



# North Carolina Virtual Public School

## Race to the Top STEM Blended Course Project Overview

As part of North Carolina's Race to the Top (Rt3) funding, the North Carolina Virtual Public School is tasked with increasing the number of highly effective teachers in low-income rural and urban areas and in low performing schools. We will accomplish this task by increasing the availability of highly effective math and science teachers to students who are at risk of failure in math and science courses by delivering a new virtual STEM course model to address the needs of these students. In addition, we will also develop blended courses in which on site teachers share teaching duties with more experienced, historically effective online teachers, again with a focus on serving students in the lowest achieving schools. Deadline February 15, 2011.

## Race to the Top STEM Blended Course Development and Time-line

	Fiscal Year	Scope of Work
Year 1	10-11	<ul style="list-style-type: none"><li>• Develop 2 courses A &amp; B</li><li>• Best Practice conference &amp; training</li></ul>
Year 2	11-12	<ul style="list-style-type: none"><li>• Teach pilot of A &amp; B (2 sections each) (240 students)</li><li>• Develop 2 courses C &amp; D</li><li>• Best Practice conference &amp; training</li></ul>
Year 3	12-13	<ul style="list-style-type: none"><li>• Teach more sections of A &amp; B</li><li>• Teach pilot of C &amp; D (2 sections each) (240 students)</li><li>• Develop 2 courses E &amp; F</li><li>• Best Practice conference &amp; training</li></ul>

Year 4	13-14	<ul style="list-style-type: none"> <li>• Teach more sections of A &amp; B</li> <li>• Teach more sections of C &amp; D</li> <li>• Teach pilot of E &amp; F (2 sections each) (240 students)</li> <li>• Develop 2 courses - G &amp; H</li> <li>• Best Practice conference &amp; training</li> <li>• GRANT ENDS - All courses are transferred to VPS budget and opened to all students</li> </ul>
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### Expectations of Rt3 STEM Districts/Schools

1. Provide ongoing student support as required by NCVPS including but not limited to: digital resource funding, access to technology resources, district NCVPS distance learning advisors, frequent communication with parents, teachers, and students, monitoring grade reporting, etc.
2. Create positive and aggressive solutions to ensure security while at the same time promoting innovation by eliminating technology barriers: port requirements, network requirements, firewalls, etc.
3. Establish consistent time for on-the-ground support, conferencing, and observation from regional Rt3 leads.
4. Designate a district team leader who will closely collaborate and communicate with Rt3 Project Lead and other NCVPS leadership for STEM course development and implementation.
5. Designate a school team leader who will closely collaborate and communicate with district lead, Rt3 Project Lead and other NCVPS leadership for STEM course development and implementation.
6. Develop and organize marketing and promotion strategies (for examples, examine the following site: <https://sites.google.com/site/ncvpsgolive/supporting-e-learning/promotion-and-marketing-strategies>)
7. Identify and commit up to four teachers, including an Exceptional Children (EC) teacher to serve on course development team per course through the duration of the project.
8. Identify and commit up to four teachers (these can be the same teachers as identified in #7) to team and collaborate with NCVPS teachers in a blended environment to increase engagement and close achievement gap of at risk students in math and science courses.
9. Send identified teachers to respective regional or on-site training on blended

- instructional practices, course development, etc.
10. Develop a strategic plan to deploy mobile and digital technologies to foster student engagement, collaboration, communication for over-all academic improvement
  11. Sign a mobile device usage agreement (Before obtaining any device hardware from NCVPS, this agreement must be signed). This agreement may have impact on how your students interact with the NCVPS Course material.
  12. Identify specific students who are at risk of failing math and science to participate in these blended STEM courses.

Special Note: Each selected LEA will be expected to provide 10% matching funds to the overall outlay of resources from NCVPS. For example, if the LEAs are being provided devices, software, training, travel, stipends, etc. by NCVPS, then in the planning for sustainability it is imperative for each LEA to align Race to the Top, Title II, and/or local resources to ensure that each year of the grant 10% of the effort is supported by the LEA to purchase requisite technology applications and services.

