STEEL DESIGN

2023 STUDENT COMPETITION

CATEGORY I
SPIRITUAL SPACE

CATEGORY II
OPEN

PROGRAM

2023 ACSA/AISC STEEL DESIGN STUDENT COMPETITION

Category I: Spiritual Space Category II: OPEN

Competition Overview

The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce the 23rd Annual Steel Design Student Competition for the 2022-2023 academic year. Administered by the Association of Collegiate Schools of Architecture (ACSA) and sponsored by the American Institute of Steel Construction (AISC), the program is intended to challenge undergraduate and graduate students, working individually or in teams, to explore a variety of design issues related to the use of steel in design and construction. Steel must be used as the primary structural material and contain at least one space that requires long-span steel structure, with special emphasis placed on innovation in steel design.

The Opportunities

The 2023 Steel Design Student Competition will offer architecture students the opportunity to compete in two separate categories:

Category I: Spiritual Space

Design "A Place for the Spirit" on a campus, welcoming to all, where members of the campus community and visitors can learn about and express spirituality. Program spaces include places for worship, meditation, learning, and fellowship. Steel is the primary material.

Category II: Open

Category II offers architecture students the opportunity to select a site and building program using steel as the primary material. This competition category permits the greatest amount of flexibility for any building type.

Students may not enter both categories of the competition.

Advantages of Steel

Steel has a natural beauty that can be exposed to emphasize grace, slenderness and strength in space and form, as well as in building envelopes to enhance environmental performance and aesthetic character.

Resiliency

Structural steel offers a number of benefits in building design including the capacity to bear great loads in tension and compression, high resiliency and performance under harsh and difficult conditions, such as earthquakes and hurricanes, and the ability to span great distances with minimal material. Steel can be shaped by many processes, ranging from standard rolled sections to custom castings and digitally generated components. It can be prefabricated and delivered for site assembly, and it can be erected quickly under almost any weather condition to meet tight construction schedules.

Efficiency

Steel offers the greatest strength-to-weight ratio of structural materials. In addition, steel can be constructed quickly and for all project site types with the use of labor-saving prefabrication methods such as kit-of-parts, panelization, and modular construction. A building built with steel is potentially more flexible and adaptable to allow for a change in program, occupancy, and loading needs over time. Steel, if desired by the architect, can be graceful, nimble, and minimal in its bulk both in plan and section, and it integrates easily with other systems and materials.

Sustainability

In addition to its efficiency, steel is the most recycled material in the world; it is an environmentally sound building material choice. Today, US structural steel is 98% recycled with the primary source being automobiles. Few materials can truly claim they are cradle-to-cradle.

Expression
Exposed and curved steel is an art, providing endless possibilities for architectural expression. Curved steel enhances the visibility of any building project – from the largest monumental project to that building down your street. Curved steel is one way to increase the design creativity of your next building project. And most importantly, curved steel is readily available nationally from a number of qualified AISC Associate Member Bender-Rollers. AISC information on curved steel: aisc.org/curvedsteel.

For more information, see the Supplemental Studio Guide.

Schedule

Fall 2022	Live Webinar about the competition (recording will be available)
April 5, 2023	Registration Deadline (free registration)
June 7, 2023	Submission Deadline
Summer 2023	Winners Announced
Fall 2023	Publication of Summary Book

Awards
The design jury will meet in Summer 2023 to select winning projects and honorable mentions. Winners and their faculty sponsors will be notified of the competition results directly. A list of winning projects will be posted on the ACSA web site and the AISC web site at www.aisc.org. Winning students and their faculty sponsors will receive cash prizes totaling **$20,000** with distribution as follows:

Category I: Spiritual Space

	Student	Faculty
First Place	$4,000	$1,500
Second Place	$2,000	$1,000
Third Place	$1,000	$500

Category II: Open

	Student	Faculty
First Place	$4,000	$1,500
Second Place	$2,000	$1,000
Third Place	$1,000	$500

A limited number of honorable mentions may also be awarded at the jury's discretion. Prize-winning submissions will be exhibited at the 2024 ACSA Annual Meeting and the 2024 AIA National Convention as well as published in a competition summary publication.

