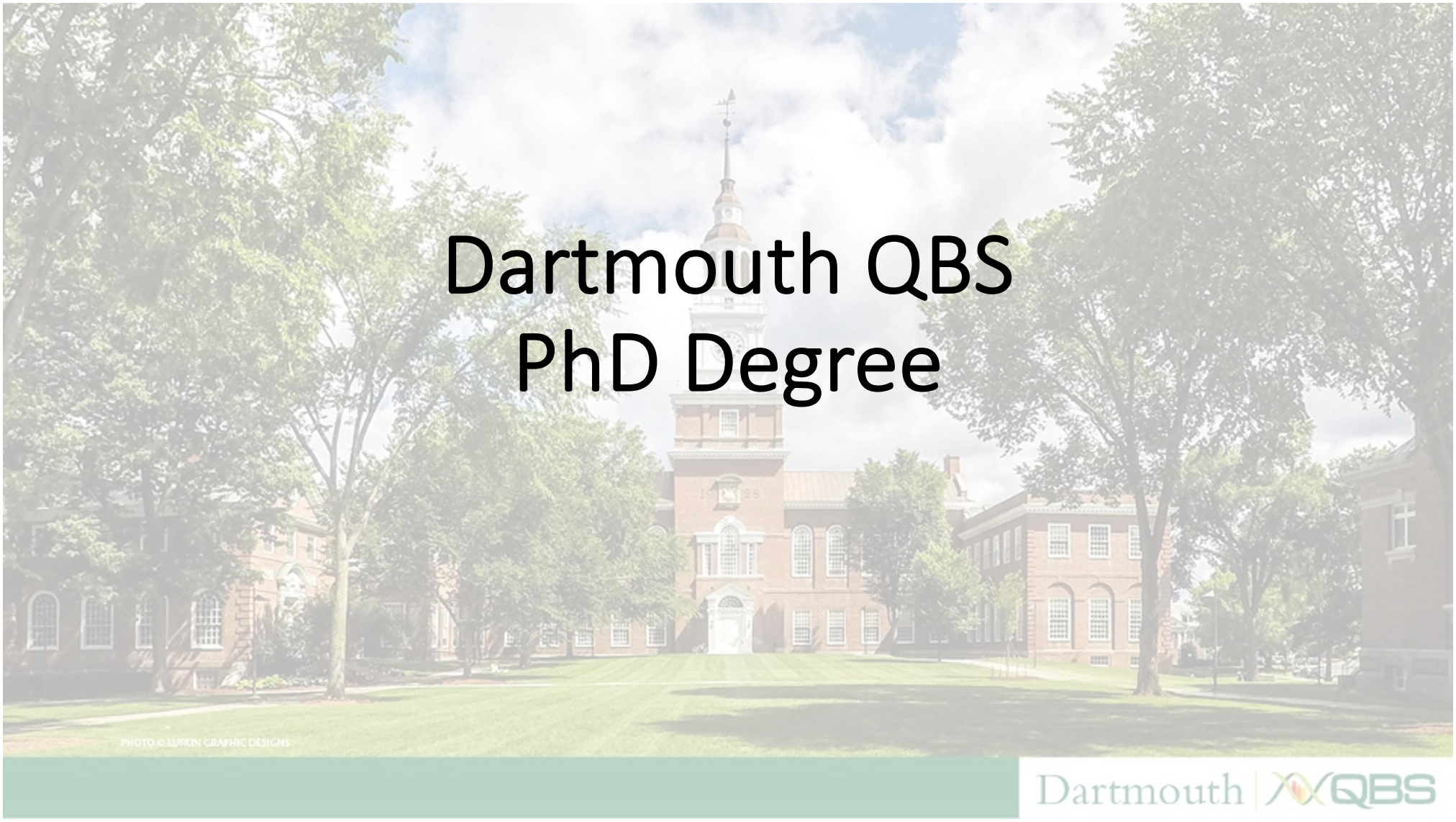


Dartmouth QBS
PhD Degree

Dartmouth | QBS

QBS | Dartmouth

The Dartmouth QBS program trains highly qualified students in Bioinformatics, Biostatistics, Epidemiology, and Health Data Science for careers in academia and industry.

