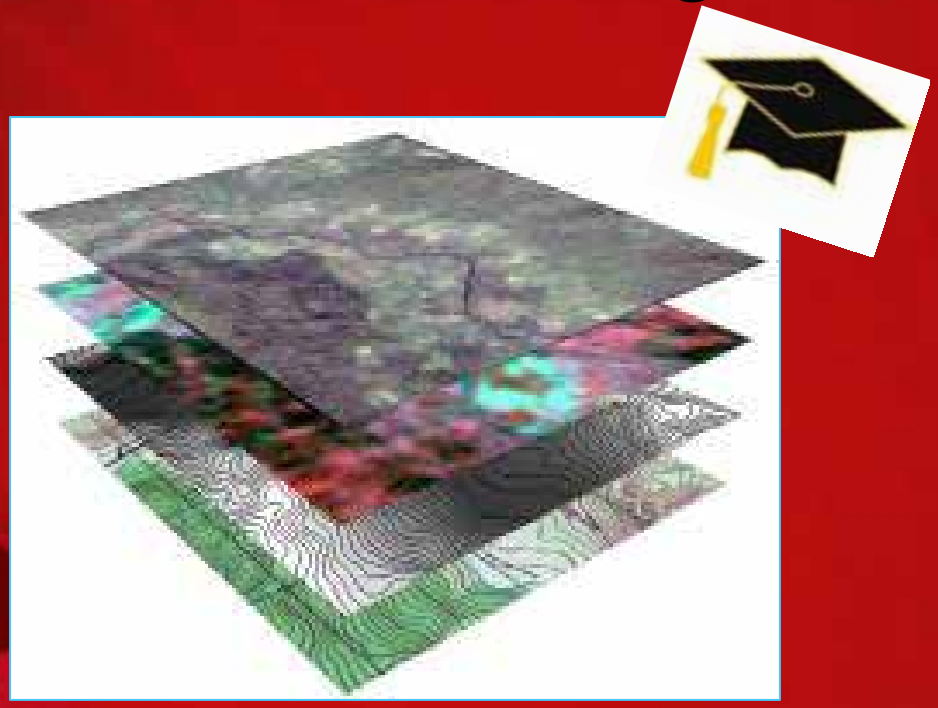
The Development of a Track System for GIS Certificate Programs



R. B. Schultz and Judy Bock

Elmhurst College

GIS Programs at Colleges and Universities

- 3,500 colleges & universities in US and 4,000 world wide (Phoenix, 2007)
  - Over 315 programs are listed on the Searchable Database on the Higher Ed web page of ESRI's site
  - 50,000 students a year learning GIS in US schools
- GIS is taught or used in over 70 disciplines and departments
    - **geography, geology, sociology, archeology, computer science, forestry, agriculture, engineering, environmental science, business, drafting, economics, political science, history, etc.**
    - **College and university administration**

Who Takes GIS Certificate and Distance Ed Courses?

