



## CT STEM-Related Educational Assets

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### **Business/Government/Education Partnerships**

1. **AT&T Learning Connection:** An educational portal designed to increase the science literacy among Connecticut's teachers, students and families will be located at the CT Center for Science and Exploration when the building is opened in 2008. Until then use the following URL to identify programs <http://www.ctcse.org/att.php> Contact, Christine Moses, Director Program Outreach [cmoses@ctcse.org](mailto:cmoses@ctcse.org) 860-727-0457
2. **Career Explorations:** CT Business and Industry Association Contact, Lauren Kaufman [kaufmanl@cbia.com](mailto:kaufmanl@cbia.com) 860-244-1938
3. **Connecticut Building a Presence for Science Network:** CT Academy for Education Contact, David Lopath [dlopath@ctacad.org](mailto:dlopath@ctacad.org) 860-346-1177
4. **Connecticut Center for Advanced Technology:** Education Initiatives Contact, Susan Palisano [spalisano@ccat.us](mailto:spalisano@ccat.us) 860-282-4224
5. **Connecticut Center for Science & Exploration:** Education Initiatives Contact, Christine Moses, Director Program Outreach [cmoses@ctcse.org](mailto:cmoses@ctcse.org) 860-727-0457
6. **Connecticut Innovations, Inc.,** Public Education Initiatives and Technology Scholar Program, Manager, Scholarships and Special Programs, Laura Valenti, Email: [ctinnovations@mail.csif.org](mailto:ctinnovations@mail.csif.org) (860) 257-4001 Ext. 446
7. **Connecticut Pre-Engineering Program (CPEP)** helps underrepresented students discover their potential through science, math and technology. Contact, Glenn A. Cassis Email: [cassisg@cpep.org](mailto:cassisg@cpep.org) (860) 769-5283
8. **Connecticut State Scholars:** CT Business and Industry Association Contact, Dayl Walker, Project Director, [walkerd@cbia.com](mailto:walkerd@cbia.com) 860-244-1900
9. **Connecticut Technology Council:** Contact: Matt Nemerson [mnermerson@ct.org](mailto:mnermerson@ct.org)
10. **CONNvene:** CT Academy for Education Contact, Richard Cole [rcole@ctacad.org](mailto:rcole@ctacad.org) 860-346-1177
11. **CURE:** Contact: Paul Pescatello [curenet.org](http://curenet.org)
12. **General Electric:** EDGE Lab/UConn at Stamford, Contact: Chris Kalish, Director 203-961-2542
13. **IBM/Ed Connections:** IT Leadership Academy (ITLA) Contact: Michael Mino, Ed Connection [mino@educationconnection.org](mailto:mino@educationconnection.org) 860-567-0863





