SCIENCE LEARNING CENTER

Designing for a New Undergraduate STEM Experience at UGA

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Arzu Yilmaz, AICP

Office of University Architects - March 28, 2015
• Background
• Design Concept
  o Shared Building
  o Long Term Flexibility
  o User Involvement
• Learning Spaces
  o Instructional Labs
  o 280-seat Classrooms
  o SCALE-UP Classrooms
  o Collaboration Spaces
• Questions / Comments
SCIENCE LEARNING CENTER - TWENTY YEARS FROM INCEPTION TO COMPLETION

1996
- Master Plan
- Identified deficiencies in teaching space

1997
- Deferred Maintenance Study

2002
- The Capital Outlay Plan proposed new Biological Sciences and Chemistry buildings for the 1st time and renovations on existing buildings

2004
- Capital Outlay Plan lacked administrative support for new teaching facility

2005
- HOK study for Biological Sciences Building
- Renovation return on investment: 85 cents/$

2007
- First Capital Outlay Plan to specifically address deficiencies in buildings and teaching spaces

2009
- Physics building receives $3.2M for a new addition and renovation
- First SCALE-UP classroom implementation in Physics building

2009-07
- Capital Outlay Plan proposed new chemistry building

2009-07
- A new Science Learning Center is proposed
- Facility found too large
- No administrative support

2009
- Study by Collins, Cooper, Carus

2010-12
- OUA works with Government Relations, President, and Provost to prioritize Science Learning Center in Capital Outlay plan

2013
- Science Learning Center approved by BOR

2016
- Science Learning Center opening

Office of University Architects’ (OUA) Involvement
- Master Planning
- Geographic Information Systems (GIS)
- Design

PRE-PLANNING

PROJECT MANAGEMENT

SCIENCE LEARNING CENTER
Background
## Schedule and Overview of Design Process

### 2013
- **August**: Project Initiation
- **September**: SCIENCE LEARNING CENTER
- **October**: OUA SUPPORT TEAM
- **November**: AND SCHEDULE
- **December**: SEPTEMBER 11, 2013

### 2014
- **January**: SCIENCE LEARNING CENTER
- **February**: SCHEDULE AND OVERVIEW OF DESIGN PROCESS

### 2015
- **January**: SCIENCE LEARNING CENTER
- **February**: SCHEDULE AND OVERVIEW OF DESIGN PROCESS

### 2016
- **January**: SCIENCE LEARNING CENTER
- **February**: SCHEDULE AND OVERVIEW OF DESIGN PROCESS

### Project Timeline
- **July 2014**: START CONSTRUCTION
- **August 2016**: OCCLUSION

### Key Dates
- **JULY 2014**: START CONSTRUCTION
- **AUGUST 2016**: OCCLUSION

### Design Documents
- **Design and Construction Phase 1**: Engineering, Interiors, Construction
- **Design and Construction Phase 2**: Engineering, Interiors, Construction
- **Design and Construction Phase 3**: Engineering, Interiors, Construction
- **Design and Construction Phase 4**: Engineering, Interiors, Construction

### Construction Documents
- **Design and Construction Phase 1**: Engineering, Interiors, Construction
- **Design and Construction Phase 2**: Engineering, Interiors, Construction
- **Design and Construction Phase 3**: Engineering, Interiors, Construction
- **Design and Construction Phase 4**: Engineering, Interiors, Construction

### Procurement
- **AV / Furniture / Equipment**: Intermec, Construction
- **Design and Construction Phase 1**: Intermec, Construction
- **Design and Construction Phase 2**: Intermec, Construction
- **Design and Construction Phase 3**: Intermec, Construction
- **Design and Construction Phase 4**: Intermec, Construction

### Key Personnel
- **Project Manager**: Scott Hargrove / Arco Thomas
- **Project Manager**: Clayton W. Robin
- **Project Manager**: Clayton W. Robin
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**The University of Georgia**