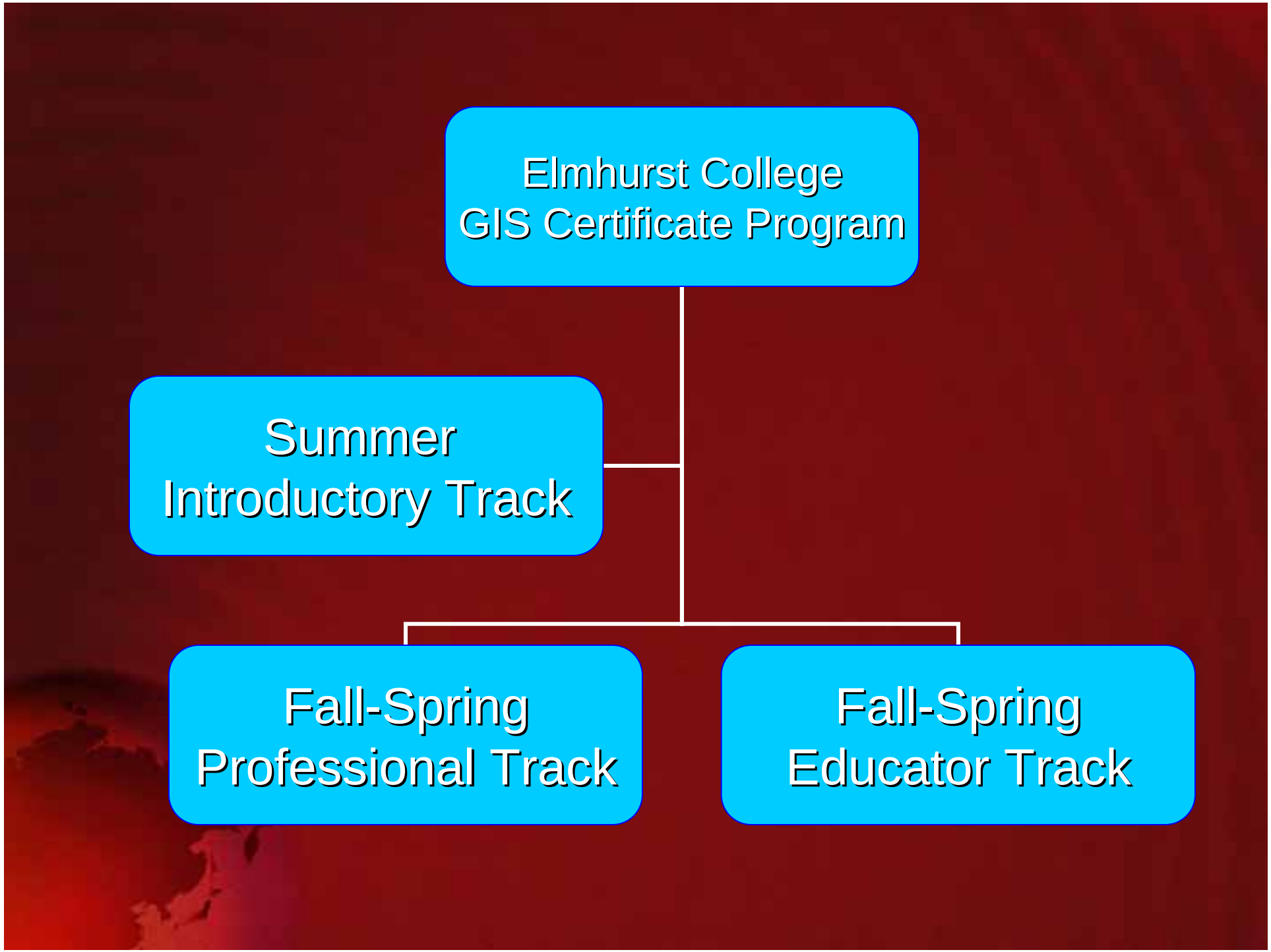
- 75% of Students in Adult-Oriented Programs are Working Professionals
  - Upgrading and Retraining in technology
  - Need for Knowledge in Related Fields
    - Business, Marketing, Economics, Commerce
- Educators
  - K-12, College and University Personnel
- Recent University Graduates
  - Jobs Require Knowledge of Spatial Concepts
- The Elmhurst College GIS Certificate Program is designed with these student needs and time/location restrictions in mind

