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# **S.T.E.M. Promoting Curriculum Alignment**

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# Outline

## ■ You're on the Right Path

- ❑ STEM in Florida
- ❑ Career and Technical
- ❑ FCS Alignment Plans

## ■ Things to Keep in Mind

- ❑ PERT
- ❑ Statewide Course Numbering System
- ❑ Core to College

## ■ Taking the Next Steps

- ❑ Get Started
- ❑ Promote Your Network
- ❑ The Challenge – Accountability
- ❑ Meet and Greet

# Florida Statute 1001.03 (17)

- *The State Board of Education, in consultation with the Board of Governors and the Department of Economic Opportunity, shall adopt a unified state plan to improve K-20 STEM education and prepare students for high-skill, high-wage, and high-demand employment in STEM and STEM-related fields.*
- A committee is working on this at the state level.

# S.T.E.M. Implications

- Much of the focus for STEM is on how it will benefit students after high school and college.
  - Workforce to help Florida's economy.
- Career and Technical Education have STEM Curriculum Frameworks

## 2013-14 Science, Technology, Engineering & Math (STEM) Curriculum Frameworks

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Florida is taking a systematic approach to identifying "STEM" career and technical education programs based on STE in a career path that leads to a STEM occupation identified through national and state research and labor market info meet the Race to the Top criteria for STEM programs are included on this list and are annotated as such.

## Secondary/PSAV Programs/Courses

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Agriculture, Food & Natural Resources STEM Programs - Supervisor: [Amy McAllister](#), (850) 245-9017

- [Agricultural Biotechnology \(8106600\)](#) (RTF, 539KB) \* RTTT
- [Agritechnology \(8106800\)](#) (RTF, 840KB)
- [Animal Biotechnology \(8106100\)](#) (RTF, 537KB) \* RTTT
- [Environmental Resources \(8113000\)](#) (RTF, 594KB) \* RTTT
- [Environmental Water Technology \(8007100\)](#) (RTF, 785KB)
- [Food Science Applications \(8129200\)](#) (RTF, 630KB)
- [Forestry \(8118300\)](#) (RTF, 703KB)
- [Land Resources Technology \(8913000\)](#) (RTF, 650KB)
- [Plant Biotechnology \(8106500\)](#) (RTF, 580KB) \* RTTT

# Career and Adult Education

- *Florida is taking a systematic approach to identifying “STEM” career and technical education programs based on STEM occupations. **The following programs lead directly to STEM occupations or are included in a career path that leads to a STEM occupation** identified through national and state research and labor market information.*
- Include CTE teachers and faculty if they are not already involved.

# Florida College System Alignment Plans

- The Division of Florida Colleges will recruit faculty to review the Common Core State Standards and compare them to requirements for entry-level mathematics courses.
  - The work will help create a crosswalk.
- Faculty will be asked to use
  - Course descriptions, syllabi, textbooks, course objectives, Common Core State Standards, and the Postsecondary Readiness Competencies



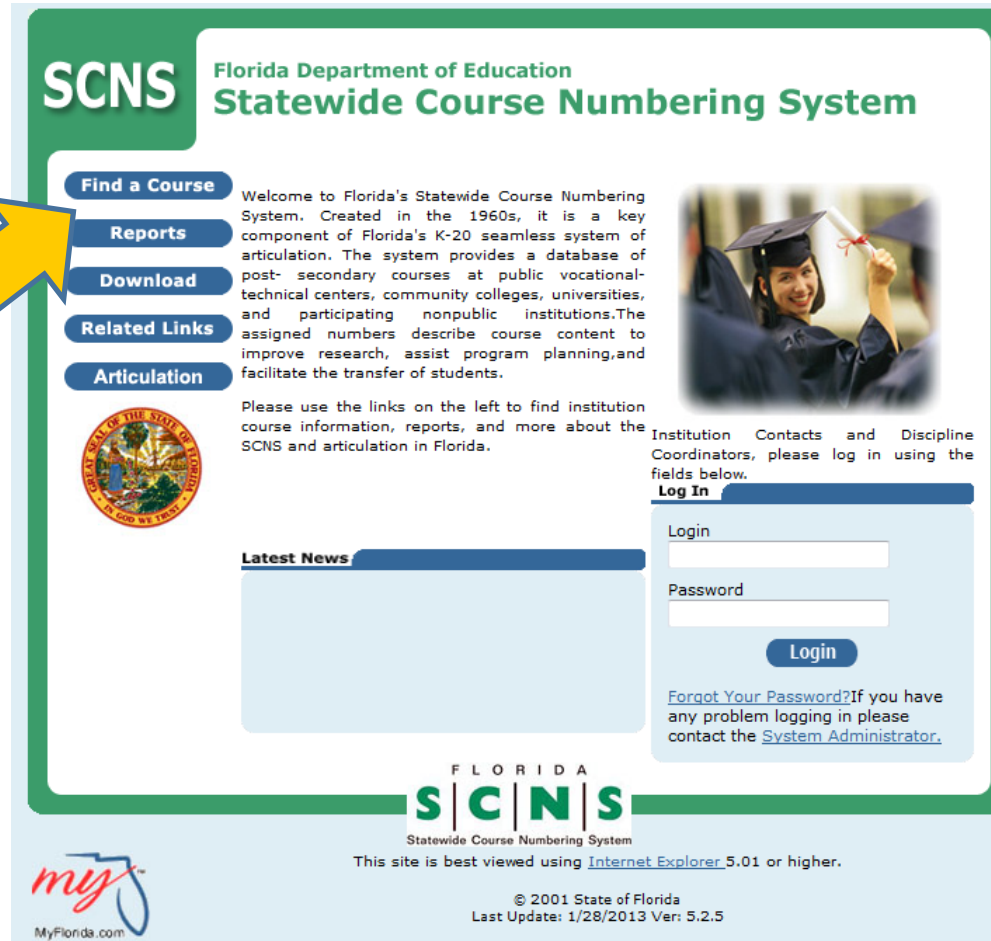
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# Things to Keep In Mind

