sefh

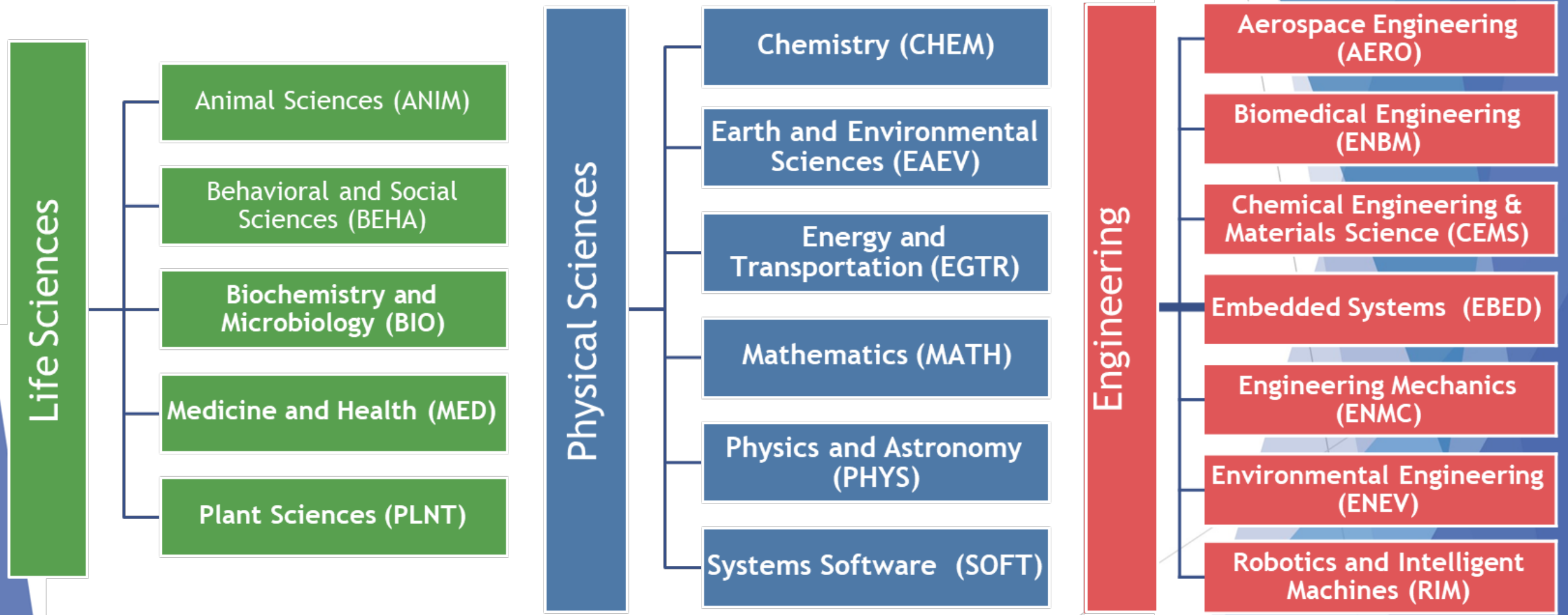
12th Annual SEFH Seminar
Judging Matters