What we will cover today

- Dartmouth College and QBS program overview
- Degree requirements and timeline
- Application and admissions
- Program training and academics, degree specific components
- Q & A
- Please sign in so we know who you are! https://apply.gs.dartmouth.edu/register/qbs-events

QBS | Dartmouth

Six reasons to join QBS at Dartmouth

QBS community

Interdisciplinary program

The Ivy League experience

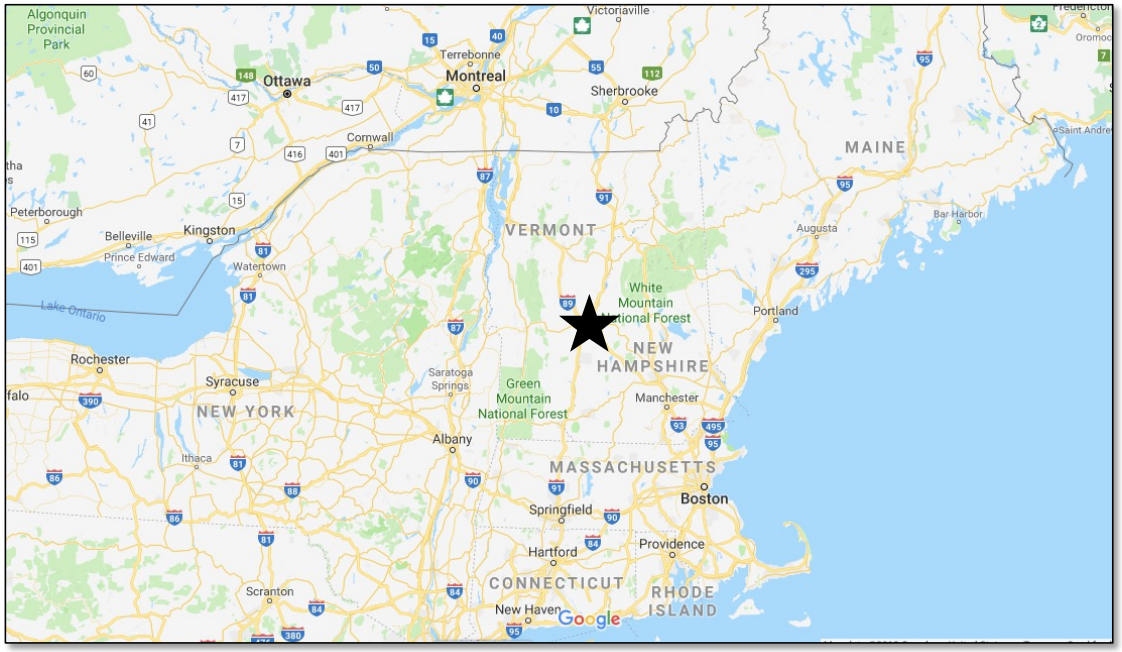
Dedicated faculty

Career opportunities

Strong alumni network

QBS | Dartmouth

Dartmouth is located on the border of New Hampshire and Vermont



QBS | Dartmouth

Dartmouth College

Founded in 1769, Dartmouth is a member of the Ivy League and is a liberal arts college with 4 professional schools:

- Geisel School of Medicine
- Thayer School of Engineering
- Tuck School of Business
- Guarini School of Advanced and Graduate Studies

QBS | Dartmouth

Quantitative Biomedical Sciences degrees

- **Doctor of Philosophy (PhD)**
  - Interdisciplinary training in Biostatistics, Bioinformatics, & Epidemiology
  - First PhD class in 2011
- **Masters of Science (MS)**
  - Health Data Science
  - Epidemiology
  - Medical Informatics
  - First MS class in 2018

QBS Leadership

- **Diane Gilbert-Diamond, ScD**
  - **Academic Director, Quantitative Biomedical Sciences**
  - Associate Professor of Epidemiology
  - Departments of Epidemiology, Medicine and Pediatrics
  - Norris Cotton Cancer Center

- **Scott Gerber, PhD**
  - **Associate Director, Quantitative Biomedical Sciences**
  - Professor of Molecular and Systems Biology
  - Kenneth E. and Carol L. Weg Distinguished Professor
  - Department of Molecular and Systems Biology
  - Norris Cotton Cancer Center