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# Statewide Course Numbering System



**SCNS** Florida Department of Education  
**Statewide Course Numbering System**

**Find a Course**  
**Reports**  
**Download**  
**Related Links**  
**Articulation**

Welcome to Florida's Statewide Course Numbering System. Created in the 1960s, it is a key component of Florida's K-20 seamless system of articulation. The system provides a database of post-secondary courses at public vocational-technical centers, community colleges, universities, and participating nonpublic institutions. The assigned numbers describe course content to improve research, assist program planning, and facilitate the transfer of students.

Please use the links on the left to find institution course information, reports, and more about the SCNS and articulation in Florida.

**Latest News**

Institution Contacts and Discipline Coordinators, please log in using the fields below.  
**Log In**

Login  
Password  
**Login**

[Forgot Your Password?](#) If you have any problem logging in please contact the [System Administrator](#).

FLORIDA  
**SCNS**  
Statewide Course Numbering System

This site is best viewed using [Internet Explorer 5.01](#) or higher.

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Last Update: 1/28/2013 Ver: 5.2.5



# Statewide Course Numbering System

CHM 022 - GENERAL CHEMISTRY

Institutions Statewide Course Detail

Locate Statewide Course

## Statewide Course Detail

Discipline	063
Discipline Title	CHEMISTRY
Discipline Definition	A GROUP OF COURSES THAT DESCRIBE THE MICRO AND MACRO STRUCTURE OF MATTER, OF THE CHANGES MATTER UNDERGOES, OF THE ENERGY INVOLVED IN THESE CHANGES, AND OF THE MODELS THAT INTERPRET AND THE THEORIES AND LAWS THAT DESCRIBE THESE PHENOMENA.
Prefix	CHM
Prefix Title	CHEMISTRY
Prefix Definition	COURSES IN GENERAL CHEMISTRY, ANALYTICAL CHEMISTRY, INORGANIC CHEMISTRY, ORGANIC CHEMISTRY, AND PHYSICAL CHEMISTRY AS DESCRIBED BELOW: GENERAL CHEMISTRY: THE MICRO AND MACRO STRUCTURE OF MATTER OF THE CHANGES MATTER UNDERGOES, OF THE ENERGY INVOLVED IN THESE CHANGES AND OF THE MODELS THAT INTERPRET AND THE THEORIES AND LAWS THAT DESCRIBE THESE PHENOMENA. ANALYTICAL CHEMISTRY: CHEMICAL AND PHYSICAL METHODS AND TECHNIQUES NEEDED TO QUALITATIVELY, QUANTITATIVELY, AND STRUCTURALLY CHARACTERIZE A SAMPLE, INCLUDING THE PROPER PROCEDURES FOR OBTAINING REPRESENTATIVE SAMPLES FOR ANALYSES AND THE STATISTICAL PROCEDURES FOR EVALUATING THE PRECISION AND ACCURACY OF THE RESULTS. INORGANIC CHEMISTRY: ELEMENTS AND THEIR COMPOUNDS, COMPOUNDS INCLUDING THE ISOLATION, COMPOSITION, STRUCTURES, PHYSICAL AND
Century	000-099
Century Title	GENERAL CHEMISTRY
Decade	020-029
Decade Title	LIBERAL STUDIES(020-024)/INTRO CHEMISTRY(025-029)
Statewide Course	022
Statewide Course Title	GENERAL CHEMISTRY
Status	ACTIVE
Transfer	GUARANTEED TRANSFER TO INSTITUTION OFFERING SAME COURSE.
Course Intent	LOWER
Prerequisites	NONE
Corequisites	NONE
Profile Description	THIS COURSE IS AN INTRODUCTION TO CHEMICAL PRINCIPLES INCLUDING ATOMIC STRUCTURE, CHEMICAL BONDING, GASES, LIQUIDS AND SOLIDS, SOLUTIONS, REACTION RATES AND EQUILIBRIUM, ACIDS AND BASES, AND AN INTRODUCTION TO ORGANIC CHEMISTRY.