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14. **NASA Educator Resource Center:** Contact Dr. Janelle Bland Day, Eastern Connecticut State University, Webb Hall, Room 144, 83 Windham Street, Willimantic CT 06226  
**Email:** [BlandJ@easternct.edu](mailto:BlandJ@easternct.edu) 860-465-4532
15. **NASA Connecticut Space Grant Consortium,** NASA Space Grant Director, Dr. Chittarajan Sahay, University of Hartford, Ward College of Technology, 200 Bloomfield Avenue, West Hartford CT 06117-1599
16. **Office for Workforce Competitiveness:** Contact: Mary Ann Hanley, [mary.ann.hanley@po.state.ct.us](mailto:mary.ann.hanley@po.state.ct.us) 860-258-4304
  - 16.1. **Model PreK-6 Mathematics Curriculum Initiative:** in partnership with the CT State Department of Education, EDUCATION CONNECTION, and CT Academy for Education
  - 16.2. **Connecticut Career Choices** is a workforce development initiative focused on the implementation of curriculum aligned with both industry and state standards that can be adapted to any high school within Connecticut.
  - 16.3. **Connecticut Innovation Challenge** engages Connecticut high school students and teachers in a comprehensive Information Technology Research and Design project and challenges them to use technology to think creatively and work collaboratively. To REGISTER go to <http://www.ctcareerchoices.org/challenge>
17. **Project Lead the Way,** has developed a four year sequence of courses which, when combined with college preparatory mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering and engineering technology prior to entering college. Regional Coordinator for Connecticut is Gregory Kane at the CT State Department of Education, [gregory.kane@po.state.ct.us](mailto:gregory.kane@po.state.ct.us) CT colleges and schools that are involved can be identified at <http://www.pltw.org/schoollist.asp?toSelect=CT>
18. **Proton Energy:** Wallingford and UConn, CT Pathways to Innovation Contact: Sue Quatrella, Ed Connection [quatrella@educationconnection.org](mailto:quatrella@educationconnection.org) 860-567-0863
19. **Science Alliance of Fairfield County:** The Business Council of Southwest CT, Contact: Chris Bruhl, [cbruhl@businessfairfield.com](mailto:cbruhl@businessfairfield.com) 203-359-3220
20. **SmartBridges:** The Business Council of Southwest CT, Contact: Chris Bruhl, [cbruhl@businessfairfield.com](mailto:cbruhl@businessfairfield.com) 203-359-3220
21. **Yankee Ingenuity:** Contact: Nancy Rion [nancy.rion@ctinnovations.com](mailto:nancy.rion@ctinnovations.com) 563-5851
22. **Pratt & Whitney/University of Hartford: Cybergrant:** to establish a Career Fair for Women in Engineering that will target high school students in an effort to encourage more young women to prepare for careers in engineering and science. \$ 3,000 Contact: L. Manzione
- 23.





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24.

### National Science Foundation-Funded STEM Grants

- 1. Regional Center for Next Generation Manufacturing:** \$1,571,849 CT Community-Technical Colleges' College of Technology. The Connecticut Community College System, through its College of Technology (COT), is developing an ATE Regional Center for Next Generation Manufacturing (RCNGM). The Center is the regional focal point for the education of an agile manufacturing workforce skilled in the implementation of advances in technology and capable of meeting the changing needs of the manufacturing industry. The RCNGM is a partnership of the Community Colleges' College of Technology with the Manufacturing Institute of the National Association of Manufacturers, the Education Foundation of the Connecticut Business and Industry Association (CBIA), the Connecticut Center for Advanced Technology, government agencies, and secondary and higher education institutions. The RCNGM builds on the successes of several ATE, CSEMS and CCLI grants received by the partners. Contact Karen Wosczyzna-Birch: [kwosczyzna-birch@commnet.edu](mailto:kwosczyzna-birch@commnet.edu) (860)-244-7608 or 860-255-3746
- 2. Collaborative Industry/Community College System ATE Professional Development Project:** \$638,262 The project supports comprehensive professional development for community college faculty, high school mathematics, science and technology teachers and limited numbers of pre-service teachers. Project goals are to: (1) strengthen relationships among business and industry, the CCCS, state comprehensive and vocational high schools, and other ATE institutions; (2) build a stronger feeder system for the state's two-year ATE programs in three areas: manufacturing, engineering technologies and computer science/information technology; and (3) increase the supply of technically trained AS graduates. CBIA Contact, Lauren Kaufman [kaufmanl@cbia.com](mailto:kaufmanl@cbia.com) 860-244-1938
- 3. Computer Science, Engineering, and Mathematics Scholarships Program:** \$385,000 The Program has three primary objectives: to enhance both the quantity and quality of high school students entering Connecticut College's existing math and computer science program, especially those from underrepresented minorities such as women and students of color; to increase retention of students who are enrolled in the math and computer science programs through extensive support services and through programs which increase the knowledge and skills of the students; and to expand the number of high school students considering math and





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computer science as career options by encouraging the scholarship students to become leaders and role models. Connecticut College, Contact Gary Parker