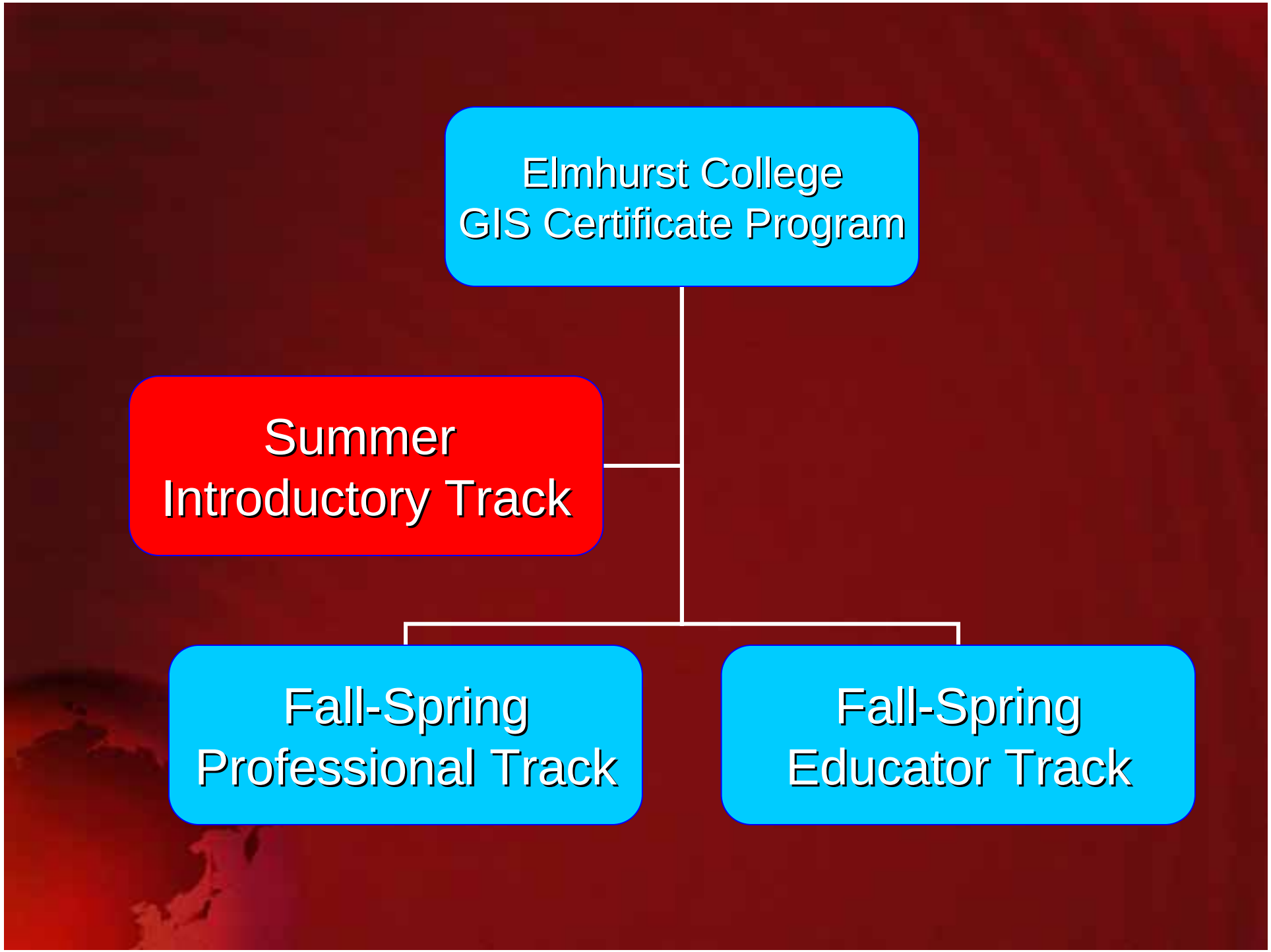
Elmhurst College's GIS Certificate Program

- Original organization of Program had all students in one classroom
- Challenges:
  - Introductory students were "lost"
  - Advanced students were not challenged
  - Limited market around local area
- Positives:
  - Beginners learned from experts
  - Collaborative learning environment

Advancements to the Elmhurst College GIS Certificate Program Began Fall 2006

- Three specific tracks:
  - Introductory (leading to Professional Track admission)
  - Professional Track
  - Educator Track
- Each with specific coursework tailored to goals of students
- Either track can be completed in less than one calendar year


