CAMPUS STANDARDS
SUMMARY SHEET

DESIGN CRITERIA
STEM RESEARCH AND CLASSROOM BUILDING

Access
- Enclosed connection to existing engineering building
- Outdoor access to labs

Structure
- Steel frame with masonry infill
- Structural bays sized to maximize flexibility of space
- Designed to meet current seismic codes

Landscaping
- Will follow current campus standards to promote park-like atmosphere
- Effort to maximize protection of Legacy Trees

Entrances
- Primary entrance to be prominent and welcoming
- All secondary entrances secured

Facade
- Use of campus standard materials – brick, precast, glass
- Elevations will blend with existing buildings, yet present a forward, high tech, engineered look

Flooring
- Durable, stain resistant, polished concrete in appropriate areas

Doors
- Campus standard stained solid core wood with sidelight
- Double doors at labs for equipment access

Circulation
- Exterior – maintain campus circulation patterns
- Interior – sufficient corridor widths to facilitate access for lab and other equipment

Audio/Visual
- Specialty audio visual at labs, active learning classrooms, and collaborative spaces

Security
- Electronic access card key system

Environmental Health and Safety
- Appropriate fire alarm and suppression systems
- Hazardous material storage systems
- Eye wash and emergency showers

Sustainability
- Design will meet or exceed TN HPBr Standards (High Performance Building Requirements)

Mechanical/HVAC
- Chiller boiler system for temperature and humidity control
- Filtered compressed air system

Reference for University of Memphis Campus Planning & Design Standards:
https://www.memphis.edu/cpd/design.php
FACILITIES PLAN DETAIL REQUIREMENTS

Program Served: Interdisciplinary

Description of Functional Area: Active learning classrooms, support spaces

Total NetAssignable Square Feet (3 @ 2,100, 2 @ 400): 7,100S.F.

Description of Educational Activity to Take Place in Area: Active learning classrooms and adjoining support spaces, interactive display and flexible space to break out into smaller working groups.

Special Requirements:

Floors: Vinyl composition tile

Walls: Painted CMU

Doors: Solid core wood with narrow vision lite

Ceilings: Suspended acoustical tile

Windows: Insulating glazing

Acoustics: N/A

Electrical Service: as programmed

Plumbing Service: N/A

Atmospherics: Temperature/humidity control

Other Utilities: N/A

Safety: Sprinkler system

Communications: Data

Permanent Equipment: Smartboards, video monitors, whiteboards

Movable Equipment: N/A
Program Served: Engineering

Description of Functional Area: Advanced Manufacturing Lab

Total Net Assignable Square Feet (1 @ 3,000): 3,000 S.F.

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Description of Educational Activity to Take Place in Area: Advanced manufacturing including 3d metal printing. Printing area to have static dissipative flooring, glass enclosure, argon fire suppression, and dropped ceiling. Remainder of lab to have polished concrete and exposed structure.

Special Requirements:

- Floors: Static dissipative tile, polished concrete
- Walls: Painted CMU
- Doors: Solid core wood with narrow vision lite
- Ceilings: Suspended acoustical tile with hold downs, exposed structure
- Windows: Insulating exterior glazing, fire rated glass at printing enclosure
- Acoustics: N/A
- Electrical Service: as programmed
- Plumbing Service: as programmed
- Atmospherics: Temperature/humidity control
- Other Utilities: Nitrogen, argon, compressed air
- Safety: Argon fire suppression system
- Communications: Data/tele
- Permanent Equipment: as programmed
- Movable Equipment: as programmed
Program Served: **Interdisciplinary**

Description of Functional Area: **Collaboration Hub**

Total Net Assignable Square Feet (1 @ 1500 sf): **1500 S.F.**

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Description of Educational Activity to Take Place in Area: **Open laboratory**

Special Requirements:

- Floors: **Polished Concrete**
- Walls: **Painted CMU**
- Doors: **Solid core wood with narrow vision lite**
- Ceilings: **Exposed Structure**
- Windows: **Insulating glazing**
- Acoustics: **N/A**
- Electrical Service: **As programmed**
- Plumbing Service: **As programmed**
- Atmospherics: **Temperature/humidity control**
- Other Utilities: **Compressed air**
- Safety: **Sprinkler system**
- Communications: **Data**
- Permanent Equipment: **N/A**
- Movable Equipment: **N/A**
Program Served: Engineering, Interdisciplinary

Description of Functional Area: Conference, Seminar

Total Net Assignable Square Feet (2 @ 300 sf, 1 @ 1200 sf): 1,000 S.F.