4. **Computer Security and Data Assurance Associate Degree Program**, \$688,414 This project is developing an associate degree program in computer security and data assurance at Norwalk Community College. The new program leads students either to immediate employment or to a related four-year degree at Western Connecticut State University. The project provides faculty members with relevant workplace experiences so they can better prepare their students for careers in the computer security field. Although the project's primary audience is two-year college faculty and students, the goal is to create a computer security career pathway from secondary schools to two-year colleges and on to universities. Norwalk Community College, Contact Rose Ellis
5. **Implementing Physics by Inquiry Using Undergraduate Peer Instructors and Cooperative Group Learning**, Collaborative Project: \$33,548 The primary objective of the Physics by Inquiry project is to adapt and investigate how the PbI curriculum can be implemented without the need for physics graduate student teaching assistants as it is currently being implemented by its developers. Instead, formal cooperative group learning techniques and undergraduate teaching assistants are being used. Southern CT State University, Contact Karen Cummings
6. **STRONG-CT: Science and Technology Reaching Out to New Generations in CT**, \$1,526,894 STRONG-CT project is a collaborative between University of Connecticut, Manchester Community College, Three Rivers Community College and Quinebaug Valley Community College. The focus of STRONG-CT is to prepare life science students beginning at the Community Colleges who normally would not be afforded this opportunity (disadvantaged, first generation or minority students). The point person on this project for the Community Colleges is Eleanor Weseloh, Director of Mathematics, Science and Health Careers at Manchester Community College (860-512-2702, eweseloh@mcc.commnet.edu). University of CT, Contact Hedley Freake.
7. Machine Learning Lab. Exp. for Introducing Undergraduates to Artificial Intelligence, \$109,469 I. Russell
8. **Toward Machine Ethics**, \$99,861, Dr. Anderson received funding to explore the ethical ramifications of behavior involving machines, or machine ethics. The grant was awarded in 1/05 and extended to 6/30/06. M. Anderson

## CT Department of Higher Education's Teacher Quality Grant Program

1. **Elementary Mathematics Lesson Study in Greater New Haven**: Sponsor Albertus Magnus College (Field of Study – mathematics) \$76,300;





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2. **Project S.C.I.E.N.C.E.:** Sponsor Central CT State University (Field of Study – science and reading) \$140,000;
3. **Connecticut Center for Science Inquiry Teaching and Learning:** Sponsor CT Academy for Education in Mathematics, Science & Technology, Inc. (Field of Study – inquiry science) \$188,000);
4. **Summer Academy for Integrated Science, Social Studies and Mathematics for Middle School Teachers:** Sponsor Eastern CT State University (Field of Study – math, science, and reading) \$110,000;
5. **The Art Museum Experience: Gateway to History, Journey to Expression:** Sponsor Saint Joseph College (Field of Study – English, reading, arts, and history) \$65,000;
6. **Math Quality Education for Students and Teachers MathQuEST:** Sponsor University of CT (Field of Study – math) \$110,000; and
7. **WestConn’s Institute for Science Teachers:** Sponsor Western CT State University (Field of Study – math, science, and reading) \$125,000.

### **Individual Grants from Various Sources that impact STEM-Related Educational Programs**

1. **Teachers for a New Era:** UCONN Carnegie Corporation \$5 million grant. UCONN is one of 11 recipients nationwide that will foster innovative programs that will inform curriculum development and evaluation of teacher preparation. The intended result of this program will be better prepared teachers who will have a profound impact on the academic achievement of K-12 pupils across the state and throughout the nation.
2. **Career Pathways Initiative in Nursing and Allied Health:** United States Department of Labor, Employment and Training Administration, Connecticut Community Colleges \$2,147,325 grant. Total funding, including match: \$9,926,353. Targeted degrees at Community Colleges include: Nursing, Radiological Technology, Respiratory Therapy, Medical Assistant, and Physical Therapy Assistant. Specific goal is to increase the number of credentialed students graduating in specified programs and entering the workforce. Strategies to meet goal include: improve retention, enhance academic and career support systems, enhance marketing to high-schools and workforce investment boards, develop a system-wide allied health certificate, enhance online instructional capacity, strengthen career ladder programs. Partners: Office of Workforce Competitiveness, Workforce Investment Boards, Hospitals, Health Care Organizations, Connecticut Hospital Association, Anthem Blue Cross and Blue Shield, Connecticut Distance Learning Consortium, State Department of Education, State Department of Labor, Connecticut Business and Industry Association, Area Education Health Centers