Elmhurst College
GIS Certificate Program
Summer
Introductory Track
Fall-Spring
Professional Track
Fall-Spring
Educator Track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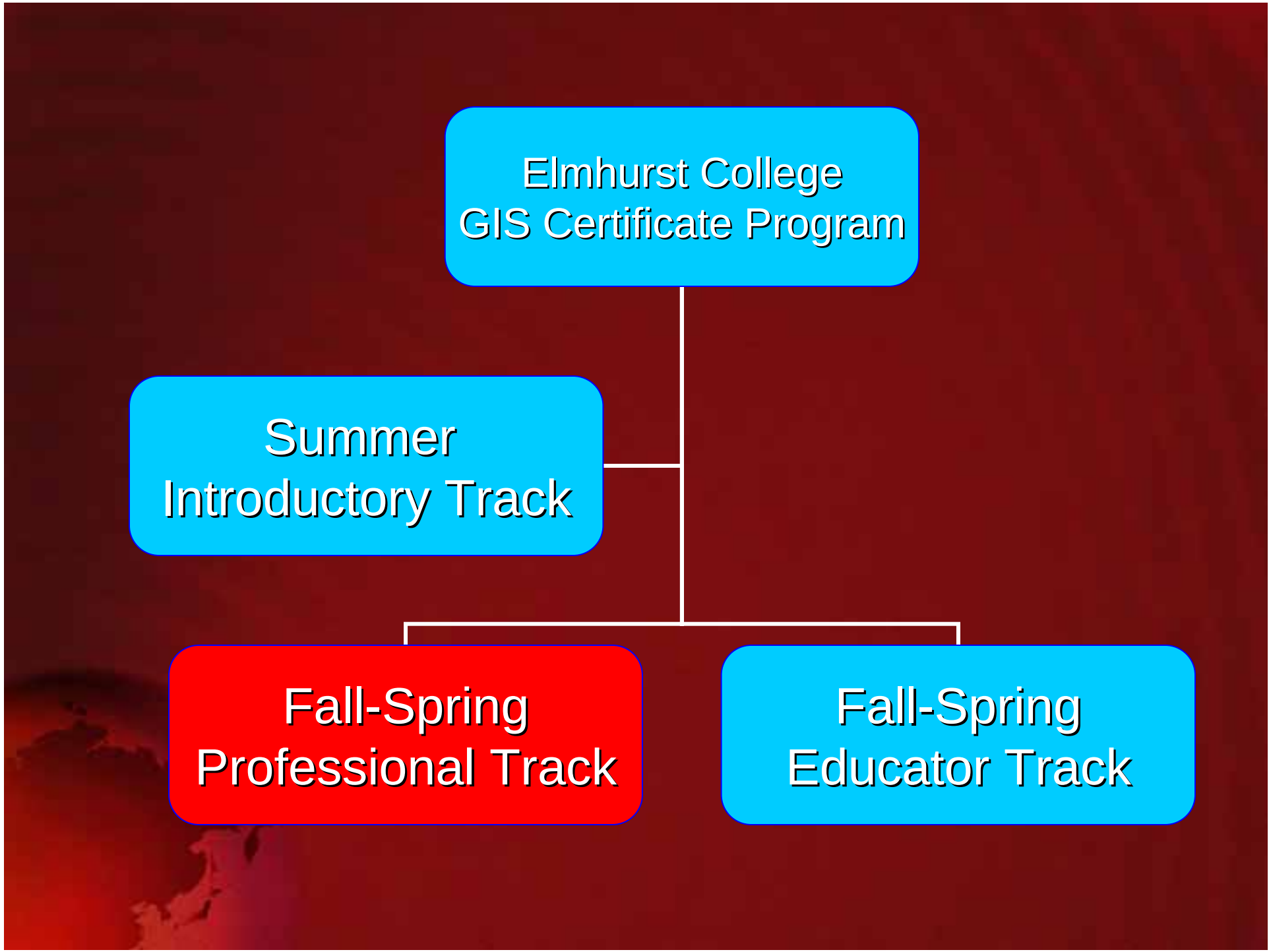
GIS Certificate Program Introductory Track

