



THE NATIONAL CENTER
FOR SIMULATION

***EDUCATION AND WORKFORCE DEVELOPMENT COMMITTEE
MEETING MINUTES
31 October 2018***

ATTENDEES

Amanda Allen (stemCONNECT), Michelle Berggren (OCPS), Dr. Lisa Dieker (UCF-CCIE), Marilyn Doyle (OCPS), Dr. Dennis Duke (FIT), Dr. Neal Finkelstein (ARL), Candace Finley (STEAM BOX), Dr. Bill Gaught (SSC), Brandon Hanshaw (Crooms AOIT), Brian Holmes (NCS-Quantum 3D), Dr. Cap Jadonath (OCPS), Deepika Kannan (SCPS-Coder Chicks), Carol Ann Dykes Logue (CFSEC-UCF), Annette Love (OTC-East River HS), Alan Lynch (OTC-MFC), Dr. Mike Macedonia (UCF), Dani McNeely (NAWCTSD), Dr. Kristy Murray (NDIA/NTSA-Summitt), Jennie Nolanedo (stemCONNECT), N.Y. Nathiri (PEC-Zora!), Hank Okraski (NCS), Brent Smith (ADL), Lindsey Spalding (SCPS), Gene Tavares (SCPS), Lynn Vander-Zyl (Osceola CPS), Dr. Fuzzy Wells (UCF-IST), Faith Whittingham (SCPS), Emily Winchester (TechSassyGirlz),

Agenda is provided as Attachment A.

Meeting minutes and presentations will be posted on the NCS website:

www.simulationinformation.com

ACTIVITIES AND DISCUSSIONS:

A. Welcoming

Hank Okraski welcomed the committee members to the meeting held in the Central Florida Research Park, Partnership II Bldg. Attendees introduced themselves.

B. Status of Ed&WD Committee Activities-

Hank Okraski, Committee Chairman, reported on the most recent activities of the committee. They are summarized as follows

- Award 10 Scholarships to high school students Seminole State College added to list.
- Determine interest for M&S Certification elsewhere beyond Florida and Virginia. Continue to encourage M&S industry to hire high school student interns. M&S Certified Teachers available for summer (2019) jobs with industry.

- Team Orlando Student Day set for Feb 25, 2019 at Central Florida Research Park. Expect to select 10 student M&S teams to demonstrate.
- Rework Curriculum and Certification documents on NCS website (Lindsey Spalding Action).
- Serve on advisory groups for Crooms AOIT, Hungerford ES, Orange Technical College, Seminole State College. Project Lead- The-Way, North Dakota Community College.
- Brought together Seminole High School (SHS), NAWCTSD, OCPS, SCPS and Lockheed Martin to support newly established Aviation Program at SHS.
- To participate in Zora! STEM January 2019 middle school event at Rollins College and OTC(MFC)

C. Central Florida STEM Education Council (CFSEC) Status

Carol Ann Dykes Logue outlined the following Council activities and initiatives:

1. The annual DiSTI Gold Duffer was held 27 October at Country Club of Deer Run. Funds from previous Duffers have been used each year to support UCF Robo-Knights, Seaperch, Central Florida YMCA STEM programs, scholarships for local high school seniors and more.
2. The Council is redirecting some of the funds from the DiSTI Duffer to an Educator Grant Program to support professional development in STEM education and STEM materials for classrooms.
5. Planning is underway for I/ITSEC 2018. The Council will once again manage the STEM Pavilion and conduct an educator workshop. The workshop this year will focus on the use of virtual reality as a teaching tool.

D. Seminole County and Hagerty High School M&S Implementation Status

Gene Tavares reported that the district has filled the position to be left vacant at Hagerty High School. Dr. Jason Wysong (SCPS) provided funding for her replacement (Jonas Hardy) to work with industry (DiSTI) during the past summer.

H. New Seminole State College M&S Emphasis

Dr. Bill Gaught, Seminole State College, briefed the group on a new program with Simulation emphasis. “We have created a course that articulates the M&S Certification into our new modeling & simulation specialization so students who earn the certification can now get 3 college credits. This benefits students such as those at Hagerty to put in the work to earn the certification.

I wanted to share that Seminole State College is now offering specializations in modeling and simulation in our AS and BS degree programs. This is the culmination of a two-year effort we started with the National Center for Simulation back in 2017. The new specializations are being offered this Fall term and we built them so SCPS high school

students can leverage their AP Computer Science courses (both Fundamentals and A), as well as the certification in Modeling and Simulations offered by the National Center for Simulation.