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3. **Improve Teacher Knowledge and Skills and/or Recruitment and Retention:** National Governor's Association - \$100,000 grant to provide job-embedded professional development for up to 10 multi-disciplinary teams representing rural, suburban, and urban school districts; initiate and support classroom-based and school-based action research projects with each team; and identify, train, and support a cadre of candidates who are making mid-career transitions into education through the Alternative Route to Certification (ARC) and who are seeking teaching positions in hard-to-staff areas.
4. **Streamlining Educational Governance:** National Governor's Association – \$50,000 grant to the Governor will convene a Pre-K-16 Education Council that will coordinate efforts to support the implementation of recommendations made by the High School Advisory Committee; advise the State Board of Education and the Board of Governors for Higher Education; and develop consensus around the two-year and 10-year goals for the Pre-K-16 Council.
5. **ConnCAP Program:** Nellie Mae Foundation - \$87,508 grant to support long-term summer and after school academic support program for minority students in grades 7 – 12 low-income communities in the Hartford area.
6. **Horseshoe Crab Ecology in Long Island Sound:** National Fish and Wildlife Foundation grant. Sacred Heart University and The Maritime Aquarium will train teachers on how to become research assistants (with their students) concerning horseshoe crab ecology in Long Island Sound. Starts with a pilot program this spring with a full program to be run in the spring of 2007. Jennifer H. Mattei, Ph.D., Chair & Associate Professor, Department of Biology, Sacred Heart University [matteij@sacredheart.edu](mailto:matteij@sacredheart.edu) 203-365-7577
7. **Ecology of the Breeding Population of Horseshoe Crabs in New Haven Harbor:** Wildlife Trust grant involves teacher training and high school students at The Sound School starting spring 2006. Teachers will learn how to gather data and study the ecology of horseshoe crabs in New Haven Harbor. This work will include training in the utilization of sonar tags and receiving equipment to track the movement of crabs in the harbor. Two undergraduate students are also working on this project. Jennifer H. Mattei, Ph.D., Chair & Associate Professor, Department of Biology, Sacred Heart University [matteij@sacredheart.edu](mailto:matteij@sacredheart.edu) 203-365-7577
8. **Horseshoe Crab Research at Milford Point:** CT State Department of Environmental Protection grant. Program involves teaching young students that participate in the CT Audubon Coastal Center late spring and early summer programs. Undergraduate research assistants help the Audubon naturalist to teach kids how to measure and tag horseshoe crabs and why it is important. This program has been running for 6 years. Jennifer H. Mattei, Ph.D., Chair & Associate Professor, Department of Biology, Sacred Heart University [matteij@sacredheart.edu](mailto:matteij@sacredheart.edu) 203-365-7577





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9. **After-School Computer Academy for Hartford in-school females age 16-18.** Capitol Workforce Partners \$ 41,800 grant to University of Hartford. G. Champlin
10. **Project Crecer-summer program,** Capitol Workforce Partners \$ 61,411 grant to University of Hartford offering morning academic sessions to Latino high school students and afternoon job placement. G. Champlin
11. **CT Clean Energy Fund,** \$10,000 grant to University of Hartford to identify barriers to the solar industry in the state and to devise an implementation plan to overcome and mitigate those barriers. Contact, Shandra
12. **State of Connecticut, Office of Workforce Competitiveness** \$50,000 grant to University of Hartford for annual investment in a NASA-sponsored partnership that is focused on increasing public awareness of aerospace education, developing curricula, providing scholarships, and expanding research opportunities. Contact C. Sahay
13. **American Chemical Society, Petroleum Research Fund** \$50,000 grant to University of Hartford that supports advanced scientific education and fundamental research in the 'petroleum field'. Undergraduate students carry out all of this research and our introduced to a combination of synthesis, spectroscopy, magneto chemistry, and catalytic transformations of organic species, all within a single system. Contact L. Pence
- 14.

