**Southeast Michigan STEM Summit 2019**

**March 8-9, 2019**

**Oakland University, Oakland Center**

**Rochester, Michigan**

**Call for Presentation - Guidelines**

The theme for the Southeast Michigan STEM Summit is “Connections and Opportunities” and seeks to enhance regional system alignment and enhancement to ensure a STEM conduit providing access to rewarding and productive careers that support the promise of continued economic prosperity and growth across the region by highlighting the many diverse and innovative approaches that nurture curiosity, innovation, and achievement in STEM throughout one's lifetime. This STEM pipeline extends from pre-kindergarten through elementary school, secondary school, and out-of-school time, paving the way to STEM pathways into higher education, and ultimately entry to, and advancement in, the STEM workforce. By meeting the growing needs of Southeast Michigan employers for a diverse, talented workforce, the STEM pipeline affords access to rewarding and productive careers and contributes to the promise of continued economic prosperity and growth across the region.

***We encourage the submission of proposals for sessions and exhibits t***hat showcase the creative ways in which you are addressing the challenges of engaging individuals in STEM and helping them succeed and progress through the pipeline.

Breakout Sessions are selected through a competitive review process. Proposals typically cover a broad spectrum of issues related to any of four general topic areas, referred to as Strands:

* Education
* Workforce and Business
* Policy
* Parents/Student Support

The following information provides instructions for submitting proposals for breakout sessions.

If you have any questions, please contact us at:

[**Need**](mailto:jsupel@donahue.umassp.edu) **Contact Email Here**

1. **Timeline for Call for Presentations**
2. Proposals Due: Friday, December 20, 2018, 5 pm
3. Notification of Decisions: January 4, 2019, 5 pm
4. Selected Sessions confirm intent to participate: Thursday, January 11, 2019 5 pm
5. Program Finalized: Friday, January 16, 2019 5 pm
6. **Submission Instructions**

All proposals must be submitted electronically using the [2019 STEM Summit Call For Presentations Proposal Form](http://www.mistempartnership.com/what-we-do/events/michigan-stem-partnership-produced-or-sponsored-events/SE-MI-STEM-Summit-2019_ET65.html), a Word template that can be downloaded from the STEM Summit website.

Proposals should be submitted as email attachments to: ***garymistem@gmail.com***

***Please submit your proposal as a MS Word document, not as a PDF.***

File Format for summiting your proposal – Please use the following filename protocol for submitting your presentation proposal: **Strandname\_Proposer Last Name or Organizations**. Examples include:

**Policy\_johnson** or **Workforce\_MearsSchoolDistrict**, (A list of the Strand names and their abbreviations can be found in Section 3 below.)

Proposals received after the deadline (December 14, 2018, 5:00 pm) may not be considered by the review committees.

Outline of the proposal form:

1. **Session Organizer:**

Enter the name and information for the person who will serve as the primary contact for the proposal. This person will receive instructions from the Summit organizers to pass on to the rest of the team.

1. **Type of Proposal:**

Proposals for break-out sessions may be in one of the following formats:

1. **Speaker Panels** or **Presentations** are held in rooms with theater-style seating and no tables.
2. **Hands-on Workshops** are held in rooms with tables appropriate for setting up activities. Some seating may be theater-style and some will be at the tables.
3. **Roundtables** or **Discussion Groups** are held in rooms where all seating is at round tables.
4. **Strands:**

This year, the STEM Summit’s sessions are organized around four stakeholder communities, referred to as the Summit Strands:

* + **Education**
  + **Business/Workforce**
  + **Policy**
  + **Parents/Student Support**

While your proposal may interest more than one audience it should be targeted to one primary Strand; it will be reviewed by a committee of volunteers with particular interest and expertise in that Strand. Sessions selected by the committees will then be identified in the program by Strand to help guide attendees as they plan their activities for the day.

Some of the Strand include identified. Please check all of the sub-Strands to which your proposal applies.

Descriptions of the Strands can be found at the end of this document (**Section IV. Descriptions of the Strands**, beginning on page 5).

1. **Session Title:**

Enter the title of your session as you would like it to appear in the program. **You are limited to 100 characters, including spaces and punctuation.**

1. **Description of your proposed session:**

Provide both a full, detailed description of your proposed session (750 word limit), as well as a short abstract (250 word limit). The full description will be used by the review committee to consider your proposal. If your session is accepted, the abstract will appear in the Summit program and on the website to help attendees decide which sessions to attend.