If you have students who are interested, attached is a proposed education plan should a student want to pursue modeling and simulation dual enrollment classes their entire four years in high school. Students wishing to pursue simulation less than four years would simply take the courses they wanted (please note some courses are prerequisites for others, so that would impact which courses a student might select).

All the courses listed in the plan are offered for dual enrollment and articulate into our AS Computer Programming & Analysis – Modeling and Simulation Specialization degree. That AS degree articulates into our BS Information Systems Technology – Modeling and Simulation Specialization degree, so the proposed ed plan offers students the opportunity to work on both AS or BS degrees while in high school.”

E. Orange County Public Schools M&S Program

Dr. Cap Jadonath and Michelle Berggren (both OCPS) briefed on the status of M&S in Orange County schools as follows:

Orange County Public Schools, Career and Technical Education (CTE) along with Orange Technical College, Winter Park Campus are looking to expand their postsecondary Modeling Simulation Design program to Timber Creek High School for the 2019-2020 school year. Timber Creek High School has historically been a huge supporter of Career and Technical Education and is looking to expand and strengthen opportunities for students on campus. The program will be offered through Orange Technical College and will be housed on Timber Creek’s campus. Students will earn postsecondary credit through Orange Technical College. The planning team is meeting regularly to put a plan of action in place to ensure the smooth opening of the program and everyone is excited to bring Modeling Simulation to a high school that is in the heart of the Modeling and Simulation Corridor.

H. ZORA! STEM

N.Y. Nathiri, PEC-ZORA!, described the events planned for the annual Zora!STEM festival. (Attachment A)

H. STEM CONNECT

Amanda Allen, Florida HiTechCorridor, briefed on stemCONNECT, a new medium to bring experts into the classroom. Once again, a virtual tour of I/ITSEC will be conducted (live) to be broadcast to schools throughout Florida and, in some cases, to other states. NCS strongly supports this initiative and recognizes the utility of the program. I/ITSEC will have a special stemCONNECT program for teachers and administrators. It will be held on Monday morning of the conference.

I. SPECIAL ROUNDTABLE- *Combatting the K-12 STEM/M&S Teacher Shortage*-Brian Holmes (NCS) Moderator

Members of the Roundtable were Dr. Lisa Dieker (UCF-CCIE), Lindsey Spalding (NCS Consultant), Dr. Kristy Murray (NDIA/NTSA) and Carol Ann Dykes Logue (CFSEC). Issues discussed were: Teacher Preparation, Teacher Retention, Teacher Incentives, and Barriers.

Dr. Dieker presented some pertinent statistics concerning teacher retention, salaries, etc. Florida does not bode well in salaries, incentives and retention as compared to other states.

Some of the ideas and recommendations presented and discussed are as follows:

1. Need better pay in general for teachers if we want to recruit teachers with M&S background. 40% of new teachers leave their positions within 5 years.
2. Other incentives might be: providing “externships” for teachers to work with the M&S industry during the summer; Need a “non-hiring” clause to preclude a company from hiring talented and motivated teachers; budgeting for and outfitting classrooms with current technologies.
3. We have shortages long standing in FL but no tracking for M&S as it is not a license and is most often served under CTE, which is not a shortage area.
4. A solution would be to add M&S as a state certification so it is tracked, but until then hard to advocate for funding, etc. without clear data.
5. We should pursue NSF grants for teacher STEM/M&S education.
6. Discussed micro-credentials as a platform for M&S certification options with NSTA. (Dr. Dieker made introductions after the meeting). NCS could offer its M&S Certification to provide incremental “building blocks” of micro-credentials.
7. Dr. Murray announced that NDIA/NTSA has awarded the Orlando Science Center a grant to improve teacher education. (Details forthcoming).
8. Want to get STEM/M&S into Pre-Service Teacher Education to familiarize teachers with the utility of M&S to improve teaching effectiveness through new tools, impart an awareness of M&S career opportunities and educate them on the courses in M&S being taught in K-12 today.
9. Encourage teachers, administrators and students to attend I/ITSEC this year at the Orange County Convention Center 27-29 November. NCS will provide free VIP passes to the Exhibit Center at the conference. Dr. Dieker anticipate at least 10 folks from CCIE attending ITSEC, including herself to look at the displays. This information will be brought back into classes and research projects by those attending.
10. Lindsey Spalding essentially introduced a new paradigm of teaching at Hagerty High School that solves the problem of a teacher having to understand and lead coursework that included multiple software programs. Team assignments with clearly stated objectives are necessary to implement a program that is hands-on and stimulating..
11. Carol Ann Dykes Logue summarized the barriers stated throughout the discussions: salaries, red tape in operations, extra duties infringing on mission performance, budget for school computers and school supplies.