**SCIENCE LEARNING CENTER**

**SCHEDULE AND OVERVIEW OF DESIGN PROCESS**
Role of Building Steering Committee

• Provide guidance and advice on the **instructional function** of this facility during the design process

• Consider the Science Learning Center as a **whole**

• Consider the **long-term use of the building** in terms of undergraduate science instruction
<table>
<thead>
<tr>
<th>Program Summary</th>
<th>Program Areas</th>
<th>Actual Areas</th>
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<tbody>
<tr>
<td>1.0 Chemistry Total NSF</td>
<td>30,302</td>
<td>29,100</td>
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<td>Instructional Labs</td>
<td>25,600</td>
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<td>Prep Labs</td>
<td>3,220</td>
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<td>Storage</td>
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<td>Offices</td>
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<td>2.0 Biological Sciences/Plant Biology</td>
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<td>Instructional Labs</td>
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<td>Instructional Labs</td>
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<tr>
<td>Offices</td>
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<td>4.0 Common Spaces</td>
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<td>Classrooms</td>
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<td>Learning support</td>
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<td>Collaboration Spaces</td>
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<td>Building Support &amp; Safety Systems</td>
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<td>Total NSF</td>
<td>70,982</td>
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<td>Efficiency</td>
<td>58%</td>
<td>54%</td>
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<tr>
<td>Total GSF</td>
<td>122,224</td>
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Not Included in the Program

- No computer labs
- No emergency generator or back-up power
- No lesson capture systems included
- Building systems are based on instructional lab requirements and will not easily convert to research labs
Science Learning Center

Project Site - Context

October 9, 2014
SCIENCE LEARNING CENTER
COLLABORATION SPACES

First Floor
Enlarged Partial Plan

SPACE LEGEND
- CHEMISTRY PREP LAB SPACE
- ORGANIC CHEMISTRY LAB SPACE
- STUDENT SPACE
- CLASSROOM SPACE
- FACULTY SPACE
- PHYSICS PREP LAB SPACE
- PHYSICS LAB SPACE
- CIRCULATION
- VERTICAL CIRCULATION
- BUILDING SUPPORT

- (3) TA/Student Meeting Rooms
- Lab Coordinator
- TA/Student Meeting Rm
- CTL Office
- IT
- Student spaces
- Lab Manager
- Physics Teaching Lab
- Prep
- Student spaces
- Organic Chemistry Lab (Typ.)
- Student spaces
• 1280 square feet
• 24 students in pods (TBD)
• 2 – 6’ fume hoods
• 12 snorkels or capture hoods (options to be explored)

• Utilities:
  • Hot & cold potable water
  • Compressed air
  • Vacuum
  • Natural gas
  • DI water
  • 110 V electrical
    8 receptacles/pod
  • Data
    1 drop/2 students

• AV projector, screen, monitors: TBD

• Transparency & Natural Light

GENERAL CHEMISTRY (13 REQUIRED)
- 1280 square feet
- 24 students in pods (TBD)
- 2 - 4 ft fume hoods
- 12 sumps or capture hoods
- (options to be explored)

- Utilities:
  - Hot & cold potable water
  - Compressed air
  - Vacuum
  - Natural gas
  - DI water
  - 110V electrical
  - 8 receptacles/pod
- Data:
  - 4 drops/2 students
- AV projectors, screen, monitors: TBD
- Transparency & Natural Light
SCALE-UP Classrooms
SCALE UP Classrooms

White Board total 73.5 full height lf + behind projection screen 18 lf + 28 lf partial height below LCD flat panels = 119.5 LF Grand Total
SCALE UP Classrooms
SCIENCE LEARNING CENTER

280-SEAT CLASSROOMS
Support Spaces

LAB MANAGER

119A
A. Books Mall Plant Zone
B. Meadows Plant Zone
C. Forest Edge Plant Zone
D. Rain Garden Plant Zone
E. Building Facade
F. Evergreen Screen Plant Zone
G. Shady Cove Plant Zone
H. Bioretention Plant Zone
I. Riparian Plant Zone
J. Plaza Planters