QBS administration

Susan Diesel, PhD

Program and Operations Director

Rosemary White

Program Coordinator

Kristine Giffin, PhD

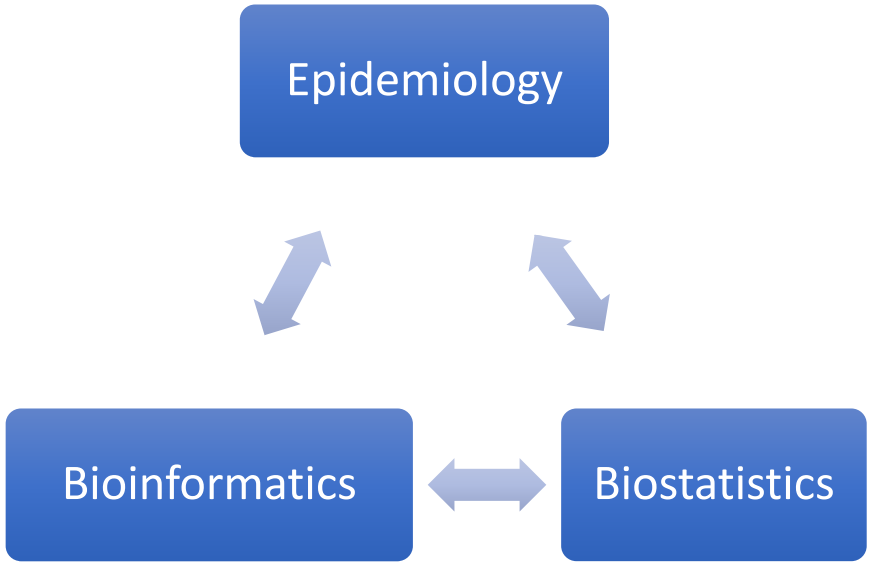
Director of Academic and Student Affairs

QBS Program

- 47 Faculty Members
- 44 MS Students
- 39 PhD Students
- Interdepartmental
- Multiple collaborations across Dartmouth programs, schools, and departments

QBS | Dartmouth

- **Mission.** To train highly qualified students for productive careers in biomedical research and teaching through the completion of an interdisciplinary PhD degree in bioinformatics, biostatistics and epidemiology.
- **Philosophy.** The modern biomedical researcher must be able to speak more than one language to successfully collaborate in a highly multidisciplinary environment. Students trained through QBS will be versed in bioinformatics, biostatistics and epidemiology.



Application Deadline: December 1, 2021

Additional application requirements

- 3 letters of recommendation
- Personal statement
- CV/resume
- 2 Supplemental statements
- Transcripts (official if offer accepted)
- Coursework requirements
  - 1 course in calculus
  - 1 course in statistics or equivalent experience
  - 1 course in programming or equivalent experience

