

Experience Coding and Decoding Secret Messages

July 22-26, 2024 | \$850



PROGRAM OVERVIEW

Mission Possible! Drexel's [Mathematics Department](#) will lead students on a fascinating journey into the world of cryptography, the art of secret communication through coding and decoding. This cryptic and highly specialized technique involves the skillful transformation of plain messages into enigmatic text, rendering them comprehensible only to their intended recipients. In an age marked by the widespread use of modern communication technologies, the need for security in transmitting vital messages over the Internet has become a paramount concern. Future James Bonds will have the opportunity to utilize software such as Excel or Python.

PROGRAM DETAILS

DATES July 22–26, 2024

LOCATION Drexel University, Philadelphia, PA, 19104

FORMAT On-campus, commuter. Meals included. Students must cover site transportation costs.

COSTS \$850

ELIGIBILITY Rising high school sophomores, juniors and seniors.

DEADLINE June 30, 2024

DISCOUNTS Early Bird (Pay non-refundable tuition by May 1, 2024): \$765 or \$1450 (\$725/ea.) for two College of Arts and Sciences programs. Two College of Arts and Sciences programs (after May 1, 2024): \$1530 (\$765/ea.)

FEE WAIVER Participants receive a fee waiver for the Drexel University undergraduate application.

Sample Schedule | July 22-26, 2024

Program content and sequence may change due to weather, staff schedules or other circumstances.

DAY 1

- Overview of Cryptology
- Foundational Mathematical Concepts in Cryptography
- Practical Application of Excel in Cryptography
- Caesar Cipher

DAY 2

- Exploring the Multiplicative Cipher
- Understanding Affine Transformations in Cryptography
- Hands-on Practice: Coding and Decoding Exercises

DAY 3

- Understanding matrix multiplication and inverses for 2×2 Matrices
- Introduction to the Hill Cipher in Cryptography
- Practice Exercises

DAY 4

- Exponential Ciphers
- RSA Encryption
- Practice Exercises

DAY 5

- Review of the topics
 - Group presentations on assigned topics
 - Wrap-up
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APPLY TODAY: drexel.edu/summer/arts-sciences