Meeting was adjourned at 5:15pm



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**EDUCATION AND WORKFORCE DEVELOPMENT COMMITTEE
MEETING**

Wednesday, 31 October 2018

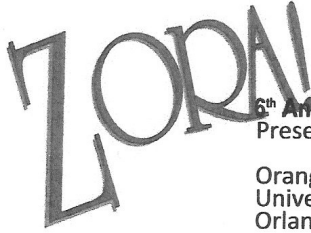
3:00-5:00 PM

**Location: UCF Partnership II (TWO) Building, Room 208, 3100 Technology
Parkway, Orlando, FL 32826**

AGENDA

<u>TOPIC</u>	<u>FACILITATOR</u>
Welcome & Introductions	Hank Okraski (NCS)
NCS Ed & WD Committee Status	Hank Okraski /Lindsey Spalding
STATUS & ANNOUNCEMENTS (Rapid-Fire)	
Central FL STEM Education Council (CFSEC)	Carol Ann Dykes Logue
Seminole County M&S Program	Gene Tavares (SCPS)
Seminole State College M&S Programs	Dr. Bill Gaught (SSC)
Orange County M&S Program Status	Dr. Cap Jadonath (OCPS)
ZORA! STEM	N.Y. Nathiri (PEC)
stem CONNECT (FHTCC)	Amanda Allen
COMBATING THE K-12 STEM/M&S TEACHER SHORTAGE ROUNDTABLE- Holmes (NCS) Moderator	
<ul style="list-style-type: none">• Teacher Preparation (Initial and continuing) (Leader: Dr. Lisa Dieker, UCF-)• Teacher Retention (Reason(s) for leaving) (Leader: Lindsey Spalding, NCS)• Teacher Incentives (Employer and Industry) (Leader: Dr. Kristy Murray, NDIA/NTSA))• Barriers (Leader: Carol Ann Dykes Logue, CFSEC))	

ATTACHMENT A-AGENDA



6th Annual ZORA!™ STEM Conference for Middle School Students
 Presented by the Association to Preserve the Eatonville Community
 In Collaboration with
 Orange County Public Schools, Valencia College –West Campus
 University of Central Florida, College of Medicine
 Orlando Science Center & the National Center for Simulation

“Education Day,” Friday February 1, 2019

Hosted by



AGENDA

8:00-8:15 a.m.	Welcome
8:20-11:20 a.m.	Morning Workshops
11:30-12:20 p.m.	Lunch and Activities
12:30 - 2:20 p.m.	Afternoon Workshops
2:30 - 2:45 p.m.....	Survey
2:45 – 3:00 p.m.	Wrap Up and Departure
Workshop Opportunities:	

Adventures in Medicine ----- **UCF College of Medicine**
 An educational activity will expose middle and high school students to medical science and the physician-training process. The students will learn about the educational path and content in the four years of medical school and apply that knowledge in hands-on activities.

Space Exploration and Programing/Coding ----- **Orlando Science Center**
 Students will immerse themselves in the exciting world of science technology! Take a tour through our solar system and beyond in our Mobile Planetarium, put your coding abilities to the test by completing a series of Ozobot challenges, and program a Makey Makey to turn your friends into a remote control!

Music in STEM ----- **Valencia College**
 Music is everywhere but so is science. There is a great deal of physics embedded in music and we will discuss and demonstrate some of it.

Basic CPR ----- **Orange Technical College**
 The students will learn Basic First Aid techniques including bandaging, choking procedures, and nosebleed care. In addition to learning Hands Only CPR with the mannequins during the training sessions.

Medical Simulation ----- **SIMETRI, Inc.**
 A state-of-the-art special effects techniques and engineering with innovative medical training technologies, to create highly realistic human forms used for immersive medical training experiences. These simulations provide first responders and military medical personnel the opportunity to train in a safe and learner-friendly environment, developing the skills so critical to survival in the field.

