

# Massachusetts STEM Advisory Council

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One Ashburton Place, Suite 1403, Boston, MA 02108 | [www.mass.edu/stem](http://www.mass.edu/stem)

## **STEM Advisory Council Executive Committee Meeting**

**Friday, October 27, 2017**

**1:00 – 2:30 pm**

**State House Room 157**

**APPROVED Minutes**

## **STEM Advisory Council Executive Committee Members Attending**

Lt. Governor Karyn Polito, Co-Chair

Nick Clemons

Sheila Harritty

Congressman Joseph Kennedy III, Co-Chair

Laurie Leshin

Alexis Lian

Secretary Jim Peyser

Dan Shine

Steven Vinter

## **Minutes**

### **I. Welcome from the Co-Chairs**

- *Lt. Governor Polito:*
  - Spoke on Vertex's 500 million dollar charitable contribution to STEM, expressed gratitude to Jeff Leiden and his team for their support
  - Amazon Proposal allowed us to showcase the Commonwealth—she noticed a level of confidence in places you wouldn't expect
    - Places they feel they have something to offer—with an ecosystem that exists there. Showed us our competitiveness
    - Page 7 talks about some of the talent we have here that's attracting many players—GE, potentially Amazon, incubators, etc.
    - Half of MA residents have college degrees
      - Gave stats on our population to reflect that the work we're doing is working--"robust pipeline of talent"
    - Concerns raised that not enough people have the right skills—particularly computer science—something to be mindful of
    - We need to do more on early jobs—technicians, engineers, etc.
    - Exciting time for us to be strategic on what we should double-down on
- *Congressman Joseph Kennedy III:*
  - Discussion on importance of health care during this time

- Further emphasized the importance of STEM/career tech education, as it is a unique opportunity to position individuals for 6 million unfulfilled jobs
  - There are more CEOs in MA than plumbers
  - The reality is that the workplace dynamic is screaming for certain needs we need to fill
  - Added incentive/example that we have to try and get this right
    - Rhetoric/vision coming out of DC has to do with what MA is doing—opportunity for us to set an example for the rest of the country

## II. Update and Discussion on Key Initiatives

- Secretary Peyser
  - Priorities/summary of meeting agenda
- Alexis Lian
  - Introduction
  - Quick updates
    - Expanding work-based learning programs
      - MA STEM@Work
        - Released RFP for 2 year competitive grant
        - Hiring consultant for STEM Council
    - Developing and growing Early College Career Pathways
    - Broadening and deepening CS & Engineering Initiatives
- Secretary Peyser
  - Assessment updates
    - Recently been updated (grades 3-8, ELA and math)
    - Exams in science
    - In high school there are 4 different science exams you can take (bio, chem, physics, tech/engineering)
      - The number of students who are taking these exams vary a lot. Not many take chem or tech/eng—this is very costly
      - Should find some alternative assessments to show that we care about these subjects without having the state carry the fiscal burden
      - Perhaps some third-party exams (e.g. PLTW) that align with the frameworks

### *Comments and Questions:*

- Laurie Leshin asked about whether there have been any formal assessments on Work-Based Learning programs
- Sheila Harrity talking about how many of the vocational programs are STEM
  - LG asked for the information to be circulated

- Secretary Peyser: are there some trades/fields that don't have as many co-ops/internship opportunities
  - Want to catalyze employer investment in the school systems to promote this end

### III. Update and Discussion on Computer Science Initiatives

- Steve Vinter, Google
  - Our redesign is focusing on the foundational, academic, practical disciplines important for Computer Science education
  - We want to provide pathways for implementing more robust Computer Science education
  - Our mission is to mobilize all the players to actually make educational change and create more equity in computer science education.
    - Our baseline or floor is that everybody establishes competency in CS
    - Our ceiling is that 30% graduating capable of taking AP exam
    - Specifically targeting this 30% goal for districts that want to work very closely with this initiative
    - This is still compatible with Project Lead the Way, we just want to provide schools with choice
    - MA Association of Superintendents will continue to lead the PACE program part of this initiative
  - Teacher licensure
    - MassCore
      - Seeing real policy changes
      - Working on implementation of that now
    - First step is to collect data and see who the key leaders are in each district re: CS
    - We need to represent all of the different regions and socioeconomic qualities of districts in the pilot programs, focusing on representativeness
    - Biggest problem—getting teachers who are qualified to teach CS
      - Tripp: online schools as an option
- Tripp Jones
  - Capacity to help a lot in advancing a general/overall improvement in education
  - Appealing from a political standpoint—this is a problem that affects every district, not just the most challenged. Even the highest performing districts are struggling with this so it's powerful.

#### *Comments/Questions:*

- JK: Newton North has a “Da Vinci Program”
  - This program is an amazing example of what education can look at, but we need to think about our districts that our struggling with other issues, e.g. Fall River

- Thinking about the challenges here, and understanding that every different school has different needs
  - How do we craft a policy that addresses this? Getting back to the equity point—not just for Superintendents who can afford to buy into it

#### **IV. Discussion on FY18-FY19 Goals and Priorities**

- Secretary Peyser
  - Thinking about what we might do next
  - Strengthen public/private partnership
    - Deepening relationships
    - We haven't fully engaged the stakeholders—if we don't do this, we won't be successful as a whole
      - Both in terms of direct engagements as well as resource
      - What role should the STEM council play in terms of governance over this new MassCAN initiative? We should figure out how to take advantage of this big opportunity
  - Other things to think about
    - Micro-credentials
      - Other technical skills
      - Having a degree, is not necessarily the same as having relevant skills
        - Supporting the development of micro-credentialing programs and having employers sharpening their demands
          - Raised by Jeff Leiden
    - I2 learning
      - Also supported greatly by Jeff Leiden
      - Developing of units
    - Matching funds to support Project Lead the Way
      - We don't have matching funds for the rest of what we do
      - How do we create a vehicle for soliciting private sector financial resources for some of these efforts?
        - Not only is that helpful in accelerating the work, but more private connections in our public work
    - Not necessarily enough demand in students/families because of misperceptions of what they think these jobs mean
      - How do we generate more demand from students and families for access to these career opportunities?

#### **V. Approval of Minutes from March 24, 2017 Meeting**

#### **VI. Wrap Up and Next Steps**

- Lt. Governor Polito suggested a follow-up executive committee meeting in early January.