### Expectations of North Carolina Virtual Public School

1. Provide an initial set of mobile or laptop devices for students participating in the STEM Initiative.
2. Provide training (on-site & virtual) for STEM blended learning integration to teachers, administrators (central office and school-based).
3. Provide mobile application development and training for face-to-face teachers who will be co-teaching/developing STEM courses.
4. Provide coaching and training (if needed) for STEM integration in district and school improvement strategic processes
5. Provide travel and training expenses for teachers involved in STEM blended learning development/teaching.
6. Provide access to multimedia streaming services to participating districts/schools at no cost for 4 years.
7. Commit to bi-monthly site visits to observe and evaluate STEM implementation and progress

Application for Race to the Top STEM Blended Course Project

## Section I: Contact Information

School System: \_\_\_\_\_

Educational Region: \_\_\_\_\_

Contact Person's Name: \_\_\_\_\_

Position: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

\_\_\_\_\_

Email Address: \_\_\_\_\_

## Section II: Narrative Responses

**Each response will be evaluated on the following criteria scale:**

**5 - Excellent 4 - Strong 3 - Average 2 - Weak 1 - Unacceptable**

1. Please explain why your school system is interested in serving as a pilot demonstration site for the North Carolina Virtual Public School (NCVPS) STEM blended online course design and implementation?
2. What data supports the need to participate and what is the projected impact (student outcomes, etc.) from your participation?
3. What will be the district's vision, values and goals for this project, how will this project be aligned to current improvement processes, and how will you know you met your intended outcomes?
4. If selected as a Race to the Top (Rt3) STEM district, NCVPS will supply computer/mobile devices for student engagement and performance. Please

describe plans that your school district would have for the following. In your description, show how each would be linked to the current district's improvement plan and any/all participating schools' improvement plan(s).

- a. STEM development and integration
  - b. 1:1 computer/mobile device implementation
5. Briefly describe how your school system has utilized the resources of North Carolina Virtual Public School. Please be specific about the extent of that participation and the positive outcomes that have been achieved by the general student population across your school system.
6. What has been your experience prior to now with the following:
  - a. Blended learning:
  - b. Competency based instruction:
  - c. Digital tools to improve student learning (as part of your response describe how you are currently aligning digital resources to your curriculum)
7. Describe the technology infrastructures (capital outlay, hardware, connectivity and software) available at the selected high schools to support the implementation of online blended STEM courses.
8. Briefly describe how you are leveraging Title I and II funding to train teachers in online professional learning networks and online/blended learning strategies.
9. Describe the reasons why your high schools would be great places to deploy the new online blended STEM courses. Please include demographic information that could assist in the decision-making process. Also, if you are currently leveraging mobile or 1:1 devices, please include current strategies and results.
10. Describe your proposed leadership structure for the project. Who will coordinate and lead effort? To what extent do you have the support of district and school leadership? This component of your application is very important. The leadership structure and support must be clearly articulated and implemented

### Section III: Participating School Information

Please complete the following section to help us gain information about your potential Rt3 STEM Participating high schools

#### *Participating School #1*

School Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

School Phone Number: \_\_\_\_\_ Fax Number:

\_\_\_\_\_

Total Number of Students : \_\_\_\_\_ Total Number of EC  
Students \_\_\_\_\_

Principal's Name: \_\_\_\_\_

Email Address:: \_\_\_\_\_

School Lead's Name (if different from Principal)

\_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

***Participating School #2***

School Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

School Phone Number: \_\_\_\_\_ Fax Number:

\_\_\_\_\_

Total Number of Students \_\_\_\_\_ Number of EC Students \_\_\_\_\_

Principal's Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

School Lead's Name (if different from Principal)

\_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Name of Participating STEM teacher \_\_\_\_\_

E-mail Address: \_\_\_\_\_

**Section IV: Assurance**

To be completed by the Superintendent of your local education agency:

I am fully supportive of this application and would like for my school system to

participate in the Rt3 STEM Blended Course Project. I have read the *Expectations above* and if selected will assure that my high schools will carry out their commitments as outlined in the above

Superintendent's Name \_\_\_\_\_

Superintendent's Signature \_\_\_\_\_ Date \_\_\_\_\_

### Procedures for Submission

- With Leadership Team, carefully review the following sections: Rt3 STEM Overview, Time-line and work flow, and Expectations.
- Upload Application as a Word Document.
- Complete all sections.
- Ensure that superintendent has signed in appropriate "Assurance" section.
- Incomplete applications will not be accepted for consideration.
- Submit your application with signature by **February 15, 2011**:
- At NCVPS, we recognize the need for LEAs to seek local board approval for this initiative. Your timely submission and signature of this application indicates desire to move forward pending that approval.
- If you have any questions about the application process please contact Don Lourcey, Innovation Director, [don.lourcey@ncpublicschools.gov](mailto:don.lourcey@ncpublicschools.gov).
- Mail whitepaper application to the following address:

North Carolina Virtual Public School  
C/O Dr. Bryan Setser  
1017 Main Campus Drive  
Partners I Bldg., Room 1610  
Raleigh, NC 27606