Saturday, September 6, 2025

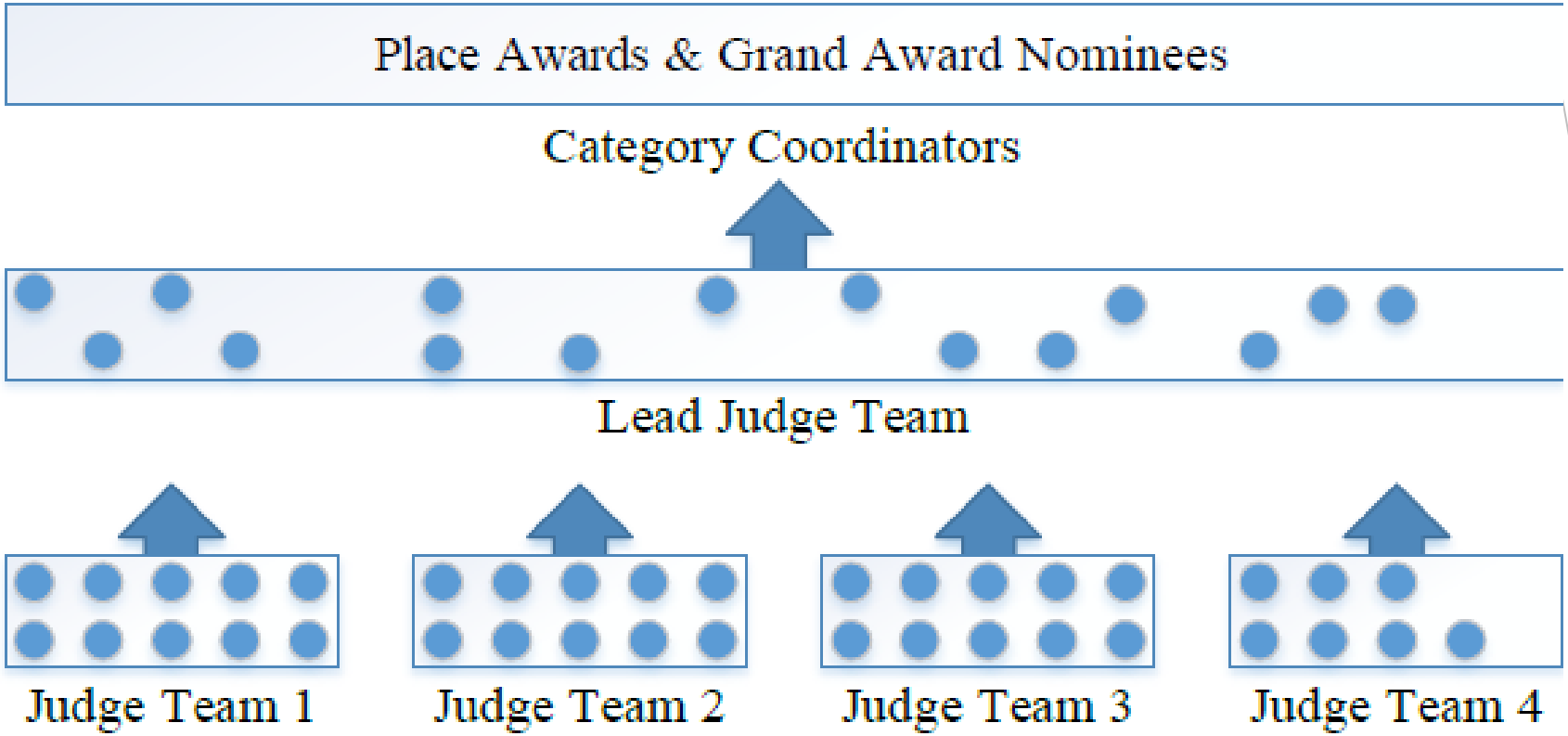
UH STEM Center
UNIVERSITY OF HOUSTON

Chevron

SEFH 2025 Category Structure



The Judging Process



Round 1: Judge Teams (3-4 judges) score 7-12 projects & select 20%-30% for Phase 2

Round 2: Lead Judge Teams review projects & select Place Awards.

Round 3: Category Coordinators review 5-6 projects & select Grand Awards

Interviewing, Scoring and Caucusing Process

Interviews

- One-on-one with judges (teams present together)
- Interviews last 10-12 minutes each, but vary by category
- Each student/team will be interviewed 3-5 times during round 1