PROGRAMS
Category I - SPIRITUAL SPACE

A PLACE FOR THE SPIRIT

For thousands of years, human beings have designed and constructed places for the spirit-- temples, synagogues, churches, chapels, mosques--in which to gather together or on their own, to forge a connection with a spiritual realm. These places often transcend the everyday world of living and working. Today, around the globe, organized religion is in flux and many people (particularly those who are college age) are seeking the spiritual outside of conventional faith traditions. They might describe themselves as "spiritual, but not religious," and they seek communion and sharing with others. They are not affiliated with any formal religious organization, but they may find the spiritual in art, nature, other people. College campuses have typically offered non-denominational facilities for worship across a variety of faith traditions. However, the design for a campus Place for the Spirit offers new and rich possibilities to share a variety of traditional faith traditions, along with spaces that can also respond to many people's deeply rooted, individual spiritual longings. A Place for the Spirit will be a campus destination where anyone—religious, spiritual, or just curious—can find welcome and a safe place.

Steel is a strong, durable material well suited to A Place for the Spirit. It can be used to symbolically express strength with lightness. Slender steel members can be employed in architecture to admit generous amounts of natural light, which is a key experiential element of sacred architecture for millennia. Steel can negotiate long spans to create welcoming gathering spaces unencumbered by columns. It is a material that lasts—another trait of many spiritual buildings, which often take on a timeless quality.

Site

Each class or individual will select a site on a university or college campus, either on their own campus or a campus of their choice. It should be either on the campus proper or on a site easily accessible from the campus by public transit, biking, or walking. It is up to the class or individual student how the campus context is addressed, but structural steel should be a primary focus. Submissions will be required to explain the site selection, strategy, and access graphically or otherwise.

Program

The program for A Place for the Spirit includes a variety of spaces, both indoor and outdoor, designed to welcome members of the campus community and visitors no matter what their religious beliefs, theistic as well as atheistic. The spaces are meant to facilitate the selfless sharing of one's spiritual dimension with others, in a non-judgmental way. As do many campus buildings, A Place for the Spirit contains program requirements for education—learning about other religions, other people's beliefs and practices, as well as places to conduct worship services, to meditate, to engage in fellowship. The design should be sustainable (many people express their spirituality through care for the Earth). The building's placement on campus should communicate a sense of welcome and opportunities for the curious to explore (functional outdoor space that can be viewed from other campus locations).

Solutions should observe the total gross square footage of approximately 15,300 square feet including circulation and service spaces. The largest area in the program, the Spiritual Gathering Space, should be a long span (50' minimum). Please provide an itemized breakdown of the program listing spaces, square footage allocation, and totals with your submission. Following is a list of programmatic spaces for A Place for the Spirit, categorized by function.

Entry and Administration

Lobby/reception area/welcome desk/seating area	400 sf
Chaplain's office	250 sf
Asst. chaplain's office	200 sf
Support staff office	150 sf
Campus ministry offices	3 @ 100 sf each
Small Conference room	150 sf
Large conference room	300 sf
	1750 sf

Gathering and Fellowship

Spiritual Gathering Space largest space, should be long span (50' min.)		2500 sf
Multipurpose Space adjacent Spiritual Gathering Space		2000 sf
Chair/table storage		150 sf
Fellowship lounge		500 sf
Outdoor Space (Multipurpose space, including small meditation garden)	1500 sf	
Classrooms w/storage		2 @ 350 sf each
Small library/reading room		400 sf
Small group meditation room		200 sf
Two individual meditation spaces		2 @ 100 sf each
Small study rooms		3 @ 150 sf each
Display case/area for religious ceremonial objects when not in use		200 sf
Kitchen/pantry		300 sf
		9100 sf

Ancillary Spaces

Restrooms (approx. 400 sf total or per code)	800 sf
Ablutions area (Muslim use, near restrooms)	100 sf
Janitor's closet	50 sf
Circulation (stairs/corridors/elevator)	as needed
Mechanical space	1000 sf
Miscellaneous storage	200 sf
	2150+ sf

Construction

The design project must be conceived in structural steel construction and must contain at least one space/element that requires a long-span structure and capitalize on steel's unique properties to resist loads instead of just using steel in non-structural elements and finishes. The most compelling proposals should integrate the steel into the design of the project at multiple levels, from primary structure (beams, columns, frames, trusses) to building envelope and tectonic details.