Issues to address in your full description should include:

* Intended audience (Be as specific as possible. For example, if this is a K12Ed proposal, specify the relevant grade levels.)
* Intended objectives/takeaways for the audience
* How the session relates to the Strand
* How the session relates to the theme of the Summit, or is otherwise particularly relevant to the Summit
* If presenting a specific program, innovation, curriculum, etc.: What evidence is there of its effectiveness (e.g., evaluation findings)
* Structure/flow of the session

We strongly recommend taking advantage of the full length of the full description section. In the past, reviewers have commented that shorter descriptions have not given them enough information on which to base their decision.

1. **Keywords:**

In addition to identifying your Strand (and potential sub-Strands), you may opt to associate a variety of keywords with your proposal. Check any of the keywords listed on the proposal form that apply to the contents of your session. If needed, under “other” you may add up to three additional keywords. These keywords will be included with the online description of your session to aid attendees searching for sessions of particular interest. A list of keywords and their descriptions can be found beginning on page 8.

1. **Presenters:**

Please provide complete contact information for all presenters in this session.

Please note:

* + Breakout sessions will be limited to 50 minutes. We therefore strongly advise that you limit the number of speakers, presenters, or panelists to four or fewer in order to allow for adequate time for each perspective as well as interaction with the audience and Q&A.
  + All those participating as presenters in breakout sessions, including moderators, speakers, workshop presenters, etc. will be required to register for the Summit. **All presenters not registering for the Summit will be required to pay a speaker registration fee of $50 unless they are full-time students.** Please notify the people you invite to present of this requirement.

1. **Additional Notes**
   * Sessions selected for inclusion will be assigned to a specific time slot by the Summit organizers. Due to the complexity of scheduling constraints, we cannot accommodate specific time slot requests.
   * All sessions will be provided with a computer (PC – not Mac), screen and projector. If you need to use a Mac, a member of the presentation team will need to bring it.
   * **Wi-Fi capacity at the Oakland Center is available. In the event of technical difficulties it is recommend that you bring any videos or other digital material you wish to present on the session’s computer or on a flash drive if you are depending on it for your presentation**
   * Conflicts of Interest:

The organizers of the STEM Summit will be recruiting volunteers to serve on Strand Proposal Review Committees. Your interest in submitting a proposal should not in any way precludes you from also volunteering to serve on a review committee. Recognizing that members of the Strand Review Committees may also wish to submit exhibit or session proposals of their own, the Strand Review Committees will be instructed to use the following guidelines to avoid any conflicts of interest:

* As Strand Committee leaders assign proposals to be read by subsets of their teams, they will work to ensure that individual reviewers not read, score, or vote on any proposal in which they have a direct interest, including cases in which:
  + they themselves submitted the proposal,
  + they are included as a presenter in the proposal,
  + the proposal is from their organization or based on the work of their organization, or
  + they cannot judge the proposal fairly and impartially for any other reason.
* Should a Strand Review Committee find itself with an inadequate number of readers due to the number of exclusions, members of the Summit planning team will serve as additional reviewers.

1. **Descriptions of the Strands**
2. **Education**

Audience participants in Education STEM Strand are a diverse group including administrators, teachers, professional development trainers, para-professionals, and others The group includes educators from all areas; PreK-12, after/out-of-school, post-secondary, and opportunities through community groups/agencies such as museums, science centers, local libraries, and organizations providing coordinated family and community engagement efforts across the region.

This STEM Strand is looking for dynamic sessions that focus on how to implement STEM in various education settings. It is looking for new ideas, new methods, and new ways to embed STEM in course/class instructional design. Moreover, this Strand is looking for proposals that foster innovative thinking and creativity, give STEM Summit participants great new ideas to elevate a student’s/child’s natural curiosity, promote higher order thinking skills, and further develop a connection and interest in lifelong STEM learning.