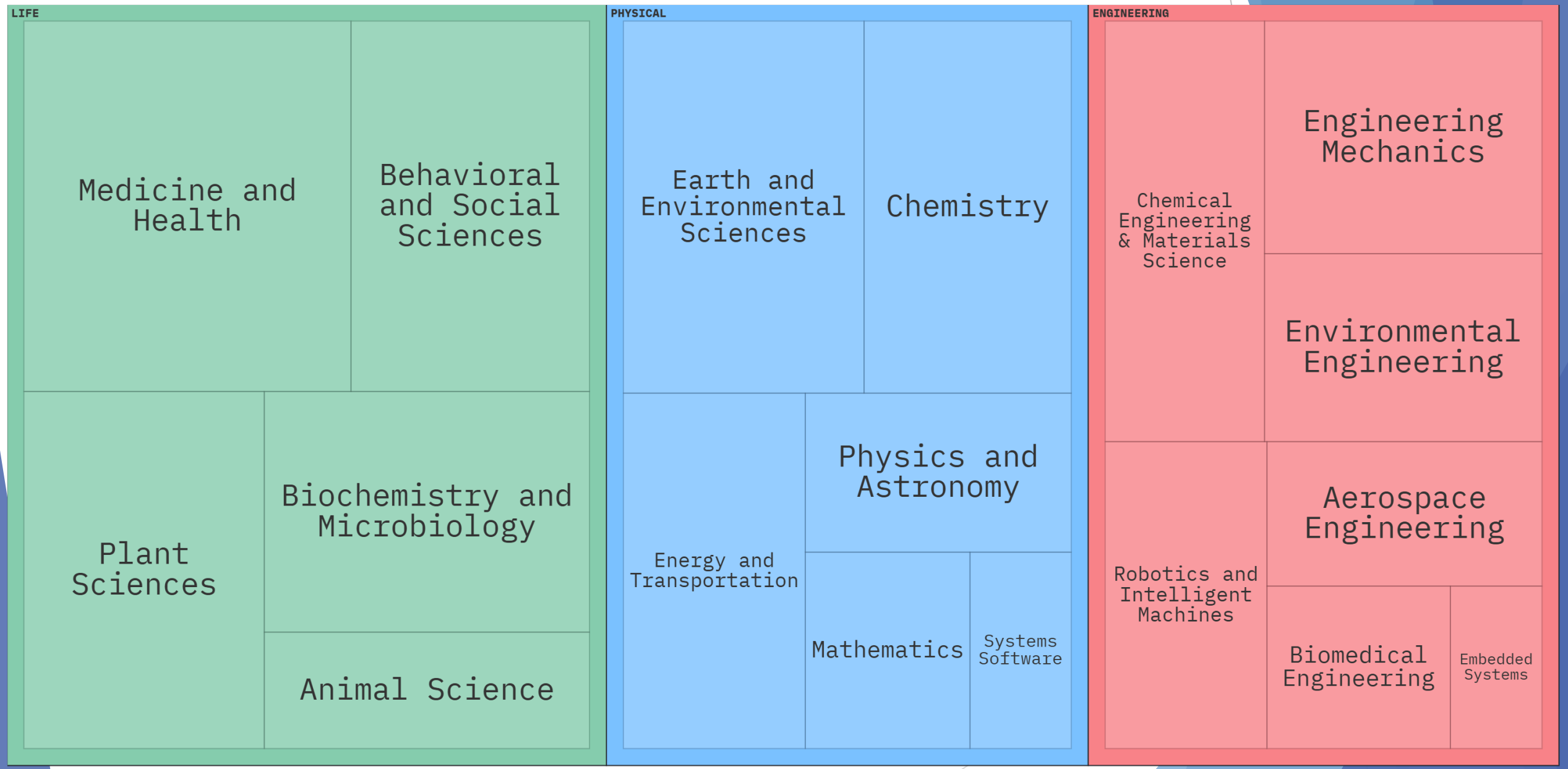
Scoring

- Projects are scored immediately after interviews
- Judges score independently
- SEFH uses the same judging criteria as the International Science and Engineering Fair