Code

Students should refer to the International Building Code and the local zoning ordinance for information on parking requirements, plumbing requirements, potential height restrictions, setbacks, easements, flood, egress, and fire containment. Challenges to conventional rules—parking requirements, for example– are encouraged but should be explained, made explicit and integral to the overall solution.

Criteria for Judging

Criteria for the judging of submissions will include the following:

- Creative use of structural steel in the design solution with a minimum of one long-span space (50' min);
- Clear visionary positions & creative design approaches that envision a sacred space for the twenty-first century;
- Successful response of the design to its surrounding context;
- Successful response to basic architectural integration with structure;
- A compelling response to the physical and cultural context of the project;
- A mature awareness of and an innovative approach to sustainability as a convergence of social,
- economic and environmental issues;
- A thorough appreciation of human needs and social responsibilities;
- A thoughtful process shown in the performance evaluation

The competition encourages students to explore the many functional and aesthetic uses for steel as a building material and structural system.

Category II – OPEN

The ACSA/AISC 2023 Steel Design Student Competition also offers architecture students the opportunity to participate in an open competition with limited restrictions. With the approval of a sponsoring faculty member, students may select a site and building program.

The Category II program should be of equal complexity as the Category I program. Students entering Category II must submit a written building program, including a brief description of the building type, gross square footage, and project location, as part of the online submission in the Program Summary (copy/paste text box). Students entering Category II are *not* required to answer Performance Evaluation questions.

Restrictions
To enter the open competition students may select any building occupancy other than a spiritual or religious facility.

Construction
The design project must be conceived in structural steel construction and must contain at least one space/element that requires long-span steel structure, with special emphasis placed on innovation in steel design. The most compelling proposals will inevitably integrate the use of steel into the design of the project at multiple levels, from primary structure to building envelope and tectonic details.

Criteria for Judging
Criteria for the judging of submissions will include the following:

- Creative use of structural steel in the design solution with a minimum of one long-span space (50' min);
- Successful response of the design to its surrounding context;
- Successful response to basic architectural integration with structure;
- A compelling response to the physical and cultural context of the project;
- A mature awareness of and an innovative approach to sustainability as a convergence of social, economic and environmental issues;
- A thorough appreciation of human needs and social responsibilities

The competition encourages students to explore the many functional and aesthetic uses for steel as a building material and structural system.

RULES

Eligibility
Because the support of AISC is largely derived from steel companies whose markets are mainly in the U.S., the ACSA/AISC Steel Design Student Competition is open to students and/or student teams from ACSA Full and Candidate Member Schools, as well as ACSA Affiliate Members Schools from the U.S., Canada, and Mexico.

An ACSA member school, faculty sponsor is required to enroll students by completing an online registration form prior to registration by April 5, 2023. All student entrants are required to work under the direction of a faculty sponsor. Entries will be accepted for individuals as well as teams. Teams must be limited to a maximum of five students. Submissions should be principally the product of work in a design studio or related class.

Registration
A faculty sponsor is required to enroll students online (available at www.acsa-arch.org) by April 5, 2023. Registration can be done for an entire studio or for each individual student or team of students participating. Students or teams wishing to enter the competition on their own must have a faculty sponsor, who should complete the registration. There is no entry or submission fee to participate in the competition. Each registered student and faculty sponsor will receive a confirmation email that will include information on how the student(s) will upload final submissions online. Please add the email address competitions@acsa-arch.org to your address book to ensure that you receive all emails regarding your submission.

During registration the faculty will have the ability to add students, add teams, assign students to teams, and add additional faculty sponsors. Registration is required by April 5, 2023, but can be changed, edited, and added to until a student starts a final submission; then the registration is no longer editable.