Applications: Test Scores

GRE

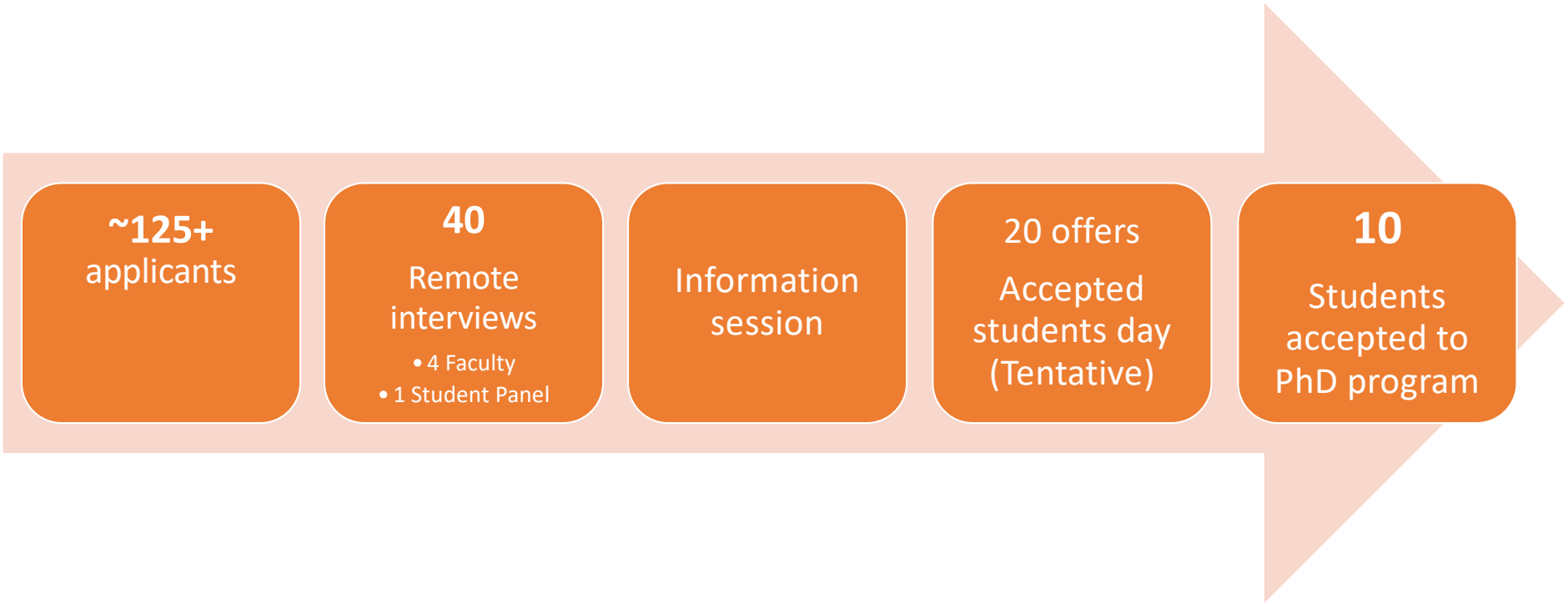
Optional 20-21, otherwise waived for 4+1 applicants

GPA

TOEFL

IELTS

Admissions


~125+
applicants
40
Remote interviews
• 4 Faculty
• 1 Student Panel
Information session
20 offers
Accepted students day (Tentative)
10
Students accepted to PhD program

Admissions

Holistic Application Review

Grades & Test Scores

Research & Work Experience

Relevant Course Work

Mentor, Supervisor, Manager References

Personal Essay & Statements

- Personal background
- Specific faculty & research of interest
- Genuine interest in program
- Career & learning goals
- Explanations – Poor grades, hardships, frequent school or job changes

Tuition and stipend

- Full tuition scholarship
- Prepaid health insurance plan
- **The student stipend 2021-22: $31,560**
  - Health access fee 20-21: $100.00 per term (fulltime students only)
  - International student fee 20-21: $104.00 per term
  - Student activity fee: $60.00 (charged once a year in Fall)
  - Student record fee: $50.00 (one time fee charged in 1st Fall)
- Adjusted for inflation
- Contingent upon satisfactory performance in studies
- We do not offer financial aid beyond the QBS fellowship

QBS | Dartmouth

Pre-matriculation

- Techniques of calculus
  - Differentiation and integration of multivariable functions
- Procedural and Object Oriented Programming in
  - R or Python
  - Concepts of algorithms and data structures
- Basic probability and statistical concepts
- QBS 103: Foundations of Data Science:
  - R bootcamp
  - Calculus/Stats Review

Curriculum

- 3 research rotations
- QBS 700: Mandatory Ethics
- Core Courses
  - QBS 110: Integrative Biomedical Sciences Seminar
  - QBS 103: Foundations of Data Science
  - Foundational Courses in each:
    - Bioinformatics
    - Biostatistics
    - Epidemiology

Curriculum, continued

- Journal Club (QBS 270 for first year) 9 total
- One quarter of supervised teaching (QBS 196)
- 3.5 units of approved elective courses
- Oral qualifying exam
- Annual research in progress presentations
- Satisfactory completion of a significant research project and preparation of a thesis describing this research
- Successful defense of the thesis in an oral examination and presentation of the work in a public lecture