- Cohort-based; can even be “company-based”
- *Hybrid* format which meets weekly on Wednesday evenings; remainder of course material is presented online so that students may work at their own convenience and pace.
- Coursework:
  - **Summer Session: June-July**
    - **GIS 100 Fundamentals of GIS**
- **Successful completion of Introductory Track course meets requirements for acceptance into Professional Track.**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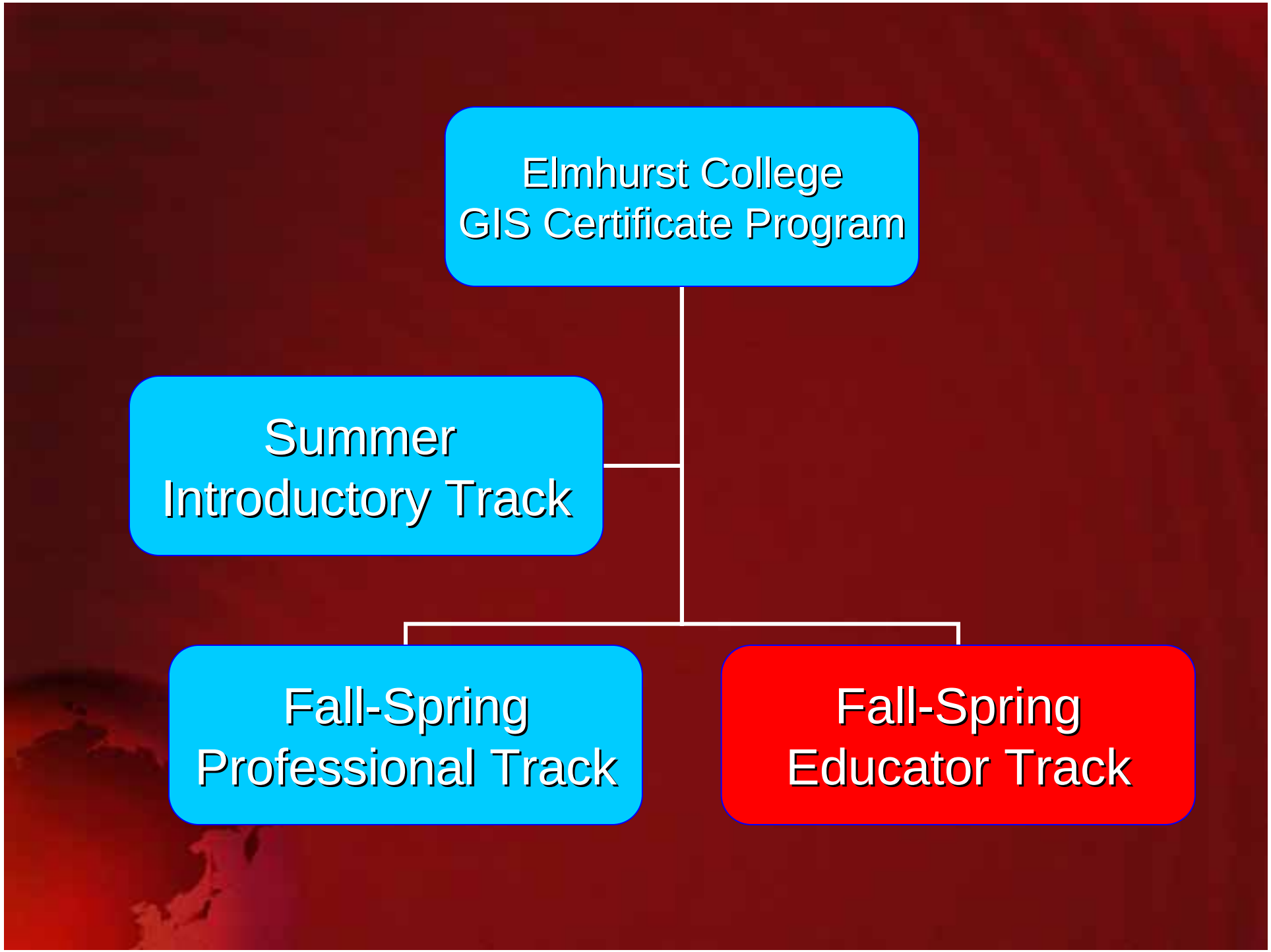
GIS Certificate Program Professional Track

- Entirely online; can even be “company-based”
- All course materials presented online via a course management system so that students may work at their own convenience and pace.
- Coursework:
  - **Session 1: Fall (August-December)**
    - **GIS 200 Advanced Remote Sensing Techniques**
    - **ISG 100 Programming with ArcObjects**
  - **Session 2: Spring (February-May)**
    - **GIS 300 Capstone: Practical GIS Applications**
    - **ISG 200 Implementing Geodatabases**
- All courses facilitated by ESRI Certified Instructors and working professionals in GIS
- Capstone course taught by ESRI employee.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GIS Certificate Program
Educator Track

- Cohort-based; can even be “institution-based”
- *Hybrid* format which meets bi-weekly on Wednesday evenings; remainder of course material is presented online via a course management system so that students may work at their own convenience and pace.
- Coursework:
  - **Session 1: Fall (August-December)**
    - **GIS 100 Fundamentals of GIS**
  - **Session 2: Spring (February-May)**
    - **GIS 300 Capstone: GIS in Society: Teaching Methods**

Tuition and Software

- Tuition
  - The cost per course is somewhat less than the traditional College credit offerings. Consult with the School for Advanced Learning (SAL) for more information: (630) 617-3300
  - All classes are “for” college credit; tuition reimbursements are available for most organizations
  - Scholarships are available
- Software:
  - Depending on the track students enroll in, they will receive one or more of the following software packages as part of the registration fees:
    - ArcGIS 9.x including all extensions (ArcMap level)
    - Google Earth Pro (Educator Track only)

Contacts

- Coordinators:
  - **Dr. Rich Schultz, GIS Coordinator**
    - Phone: (630) 617-3128
    - E-Mail: richs@elmhurst.edu
  - **Ms. Linda Krause, IS Coordinator**
    - Phone: (630) 617-3224
    - E-Mail: lindak@elmhurst.edu

- Elmhurst College

  School for Advanced Learning (SAL):

  Phone: (630) 617-3300