Registration Steps:
1. Faculty log into the ACSA website,
2. Click the “Register your Students NOW” button,
3. Select the 2023 Steel Competition (Category I or II) from the submission type dropdown menu & Click “Enter”,
4. Select “Individual Registration” to add individual student. Click “Save and Continue”. You will need to know each student’s first & last names, email, & institution, which are all required fields for each student,
5. Select “Team Registration” if this is a team registration, you may add additional students by clicking “Add Student” to the same submission to this team, teams must be limited to a maximum of five students,
6. Once the individual student or team is complete, Click “Submit”,
7. Repeat steps 3 – 6 for each individual or team.

Faculty Responsibility
The administration of the competition at each institution is left to the discretion of the faculty within the guidelines set forth in this document. Work on the competition should be structured over the course of one semester during the 2022-2023 academic year.

Each faculty sponsor is expected to develop a system to evaluate the students’ work using the criteria set forth in this program. The evaluation process should be an integral part of the design process, encouraging students to scrutinize their work in a manner similar to that of the jury. After the submittal deadline, faculty will complete a survey about this process.

Digital Submission Format
Submissions must be presented on four 20” x 20” digital boards, no more than 20MB each and uploaded individually. All boards are required to be uploaded through the ACSA website as JPEG files. Information in the text boxes can be typed directly or inserted copy/paste. The names of student participants, their

schools, or faculty sponsors, must NOT appear on the boards, or in the project title, project title file name(s), or any text box information.

Design Essay or Abstract
A brief essay, 500 words maximum, is required as part of the submission describing the most important concepts of the design project. Keep in mind that the presentation should graphically convey the design solution and context, and not rely on the design essay to convey a basic understanding of the project. The names of student participants, their schools, or faculty sponsors, must NOT appear in the design essay. This abstract is included in the final online submission, completed by the student(s) in a simple copy/paste text box.

NEW Performance Evaluation *(new for Category I only. Not required for Category II.)*
Each student will answer a few multiple-choice questions upon submission about a performance analysis topic determined by the faculty or student(s). If possible, please show your performance evaluations on your submission boards and images. For the list of questions and an expanded explanation of this, please refer to the Supplemental Studio Guide and these questions:

1. What category of performance did you measure or assess in your design?
2. What standard or benchmark did you measure against?
3. How did your final design performance compare with your standard or benchmark?
4. If you measured and your design performance was below the standard or benchmark, did you redesign and measure or assess again?

Program Summary
A program summary, 250 words maximum, diagram/text of spaces and areas is required as part of the submission. All interior and exterior spaces are to be included; total net and gross areas are required. The program summary is included in the final online submission, uploaded by the student(s) in a simple copy/paste text box. Those students entering Category I should have a program of spaces within 10% of the given net square feet. The gross area would include building circulation and service spaces.

Required Submission Documents
Submissions must include (but are not limited to) the following required drawings:
● Three-dimensional representations – in the form of axonometrics, perspectives showing the proposal in its context, montages and/or physical model photographs – to illustrate the character of the project;
● Site plan showing proposal in its context of surrounding buildings and topography, together with details of access/circulation;
● Building/site sections sufficient to show site context and major spatial and program elements;
● Floor plans to show program elements, spatial adjacencies, navigation strategies, and vertical structural elements;
● Large scale drawing(s), either orthographic or three dimensional, illustrating:
    ○ the use and detailing of steel for building structure and/or envelope
    ○ integrated design

Incomplete or undocumented entries will be disqualified. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale. The site plan should include a north arrow.

Online Project Submission
After the faculty sponsor completes the online registration, each student will receive a confirmation email, which will include a link to complete the online submission. The student is required to submit the final entries that must be uploaded through the ACSA Competition website at www.acsa-arch.org by 11:59 pm, Pacific Time, on June 7, 2023. If the submission is from a team of students, all student team members will have the ability to upload the digital files. Once the final submit button is pressed no additional edits, uploads, or changes can be made. You may “save” your submission and return to complete. Please note: The submission is not complete until the “complete this submission” button has been pressed. For team projects, each member of team projects may submit the final project, but each project should be submitted only once. Once the final submission is uploaded and submitted, each student will receive a confirmation email notification.