Session proposals should align with any existing regulations, curriculum standards and guidelines, related certification/credentialing opportunities, and/or instructional delivery methodologies such as:

* Scope of services and opportunities provided
* Student group(s) served
* Alignment to the regional STEM Education effort and connections with education and/or training
* Any Partnering organizations and/or primary
* Alignment to curriculum standards, competencies, and/or other common competency skill and/or knowledge statements
* Project Based Learning Related to Career Development and/or Pathways
* Other promising practices through partnerships and collaborations

1. **Business/Workforce**

Workforce and business issues are important at all levels of education, from preschool through college, for both in-school and out-of-school time programs, and come in a wide variety of forms. This Strand should focus on broad strategies for engaging employers at any/all education levels and turning that engagement into something more than just cursory participation. Session should outline a strongly evolved program; how to develop and maintain relationships, and the roles and engagement practices that provide sustainability to the initiative. Presenters can share their knowledge of community supports; education, skills and job training; policy approaches; and effective practices. What works and what does not is the topic of the day, and all contributors to the field are invited to weigh in.

This Strand is looking to promote both classroom and out-of-school practices that have data to support their impact on either student interest or achievement or impact on change in curriculum and/or instructional delivery through engagement with business. The strongest proposals will be able to show impact over a period of time; describe who has benefitted and succeeded through these promising practices; suggest the requirements to scale this to another site or setting; and outline what barriers need to be lowered for implementation.

Session Proposals should address/include:

1. Align with state academic and career development competencies and standards
2. Indicate any partnerships that are involved in the success of this program.
3. Stress how the work is relevant.
4. Articulate connections and alignment to the career development process supporting the futures of students as they transition to career and/or post-secondary opportunities and make socially-conscious decisions for themselves.
5. Provide student with the opportunity to engage in competitive events and programs
6. Provide evidence of the contribution to developing the talent pipeline for the related business sector.
7. **Policy**

Improving STEM education in order to prepare students for career and post-secondary pathways requires a systemic approach, including fostering a culture that values high-quality instruction and rigor in student learning for all students. This includes clear performance goals and aspirations regarding critical thinking, problem-solving, creativity, and curiosity (math and science) to improve the talent pipeline. The approach to teaching STEM (the teaching pedagogy) needs to be modernized to get away from sit-and-get [to] more hands-on, inquiry, and discovery-based for students in order to prepare them to solve the problems of tomorrow that aren’t yet known through innovation, problem solving, computational thinking, entrepreneurial thinking, etc.

Organizational policy driven initiatives that impact STEM programming by broadening opportunities, and/or created a common culture of stem through an aligned systemic model that engages staff and content areas in an aligned collaborative effort. Elements of session proposals should address/include:

* + State, Regional, Organizational or Local efforts driven by an communicated policy
  + System based models with alignment, requirements, and design elements to specific policies and guidelines
  + Services and opportunities to all students
  + Equity and diversity
  + Sustainability and scalability
  + Addresses critical talent needs within the region
  + Follows and/or influences policy or policy development that impacts student success and workforce alignment gaps

1. **Parents and Students**

This Strand seeks programs designed to engage, educate, and support parents in assisting their children through the career development and STEM education process. Parents are a child’s first teacher; helping them to learn basic skills and supporting academic development with their own level of knowledge and skills. Parents want the best for their children, including a successful career that allows them to support a family and gives them opportunities beyond those that we have had.

When it comes to STEM, diving headfirst into the rapidly advancing fields of technology or the complex world of applied mathematics, technology applications, science, innovation and problem solving —for individuals at any age—seems more intimidating than rewarding. And yet parents (and many educators) are faced with a daunting—if not impossible—task of inspiring and guiding children individually through the world of STEM. But despite a teacher’s best efforts, students at every grade level are either gaining or losing interest in STEM subjects, for various reasons. That is why a parent’s involvement is crucial to help a child master STEM subjects within and beyond the classroom.

Parents should encourage their children to start as early as preschool and continue to foster their interest in STEM throughout their education, whether it’s participating in the science fair, joining the mathletes club, or learning to code. STEM activities for kindergarten students will be easier for those who have been practicing STEM in early childhood. And by the time they reach high school, they are well-prepared to apply their knowledge and skills in the college classroom and eventually the work environment. In the following chapters we’ll outline what your child needs to know about STEM at the elementary, middle school, and high school stages and how you can prepare them for a rewarding career.

Session proposals should address/include the following:

* + Models directed at communicating and engaging parents in the career development and STEM Education process through grade levels
  + Models that provide supportive resources to Parents
  + Project and technology materials, equipment, technology
  + School or community based efforts to engage parents
  + Parent organizations addressing this need
  + Camps, vendor opportunities/activities, other programs that provide out of school STEM opportunities that parents can access for their children.

