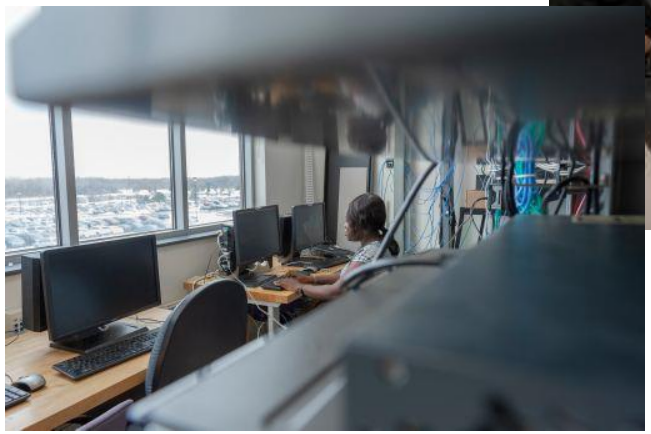
Communication Networks

Be one of the innovative leaders helping to shape the ever-evolving future of communications and information delivery

- **Provides a solid foundation in network and communication theory and application**
- **Graduates are well positioned to become the next leaders and innovators in the communications industry**

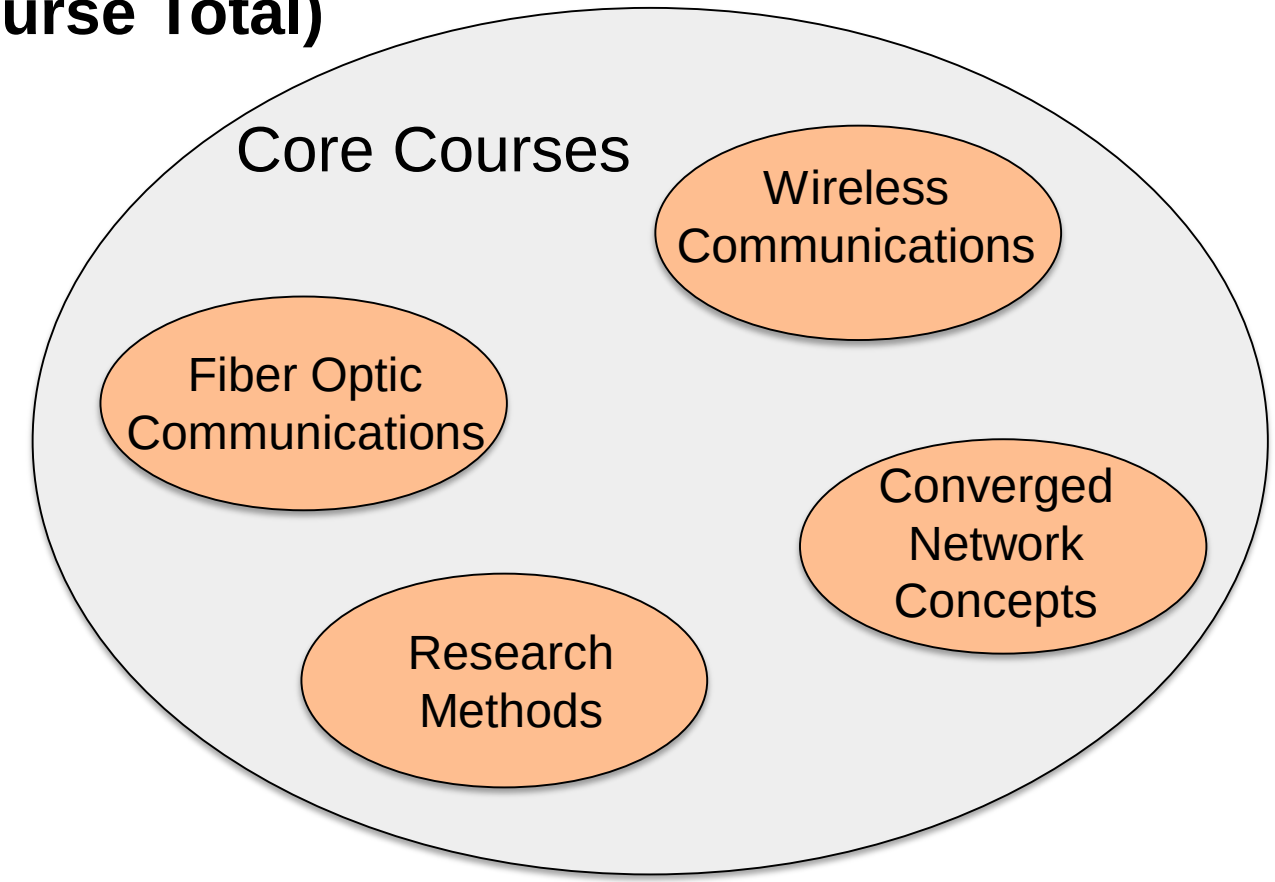


Communication Networks

- **30 Credit Hour Program**
  - Thesis, Capstone, and Comprehensive Exam opportunities
  - Program focuses on learning theory through application
  - Degree can be achieved in as little as 18 months
- **Focus Areas in Communication Networks**
  - Fiber-Optic and Photonic Communications
  - Wireless Communications
  - Network Design and Management
- **Ability to obtain up to a year long coop position**