The final submission upload must contain the following:
● Completed online registration including all team members and faculty sponsors,
● Each of the four 20”x20” boards uploaded individually as high-resolution JPEG files, no more than 20MB each,
● A design essay or abstract (500 words maximum)
● A performance evaluation (Category I students only)
● A program summary diagram/text of spaces and areas (250 words maximum).

The names of student participants, their schools and faculty sponsors must NOT appear on the boards, or in the project title, project title file name(s), or any text box information.

Winning projects will be required to submit high-resolution original files/images for use in competition publications and exhibit materials. By uploading your files, you agree that the Association of Collegiate Schools of Architecture (ACSA) has the rights to use your winning submission, images, and materials in a summary publication, online and in promotional and exhibition resources. ACSA will attribute authorship of the winning design to you, your team, faculty and affiliation. Additionally, you hereby warrant that the submission is original and that you are the author(s) of the submission.

RESOURCES
A goal of all ACSA competitions is to make students aware that research is a fundamental element of any design solution. Students are encouraged to research material properties and methods of steel construction, as well as precedent projects that demonstrate innovative use of structural steel.

Refer to the Supplemental Studio Guide for reading references about steel design and spiritual architectural design

For More Information
Program updates, including information on jury members as they are confirmed, may be found on the ACSA web site at www.acsa-arch.org/competitions. Additional questions on the competition program and submissions should be addressed to:

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Competition Program written and developed by: Michael J. Crosbie, PhD, FAIA; along with ACSA & the American Institute of Steel Construction.

SUPPLEMENTAL STUDIO GUIDE

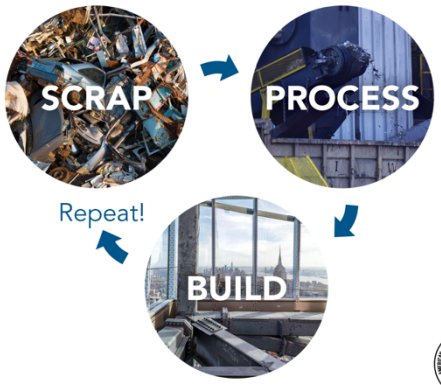
Why has the American Institute of Steel Construction sponsored this competition since 2000?
AISC's primary objective is education. A major component of what AISC does is to support students and professional architects to have the ability to integrate structure and architecture in a meaningful way. There are unique opportunities with structural steel to develop inspiring concepts, express spirituality, communicate values, and protect people through resiliency and with efficient technical strength. AISC's role builds on the publication of the foundational Steel Manual, or "steel Bible"; educational interaction is ongoing with AISC throughout an architect's career, and it begins with the steel competition.

AISC
The American Institute of Steel Construction is a non-partisan, not-for-profit technical institute and trade association established in 1921 to serve the structural steel design community and construction industry in the United States. Since its establishment, AISC has conducted its numerous activities with a scrupulous sense of public responsibility. For this reason, and because of the high caliber of its staff, the Institute enjoys a close working relationship with architects, engineers, code officials and educators who recognize its professional status in the fields of specification writing, structural research, design development and performance standards. Membership to AISC is free to university faculty and full-time students. Information can be found at Free Membership.

Sustainability of Steel
Using steel is a highly sustainable option. The production of raw US structural steel involves in upwards of 93% recycled content, keeping your old cars and appliances out of landfills. At the end of a building's life, 98% of all structural steel is recycled into new steel products, with no loss of its physical properties. As such, structural steel isn't just recycled but "multi-cycled," as it can be recycled over and over and over again. It is truly a cradle-to-cradle material, and few materials can claim that.
Steel Sustainability

The US steel industry has high transparency through its mills' environmental product declarations (EPDs) that cover all phases from product extraction to mill gate. AISC develops environmental product declarations (EPDs) of fabricated hot-rolled structural sections, fabricated steel plates, and fabricated hollow structural sections (HSS) that cover all phases from product extraction to construction through the end of life. At the building's end of life, steel is scrapped and processed with no loss of quality. In fact, a steel building is less likely to become scrap in the first place. Steel buildings have considerable strength and flexibility of function over their lifetime. If occupancy or loading changes, steel frames are more readily adjusted. Steel, if desired by the architect, can be graceful, nimble, and minimal in its bulk both in plan and section, and it integrates easily with other systems and materials.