Description of Educational Activity to Take Place in Area: Conference, Seminar

Special Requirements:

Floors: Carpentry

Walls: Painted drywall

Doors: Solid core wood with narrow vision lite

Ceilings: Suspended acoustical tile system

Windows: Insulating glazing

Acoustics: Sound attenuation in walls

Electrical Service: As programmed

Plumbing Service: N/A

Atmospherics: Temperature/humidity control

Other Utilities: N/A

Safety: Sprinkler system

Communications: Data

Permanent Equipment: N/A

Movable Equipment: N/A
Program Served: Engineering

Description of Functional Area: Exhibit space, service area

Total Net Assignable Square Feet (1@1200, 1@400): 1600 S.F.

Description of Educational Activity to Take Place in Area: Presentation of engineering projects and achievement

Special Requirements:

- Floors: Carpeting
- Walls: Painted drywall
- Doors: Solid core wood
- Ceilings: Suspended acoustical tile ceiling system
- Windows: Insulating glazing
- Acoustics: Sound attenuation in walls
- Electrical Service: as programmed
- Plumbing Service: N/A
- Atmospherics: Temperature/humidity control
- Other Utilities: N/A
- Safety: Sprinkler system
- Communications: Data
- Permanent Equipment: N/A
- Movable Equipment: N/A
Program Served: Engineering, Interdisciplinary, CAS

Description of Functional Area: Offices

Total Net Assignable Square Feet (42 @ 120 – 500 sf): 6,990 S.F.

Additional requirements:

Description of Educational Activity to Take Place in Area: Offices

Special Requirements:

Floors: Carpeting
Walls: Painted drywall
Doors: Solid core wood with narrow vision lite
Ceilings: Suspended acoustical tile system
Windows: Insulating glazing
Acoustics: Sound attenuation in walls
Electrical Service: As programmed
Plumbing Service: N/A
Atmospherics: Temperature/humidity control
Other Utilities: N/A
Safety: Sprinkler system
Communications: Data/Tele
Permanent Equipment: N/A
Movable Equipment: N/A
Program Served: Engineering, Interdisciplinary, CAS

Description of Functional Area: Office Corridors

Total Net Assignable Square Feet: N/A

Description of Educational Activity to Take Place in Area: Office corridors not including public corridors

Special Requirements:

Floors: Carpeting
Walls: Painted drywall
Doors: Solid core wood with narrow vision lite
Ceilings: Suspended acoustical tile
Windows Insulating glazing
Acoustics: Sound attenuation in walls
Electrical Service: as programmed
Plumbing Service: N/A
Atmospherics: Temperature/humidity control
Other Utilities: N/A
Safety: Sprinkler system
Communications: N/A
Permanent Equipment: N/A
Movable Equipment: N/A
Program Served: Engineering, Interdisciplinary, CAS

Description of Functional Area: Public Corridors

Total Net Assignable Square Feet: N/A

Description of Educational Activity to Take Place in Area: Public corridors not including office suites

Special Requirements:

Floors: Vinyl Composition Tile
Walls: Painted CMU
Doors: Solid core wood with narrow vision lite
Ceilings: Suspended acoustical tile
Windows: Insulating glazing
Acoustics: N/A
Electrical Service: as programmed
Plumbing Service: as programmed
Atmospherics: Temperature/humidity control
Other Utilities: N/A
Safety: Sprinkler system
Communications: N/A
Permanent Equipment: N/A
Movable Equipment: N/A
Program Served: **Interdisciplinary**

Description of Functional Area: **Reception**

Total Net Assignable Square Feet (1@1,000 sf): **1,000 S.F.**

Description of Educational Activity to Take Place in Area: **Receive visitors to the building**

Special Requirements:

- Floors: **Carpeting**
- Walls: **Painted drywall**
- Doors: **Solid core wood**
- Ceilings: **Suspended acoustical tile ceiling system**
- Windows: **Insulating glazing**
- Acoustics: **Sound attenuation in walls**
- Electrical Service: **as programmed**
- Plumbing Service: **N/A**
- Atmospherics: **Temperature/humidity control**
- Other Utilities: **N/A**
- Safety: **Sprinkler system**
- Communications: **Data/tele**
- Permanent Equipment: **N/A**
- Movable Equipment: **N/A**
Program Served: Engineering, Interdisciplinary

Description of Functional Area: Research Labs and Service Spaces

Total Net Assignable Square Feet (12 @ 150 – 3750 sf): 17,125 S.F.