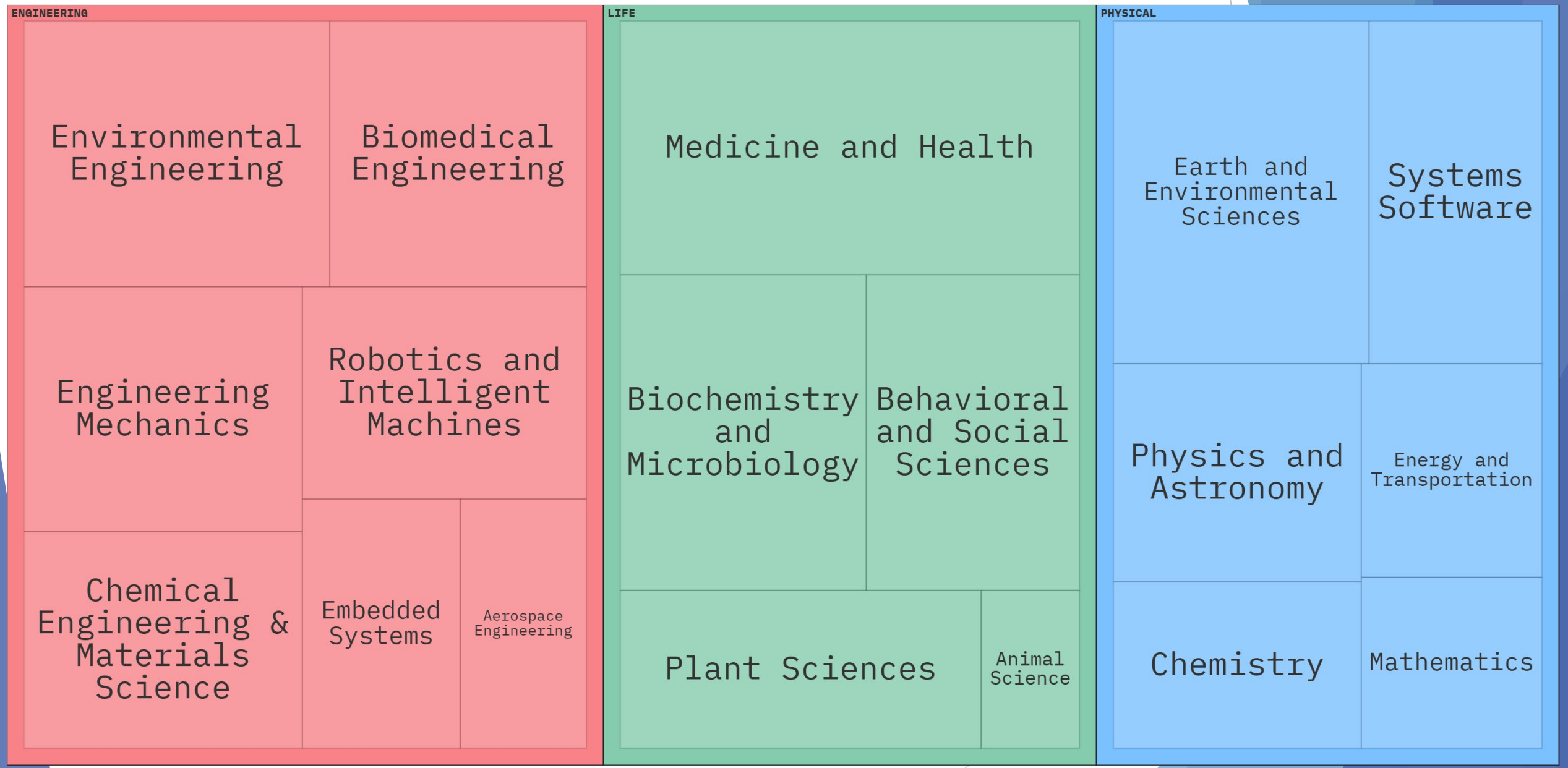
Caucusing

- Judges discuss and select projects to advance during caucuses
- Advancing is not only a matter of getting the highest score, but highly scored projects will advance.