It makes financial sense for fabricators to reduce their carbon footprint by reducing electricity use, and they are continually upgrading to renewable sources of energy. It not only ultimately saves them money, but architects and engineers who specify steel, as well as owners, can require a lower carbon footprint of their materials, so the most sustainable US structural steel producers have a competitive edge in a market increasingly concerned with life cycle analysis. Architects, engineers, and owners who use steel support lower embodied carbon.



Smarter.
Stronger.
Steel.

RESOURCES
A goal of all ACSA competitions is to make students aware that research is a fundamental element of any design solution. Students are encouraged to research material properties and methods of steel construction, as well as precedent projects that demonstrate innovative use of structural steel.

Steel Video Resources

- Architecturally Exposed Structural Steel (Steel Video Resources) – VIDEO
- What is AESS (Steel Video Resources) – VIDEO
- Steel Coatings & Protection (Steel Video Resources) – VIDEO
- Steel Connections (Steel Video Resources) – VIDEO
- Custom Steel (Steel Video Resources) – VIDEO
- Tension: Force Differentiated Structural Steel Design (Steel Video Resources) – VIDEO
- Span: Exploiting the Tensile Strength of Steel (Steel Video Resources) – VIDEO
- What is AESS – VIDEO
- Steel Coatings & Protection – VIDEO
- Steel Connections – RESOURCES

Steel Construction References

- AISC website: www.aisc.org
- Modern Steel Construction: This authoritative monthly magazine is made available online free of charge. This magazine covers the use of fabricated structural steel in the variety of structural types. It presents information on the newest and most advanced applications of structural steel in a wide range of structures. Issues of Modern Steel Construction (1996 – Present) are available online. Visit Modern Steel Construction to view them.
- Steel Connections – RESOURCES
- Terri Meyer Boake. Understanding Steel Design: An Architectural Design Manual. (Birkhäuser 2013)
- John Fernandez. Material Architecture. (Spon Press, 2006)
- Victoria Bell and Patrick Rand. Materials for Design 2. (Princeton Architectural Press, 2014)
- Shulitz, Habermann, Sobek. Steel Construction Manual. (Birkhäuser Basel 2000)
- Annette LeCuyer. Steel and Beyond. (Birkhäuser Basel 2003)
- Sutherland Lyall. Remarkable Structure: Engineering Today's Innovative Buildings. (Princeton Architectural Press, 2002)

Further Reading about Spiritual Architecture

- Thomas Barrie. The Sacred In-Between. (Routledge, 2010)
- Julio Bermudez, editor. Transcending Architecture: Contemporary Views on Sacred Space. (The Catholic University of America Press, 2015)
- Karla Britton, editor. Constructing the Ineffable: Contemporary Sacred Architecture. (Yale University Press, 2020)
- Michael J. Crosbie. "Contemporary Trends in Sacred Architecture," in Theology in Built Environments, Sigurd Bergmann, Editor; New Brunswick, NJ. (Transaction Publishers, 2009, pp. 59-67)
- Michael J. Crosbie and Julio Bermudez. "Searching for New Sacred Space." (Faith & Form, Vol. 49, No. 2, 2016, pp. 6-11)
- Michael J. Crosbie. "A Sanctuary for Interdependence." (Faith & Form, Vol. 50, No. 1, 2017, pp. 30-31)
- Victor Kazanjian and Stephen Kieran. "Design From Dialogue." (Faith & Form, Vol. 42, No. 3, 2009, pp. 6-11)
- Michael J. Crosbie. "Architecture for the Spirit," in Architecture: Celebrating the Past, Designing the Future, Edited by Nancy Solomon, Washington, D.C.: The American Institute of Architects, 2008, pp. 314-334.
- Mircea Eliade. The Sacred and the Profane. (Harcourt, Brace & World, 1959)