Current Students: 10

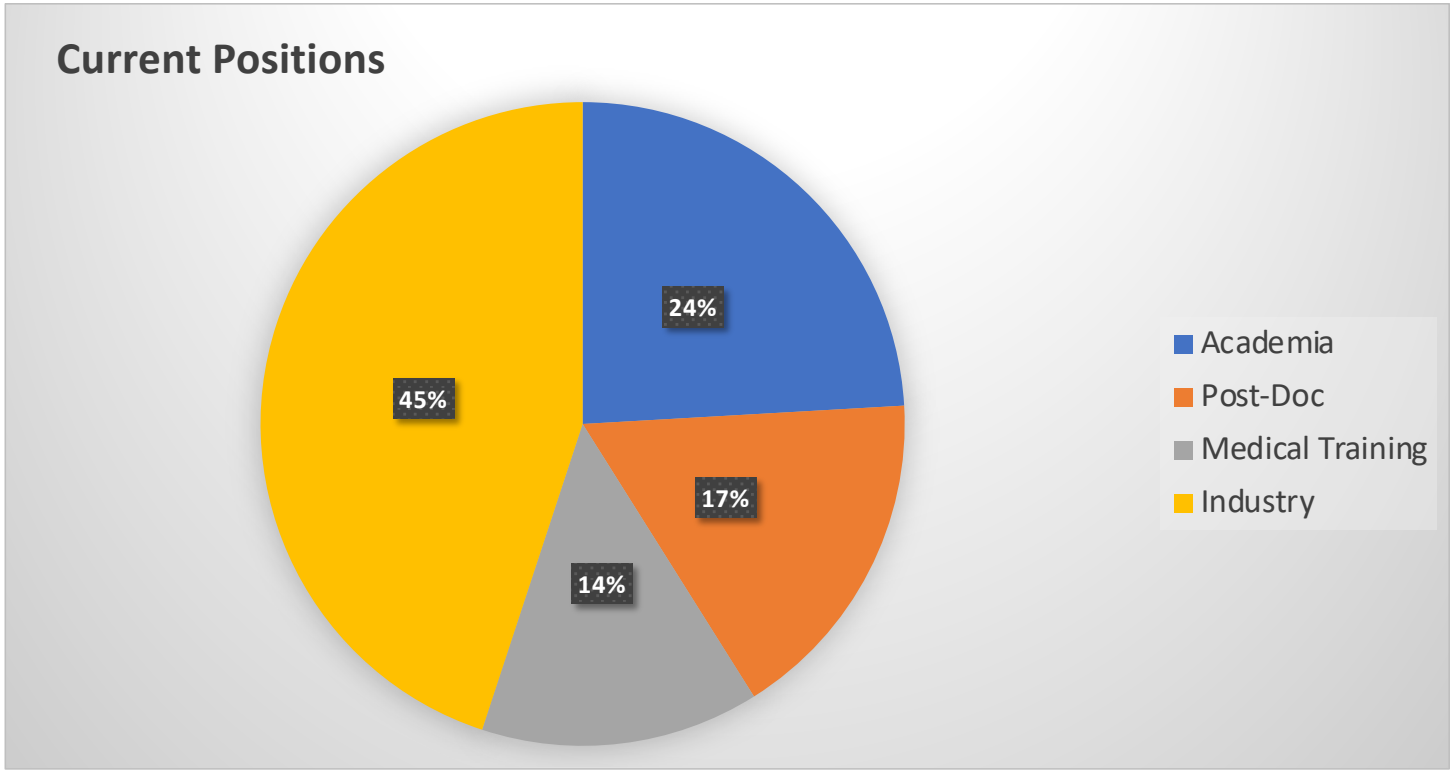
GRE Average (70% submission)	• V-84.85%, Q -86.86%, A-59%
GPA Average	• 3.6
URM	• 10%
International	• 40%
Male	• 50%
Female	• 50%

Dartmouth employment opportunities

- Self identify
  - Research opportunities
  - General employment via student employment office

- Visa holders
  - 20 hours per week when classes in session
  - 40 hours per week when classes not in session
  - Only work for Dartmouth College, no other employer

Alumni: 29


Current Positions
24%
17%
14%
45%
Academia
Post-Doc
Medical Training
Industry

COVID-19 and Dartmouth

See Dartmouth's Health and Prevention page for up-to-date information about

- Arriving on campus
- Ongoing prevention
- Campus resources

https://covid.dartmouth.edu/

Questions?

quant.biomed.sci@Dartmouth.edu

Dartmouth | QBS