2025 Project Entries by Category (Junior Division)



2025 Project Entries by Category (Senior Division)



Scoring Criteria – Science Project Content (65%)

I. **Research Question (10 pts)**
   - clear and focused purpose
   - identifies contribution to field of study
   - testable using scientific methods

II. **Design and Methodology (15 pts)**
   - well designed plan and data collection methods
   - variables and controls defined, appropriate and complete

III. **Execution: Data Collection, Analysis and Interpretation (20 pts)**
   - systematic data collection and analysis
   - reproducibility of results
   - appropriate application of mathematical and statistical methods
   - sufficient data collected to support interpretation and conclusions

IV. **Creativity & Potential Impact (20 pts)**
   - project demonstrates significant creativity in one or more of the above criteria
   - project has impact or potential impact in its field and/or in technology, economy, environment or society

Scoring Criteria – Engineering Project Content (65%)

I. **Research Problem (10 pts)**
   - description of a practical need or problem to be solved
   - definition of criteria for proposed solution
   - explanation of constraints

II. **Design and Methodology (15 pts)**
   - exploration of alternatives to answer need or problem
   - identification of a solution
   - development of a prototype/model

III. **Execution: Construction and Testing (20 pts)**
   - prototype demonstrates intended design
   - prototype has been tested in multiple conditions/trials
   - prototype demonstrates engineering skill and completeness

IV. **Creativity & Potential Impact (20 pts)**
   - project demonstrates significant creativity in one or more of the above criteria
   - project has impact or potential impact in its field and/or in technology, economy, environment or society

Scoring Criteria – Project (All) Presentation (35%)

V. Presentation (35 pts)

a. Poster (10 pts)
- logical organization of material
- clarity of graphics and legends
- supporting documentation displayed

b. Interview (25 pts)
- clear, concise, thoughtful responses to questions
- understanding of basic science relevant to project
- understanding interpretation and limitations of results and conclusions
- degree of independence in conducting project
- recognition of potential impact in science, society and/or economics
- quality of ideas for further research
- for team projects, contributions to and understanding of project by all members

Tips for creating a project

Picking a topic

- Something interesting/meaningful to you (lots of judges will ask!)
- Think about the potential impact of topic (so what?)
- Have a clear goal for your project (Tell judges a story)
- Be creative! (new takes on old topics)

Picking a category

- Review category & subcategory descriptions on SEFH/ISEF websites
- Discuss with project mentors (SEFH is not able to provide advice)
- Think broadly & carefully – Some projects could qualify in multiple areas

Designing & executing a project

- Keep detailed notes in a single document as you do your project (log book)
- Do your own work. Avoid relying too much on others (e.g., parents, teachers, generative AI)
- Collect enough data (e.g., experimental repetitions, large samples, etc.)

Tips for presenting a project

The Display

- Organized logically (use clear headings)
- Neat and readable (avoid handwritten content on the board)
- Use graphics/charts whenever possible (must be cited!)
- Include a logbook for your project (not required, but judges look for it)
- Print a set of abstracts (20-25 is plenty)
- The **maximum height of the project board at SEFH and TXSEF** (including headers) is **64.4 inches (163.8 cm).**
- **At ISEF**, the maximum project board height is **58.4 inches (148.2 cm).** Recommendation is to follow this.

Tips for presenting a project

The Interview

- Judges should give you ~5-6 minutes at the beginning to present
- Brief & thorough (consider trade-offs)
- Rehearse your presentation (don’t read from your display)
- Pace of speech matters (125-150 wpm)
- Answer questions directly and honestly (don’t bluff)
- It is ok (good!) to ask judges to clarify questions if you are unclear, but avoid conflict and remember the clock
- No one knows what you did for your project better than you. You are the expert.
- Navigating different judging styles and interests.

General Tips

- Special award interviews are usually based on review of abstracts (have a good one!)
- Being overdressed is better than being underdressed (avoid clothing with brand logos)
- Be professional (polite)
- Bring snacks and drinks
- There will be down time, so bring something to do.
- We will break for lunch
- Try to be at your project as much as possible, but it is ok to walk away briefly (e.g., restroom breaks)

Wrap Up

Questions? Feel free to reach out to me!

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Session Feedback Survey