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Description of Educational Activity to Take Place in Area: Research

Special Requirements:

Floors: Polished concrete
Walls: Painted CMU
Doors: Solid core wood with narrow vision lite
Ceilings: Exposed structure
Windows: Insulating glazing
Acoustics: Sound attenuation in walls
Electrical Service: as programmed
Plumbing Service: as programmed
Atmospherics: Temperature/humidity control
Other Utilities: Compressed air
Safety: Sprinkler system
Communications: Data/tele
Permanent Equipment: as programmed
Movable Equipment: as programmed
Program Served: Engineering, Interdisciplinary, CAS

Description of Functional Area: Toilet Rooms

Total Net Assignable Square Feet: N/A

Description of Educational Activity to Take Place in Area: Toilet rooms

Special Requirements:

Floors: Unglazed 2" x 2" mosaic tile flooring and base

Walls: Glazed 4¼" x 4¼" ceramic tile

Doors: Solid core wood

Ceilings: Suspended acoustical tile, moisture resistant

Windows: N/A

Acoustics: N/A

Electrical Service: as programmed

Plumbing Service: as programmed

Atmospherics: Negative air pressure

Other Utilities: N/A

Safety: Sprinkler system

Communications: N/A

Permanent Equipment: Floor mtd. high density polyethylene toilet partitions

Movable Equipment: N/A
## EXISTING BUILDINGS RENOVATION

<table>
<thead>
<tr>
<th>Location</th>
<th>Sq. Ft.</th>
<th>Plan</th>
<th>Current Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA 100</td>
<td>526</td>
<td>Renovate for Engineering Career Services</td>
<td>GA Offices</td>
</tr>
<tr>
<td>EA 101</td>
<td>635</td>
<td>Renovate for Engineering Career Services</td>
<td>IFTI Training Room</td>
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<tr>
<td>EA 103</td>
<td>877</td>
<td>Renovate for Engineering Career Services</td>
<td>Study Area</td>
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<tr>
<td>EA 102A</td>
<td>422</td>
<td>Renovate for Engineering Career Services</td>
<td>Metrology Lab</td>
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<tr>
<td>EA 302</td>
<td>1771</td>
<td>Renovate for Engr Student Services Computer Lab</td>
<td>IFTI</td>
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<tr>
<td>EA 302A</td>
<td>426</td>
<td>Renovate for Peer Tutoring</td>
<td>IFTI</td>
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<tr>
<td>EA 304</td>
<td>271</td>
<td>Renovate to (2) student services offices</td>
<td>Tutoring</td>
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EA Total: 4528

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<thead>
<tr>
<th>Location</th>
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<th>Current Use</th>
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<tbody>
<tr>
<td>ES 100</td>
<td>2057</td>
<td>Renovate for Instructional Lab</td>
<td>Structures/Earthquake Engineering Lab</td>
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<tr>
<td>ES 109A</td>
<td>172</td>
<td>Renovate for Instructional Lab</td>
<td>Lab Service/Storage</td>
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<tr>
<td>ES 207</td>
<td>632</td>
<td>Environmental Lab - Needs Renovation</td>
<td>Environmental Lab</td>
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<tr>
<td>ES 209</td>
<td>683</td>
<td>Environmental Lab - Needs Renovation</td>
<td>Marshed Bioelectronics Lab</td>
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<tr>
<td>ES 209A</td>
<td>622</td>
<td>Renovate for Laboratory/Instructional Lab</td>
<td>Senior Design Lab</td>
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<td>ES 229</td>
<td>643</td>
<td>Renovate for Laboratory/Instructional Lab</td>
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ES Total: 4809

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<th>Current Use</th>
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<tbody>
<tr>
<td>ET 113</td>
<td>364</td>
<td>Renovate - Convert to Women's Rest Room</td>
<td>Old Washroom - Used for AutoID Research</td>
</tr>
<tr>
<td>ET 226</td>
<td>2085</td>
<td>Renovate - retain current use</td>
<td>Classroom/Lab Automation and AutoID</td>
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<tr>
<td>ET 236</td>
<td>2161</td>
<td>Renovate to expand automation/AutoID Lab from ET 226, add Metrology</td>
<td>Senior Design/Student Projects Lab</td>
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</tbody>
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ET Total: 4640

Grand Total: 14377