**In addition to these Strand descriptions, proposals may also address one or more of these cross-Strand themes:**

1. **Diversity**

A vigorous economy is driven by a diverse workforce. In order to remain competitive, STEM occupations must become more diverse, whether it is in terms of gender, race/ethnicity, age, veteran-status, socio-economic background, disability status, or any of the other myriad characteristics that make us a diverse country. What about your program or project is oriented toward increasing diversity in STEM?

1. **Digital Literacy / Digital Education**

Technology is important at multiple levels within both education and industry. What are innovative practices relevant to your endeavor related to digital literacy, instructional technology, online learning, or other aspect of digital education?

1. **Partnerships**

As reflected in this year’s theme, partnerships are often key to successful STEM programs. Partnerships may involve education and business/industry, complementary programs, a funder and a program, multiple educational institutions, and others. Examples of partnership activities include, but are not limited to, joint in-school and out-of-school time projects; teacher externships and student internships; in-class presentations and out-of-school mentoring; joint curriculum planning; or program sponsorship. What kind of partnerships has been important to your program or project?

1. **Research-Based Practice**

How is what you do grounded in literature, research, or evidence-based practice? How did you come by this information and determine it was something you wanted to implement? How do you think your program or project might contribute to better understanding in literature, research, or evidence-based practice? What might others learn from you?

1. **Multiple Perspectives**

All programs and projects involve multiple agents, either as organizers, supporters, or participants. In addition, people who run similar programs/projects, but in different settings, will have different perspectives. How do the different parties involved in your program or project see it or help to make it successful? Or, how does someone who runs a similar program/project perhaps do it differently?

1. **Innovation, Critical Thinking, Problem Solving**

STEM Education curriculum and industry talent requirements express the common need for skill development inclusive of competencies in critical thinking, problem solving, and innovation. Classroom and project based methodologies and/or technologies employed to guide creative and systems thinking associated with innovative problem solving, and integrated into primary instructional activities resulting in improved creative intelligence. What models and/or resources for this can you share?

1. **Keyword Descriptors**

In addition to choosing a Strand for your proposal, and integrating one or more of the cross-Strand themes, you can choose from a list of descriptors to further define the focus of your session and to help attendees find sessions that meet their particular interests. These additional descriptors include:

**Academic Success Strategies** (experiences designed to increase STEM persistence or retention)

**Achievement** (experiences designed to increase learning outcomes)

**Administrator Perspective** (view from a school/program administrator)

**Business / Industry Perspective** (views from program/project business/industry partners/participants)

**Career Awareness and Development** (experiences designed to increase interest in, and understanding of, STEM career options)

**Community / Partner Perspective** (view from the perspective from a community or other program/project partner)

**Digital Literacy / Digital Education** (experiences designed to build skills necessary for life in a digital world)

**Diversity** (programs and projects designed to increase participation of nontraditional populations in STEM)

**Dual Enrollment / Early College** (experiences that integrate high school and college learning)

**Educator Perspective** (teacher/instructor/professor/direct staff view of a program/project)

**Educator Preparation** (programs and projects designed to increase educator effectiveness at any education level)

**Engineering** (programs/projects that emphasize engineering content)

**Innovation & Entrepreneurship** (experiences that enable students to innovate and be entrepreneurial in their thinking)

**In-school Programming** (programs and projects that occur during school time)

**Interest** (experiences designed to inspire interest in STEM)

**Math** (programs/projects that emphasize math content)

**Out-of-School Time** (experiences where learning occurs outside the classroom)

**Partnership** (programs involving 2 or more partnering entities)

**Policy** (educational, economic, local, state, national)

**Research and Evaluation** (effective researcher/practitioner collaborations designed to improve the teaching and learning)

**Science** (programs/projects that emphasize science content or scientific discovery)

**STEAM** (experiences that integrate arts into STEM)

**Student Perspective** (a student-eye view of a program/project)

**Technology & Computer Science** (programs/projects that emphasize the acquisition of technical and programming skills)

**Vocational-Technical Education** (at the secondary or postsecondary level)

**Workforce Development** (experiences focused on addressing particular education-employment alignment issues)