- Howard Hebel. “Numen Lumen: Pushing the Multifaith Model Forward.” (Faith & Form, Vol. 47, No. 2, 2014, pp. 14-18)
- James Pallister, Sacred Spaces: Contemporary Religious Architecture. (Phaidon Press, 2015)
- Pew Research Center. “When Americans say they believe in God, what do they mean?” (https://www.pewresearch.org/religion/2018/04/25/when-americans-say-they-believe-in-god-what-do-they-mean/ , 2018
- Sheri Wing, Designing Sacred Spaces 1st Edition. (Routlege, 2015)

PERFORMANCE EVALUATION *(New for Category I only. Not required for Category II.)*
The performance evaluation is new this year and required by the students entering Category I. Design performance accountability is an important aspect of today’s architectural profession and education, and this new requirement is meant to encourage students to embed performance assessment into their design process. The competition is an opportunity for programs to consider how assessment can be integrated at their schools and ultimately share different approaches. What students measure or assess is flexible. Students could measure quantitative aspects or assess qualitative aspects of design, from sociological performance to technical or environmental performance. Below are some examples.

Sociological
- User behavior
  How do different people use the space? How have you analyzed that to assess, and perhaps influence, your design? How can you determine whether your design is successful if responding to how people use the spaces is a goal of yours in the project?
- Accommodation/response to needs of different user groups
  This might include the needs of diverse religious groups who might use the space, students just stopping by for some reflection, an employee or manager who is concerned about monitoring the facility, etc. How do you assess whether your initial goals of accommodation were actually met?
- Inclusivity and/or accessibility
  Are you creating equally dignified experiences in your design for all users? Or did you make changes to create a more accessible entry? What does “more accessible” entail?

Technical
- Structural performance- member sizing
  Did you calculate the depth of your roof beam or trusses based on the forces and the span? Did you compare its performance to code minimums or adjust your spacing to get a more efficient or economical layout? A more dramatic effect?
- Efficiency of use of steel in the project
  One of steel’s benefits is how it can integrate with other systems. Did you make adjustments to a steel member’s depth or spacing to refine the integration with a facade or environmental system?
- Daylighting quantity and/or quality
  Some modeling plug-ins not only measure daylight quantity, but also daylight quality- does it cause glare or heat gain? Does that impact energy use?
- Energy Use Index or Embodied Carbon Index
  Modeling plug-ins are available to help measure both operational energy used during the time a building is occupied and embodied energy over a project’s lifetime.
- Acoustics
  Did you measure the reverberation time of a space? Would it be comfortable for the users of the space and activities happening in the project?

Construction
- Project Cost or Schedule
  Did you study a steel system, member, or detail like SpeedCore, for example, that would shorten construction time or reduce cost?
- Life Safety
  Were you able to improve the life safety of your design by making adjustments to a structural element?

Other
- Another aspect of design performance of your choice

Performance Evaluation Questions *(New for Category I only. Not required for Category II.)*
Upon submission, each student will answer a series of questions. We will have a webinar covering examples and questions about this in the fall.

1) What category of performance did you* measure or assess while developing your project?
    a) Society/Community
    b) Structural
    c) Environmental
    d) Life Safety
    e) Constructability

2) What standard or benchmark did you measure against?
    a) Architecture Industry or Profession Standards (Ex: LEED or Architecture 2030)
    b) Faculty or Studio Standards
    c) Code Standard (Ex: International Building Code, Local Code, ADA, Energy, Zoning, etc.)
    d) Self-Assessed Standards (established by research or surveys)
    e) None

3) How did your final design performance compare with your standards or benchmarks?
    a) Performed Much Better
    b) Performed Somewhat Better
    c) Performed Almost Equally
    d) Performed Somewhat Lower
    e) Performed Much Lower
    f) Some measurements were better, while some were lower

4) If your design performance was below the standards, did you redesign and measure or assess again?
    a) Not applicable, my/our design performance was equal to or better than the standards
    b) Yes, and performance improved.
    c) Yes, but performance did not improve.
    d) Yes, I/we redesigned, but it was difficult to run the same assessment.
    e) No, it was too difficult to run the same assessment.

*You could literally mean you, or user groups, a lab technician, a fabricator, an engineer, a contractor, etc. A defined aspect of design should be substantiated by objective analysis or assessment.

Please either join the live webinar on Zoom in early Fall 2022 or watch the video of it at website here after that date.