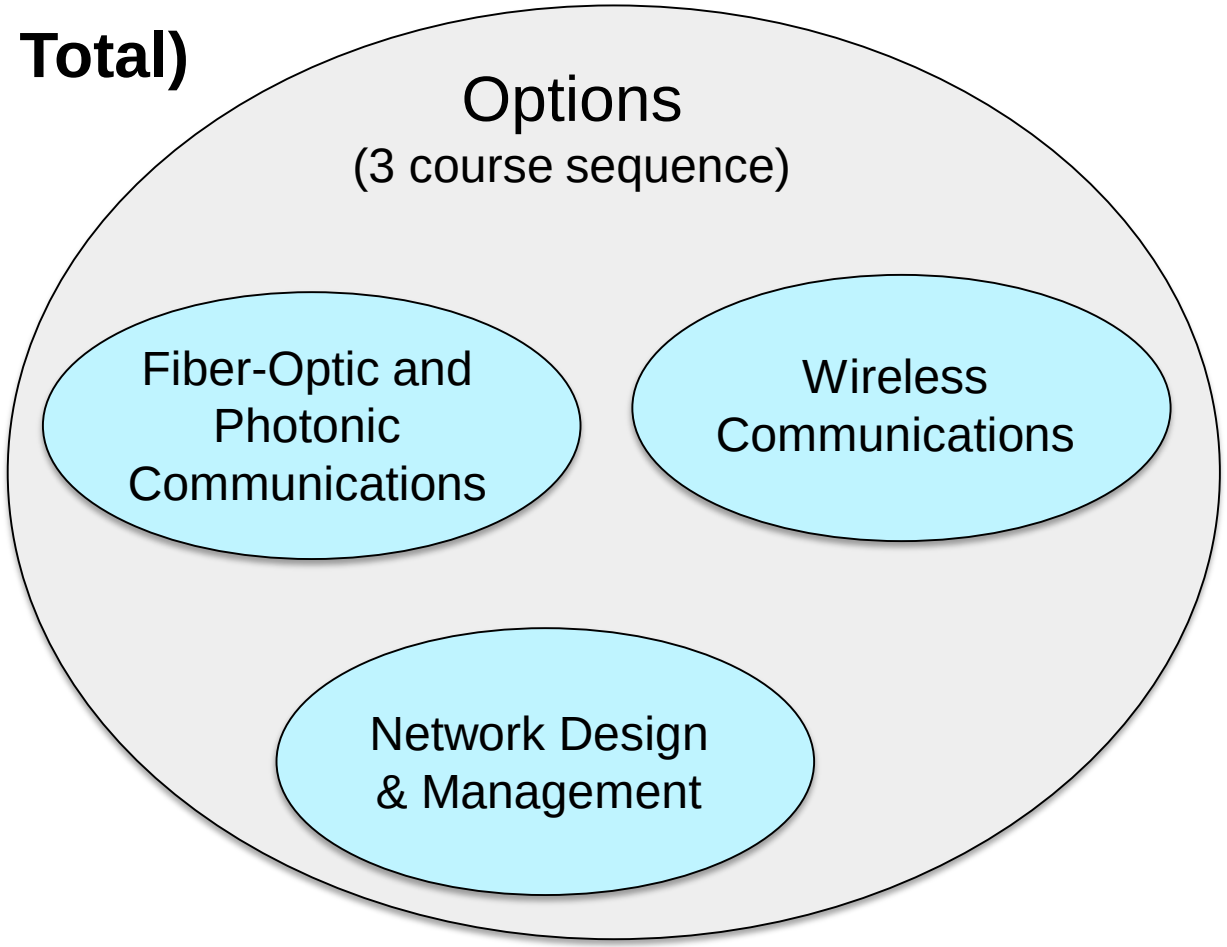
Communication Networks

- **Program Structure: (10 Course Total)**



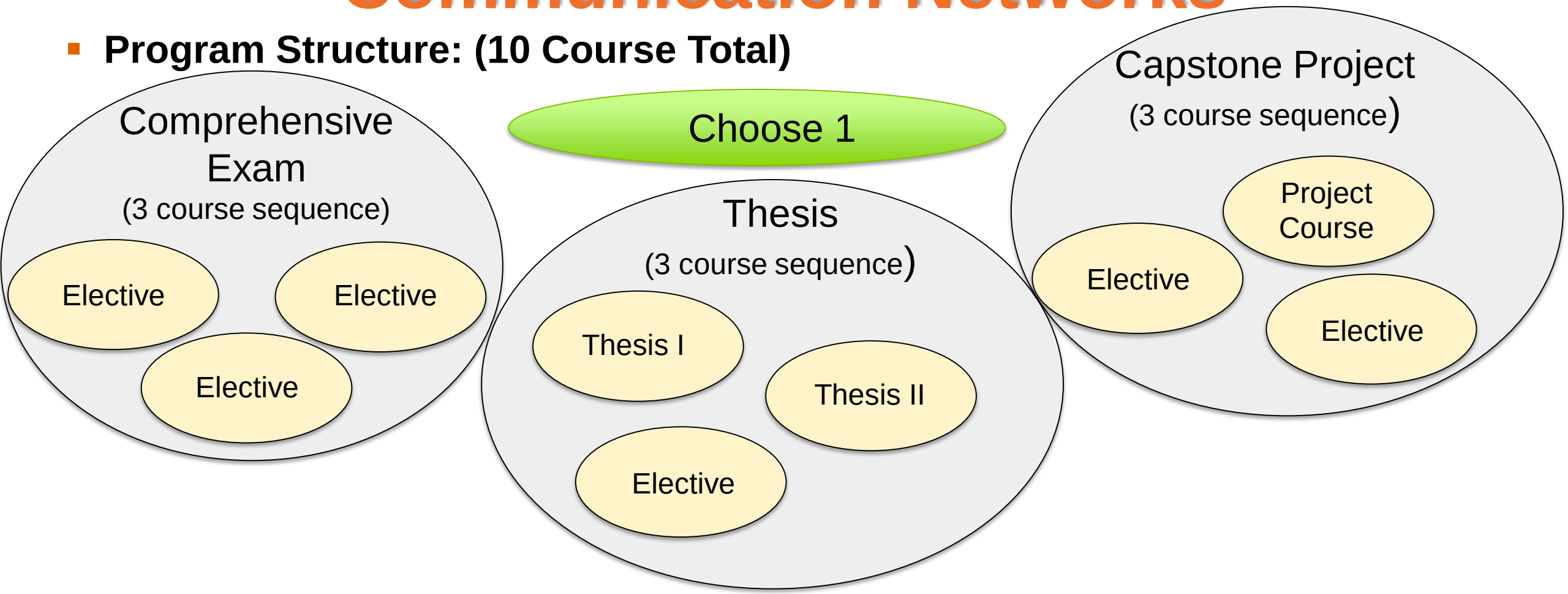
Communication Networks

- **Program Structure: (10 Course Total)**



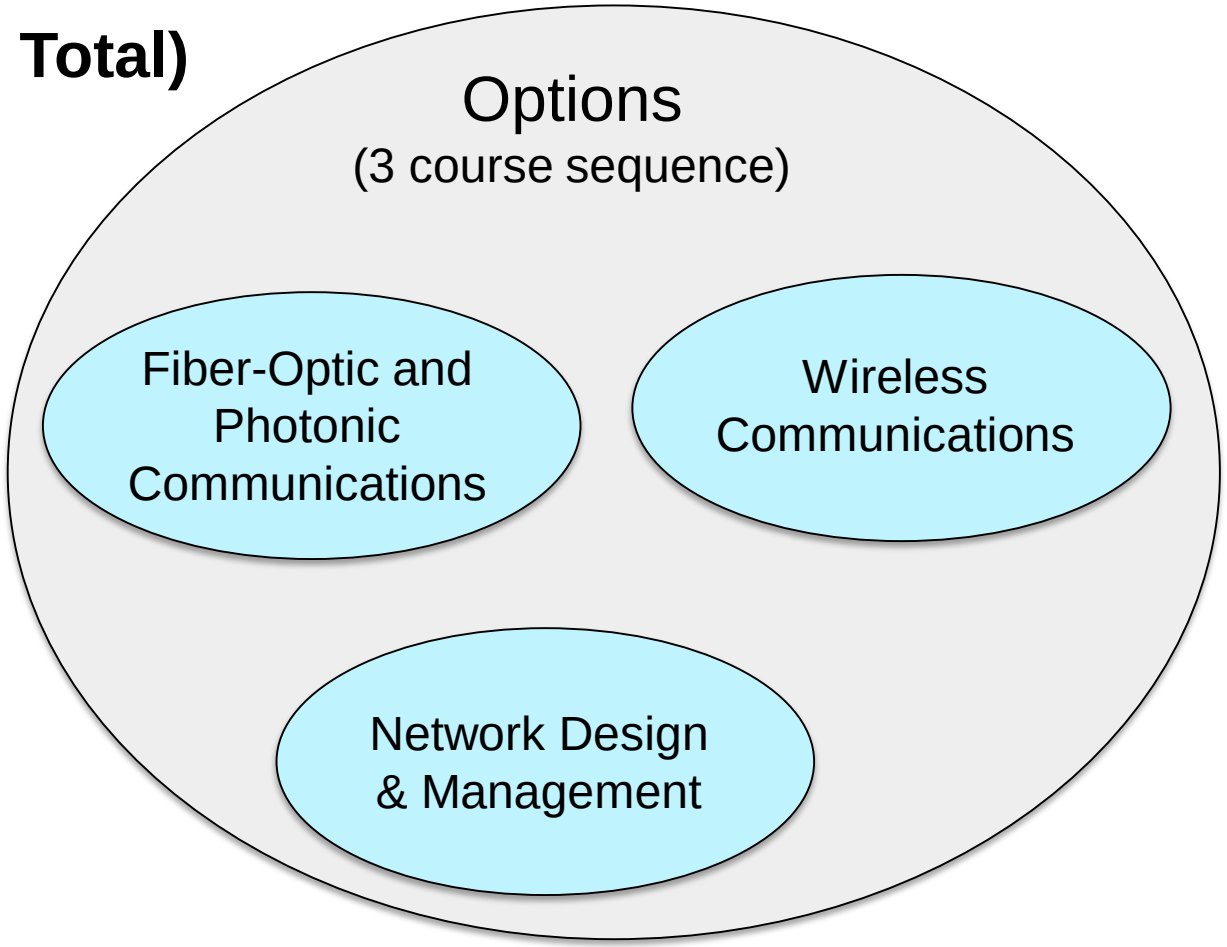
Communication Networks

- **Program Structure: (10 Course Total)**



Communication Networks

- **Program Structure: (10 Course Total)**



Fiber Optic & Photonic Communications: Course Selection

Advanced Fiber-Optic Communications TCET-745

Fiber-Optic Test & Measurement TCET-789

Choose 3 courses from this set

Optoelectronics EEEE-771

Surface Mount Electronics Manufacturing MFET-655

Fiber Optic & Photonic Communications: Content Examples

Advanced Fiber-Optic Communications

- Coherent technologies
- BER, Q-factor, eye diagrams
- State-of-the-art advances
- Hands-on training

Fiber-Optic Test & Measurement

- Test-station design/spec/activation
- Diagnostics & reliability
- Optical polarization
- Hands-on training

Optoelectronics

- Operating principles of devices
- Optical resonators & lasers
- Detectors & modulators

Surface Mount Electronics Manufacturing

- Advanced packaging
- Board design
- Hands-on training

Wireless Communications: Course Selection

Advanced Wireless Communications

TCET-752

Wireless Networks

TCET-753

Wireless Systems Policy

TCET-750

Wireless Communications: Content Examples

Advanced Wireless Communications

- Frequency Equalization
- mmWave Communication
- MIMO massive MIMO Systems
- Software-defined radio

Wireless Networks

- PHY layer of network
- Wireless DLL
- Wireless MAC
- Wireless Network Protocols

Wireless Systems Regulation

- Regulating agencies
- Considerations for System Design
- Case studies

Network Design & Management: Course Selection

Applied Machine Learning

TCET-620

Next Generation Networks

TCET-747

Choose 3 courses from this set

Network Planning & Design

TCET-760

Telecom Network Engineering

TCET-723

Fiber Optic & Photonic Communications: Content Examples

Applied Machine Learning

- Neural Networks
- Deep Learning
- Training and Validation
- Predictions

Next Generation Networks

- Focuses on Recent Advances
- 5G, Massive MIMO, mmWave
- Physical Layer Advances
- Interned of Things

Network Planning & Design

- Metropolitan & Wide Area Networks
- Analyze Network Flow & Capacity Needs
- Writing Network Proposals

Telecom Network Engineering

- Timing, Synchronization
- Quality of Service
- Network Simulation

QUESTIONS

- **ECTET contact:**
  - Dr. James Lee, Department Chair jhleme@rit.edu
- **RIT Home Page:**
  - www.rit.edu
- ***ECTET* Home Page:**
  - www.rit.edu/engineering technology/ectet/
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