- Thought of more for use with the “guaranteed transfer” of a course to another institution; however course descriptions can be used as a starting point for future work or reviewed to ensure the curriculum frameworks already created still match it.



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# Postsecondary Education Readiness Test (P.E.R.T.)

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## Section 1008.30, Florida Statutes

*The common placement testing program shall include at a minimum the following: the capacity to diagnose basic competencies in the areas of English, reading, and mathematics which are essential to perform college-level work...*

# Postsecondary Education Readiness Test (P.E.R.T.)

- The Postsecondary Education Readiness Test (P.E.R.T.) is Florida's common placement test.
- The P.E.R.T. has been aligned with the Postsecondary Readiness Competencies.
- This test is used by all 28 Florida colleges to determine if a student is ready for college credit courses in reading, writing and math.
  - School districts may use P.E.R.T. to fulfill the requirement to administer a postsecondary readiness assessment to 11<sup>th</sup> grade students.

# Postsecondary Education Readiness Test (P.E.R.T.)

## ■ P.E.R.T Facts

- Launched October 2010
- Computer adaptive test (C.A.T.)
- 25 operational questions on each subtest plus 5 field test questions
- Assessment system, includes:
  - Placement
  - Diagnostics (2 levels per subject area)
- Almost a million assessments administered.

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# P.E.R.T Placement Scores

- A student must meet or exceed the established cut-scores to demonstrate college-readiness.
  - Mathematics –113
  - Reading –104
  - Writing – 99
- Scale 50-150

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# Course Placement

- Students are placed into courses according to ACT, SAT, CPT, or P.E.R.T. scores, highest score per subtest
- Pursuant to s. 1008.30, F.S., State Board of Education Rule 6A-10.0315 establishes minimum scores for college readiness
- Students who do not meet the minimum state established scores must remediate before taking college credit courses in the area of the deficiency

# Including P.E.R.T.

- Important to consider all standards and expectations of each level.
- P.E.R.T. blueprints and the standards are available online and should be reviewed if the assessment is used by 2 of the 3 groups.
- Each group should be familiar with the entry-level expectations of the other.
- P.E.R.T. standard setting will take place this semester.
- Strongly encourage at least 1 member to participate.





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*Florida's*  
**CORE** *to* **COLLEGE**

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# Goals of Grant

- Increase faculty knowledge and awareness of the Common Core State Standards
- Promote strong collaboration and alignment between the higher education institutions and the K-12 sector
- Support the implementation and use of the Common Core State Standards and assessments to drive higher levels of college readiness among students, and ultimately greater college completion.

# Vision

- Create dedicated, local college-readiness faculty and teacher teams who are knowledgeable about Common Core State Standards, PARCC and college-readiness
- Teams will be able to
  - Have in-depth discussions on
    - local high school to college transition issues
    - college-readiness and alignment
    - challenges and successes pertaining to Common Core State Standards implementation
    - the PARCC assessment
  - Train and inform others through presentations and meetings
  - Share best practices during regional and statewide conferences for Core to College.

# 2012 Projects

- Regional College Readiness/Success course trainings
  - Faculty participation in trainings held for high school teachers
- Creating Core Teams
  - Interested faculty are forming teams of 4-5 for long-term participation (*Ongoing*)
- Institution College Readiness Conference
  - Edison State College served as pilot
- Common Core State Standard State Institutes (Summer 2012)
  - Faculty members attended Orlando Institute.
- Regional Curriculum Mapping Trainings
  - College faculty attend trainings for districts focused on blended curriculum for the 2013-2014 academic year.

# Future Projects

- CCSS Higher Education Institute
  - ❑ An opportunity for college faculty to gain an in-depth understanding of the CCSS.
  - ❑ Collaboration between teacher preparation program faculty and liberal arts and sciences faculty.
- Creating Core Teams
  - ❑ Interested faculty are forming teams of 4-5 for long-term participation (*Ongoing*)
- Core to College Summit
  - ❑ Opportunity for colleges and districts to come together and alignment and collaboration ideas.

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# Support for Goals and Projects

- Professional development for both faculty and teachers
- Webinars on CCSS, PARCC
- Website to share resources
- Core Faculty listserv
- Core to College newsletter
- Resources for Core Faculty to deliver CCSS/ PARCC sessions at their institution

# Collaboration and Alignment Grant

- Challenges postsecondary institutions to
  - ❑ Offer multiple opportunities for college faculty and secondary teachers to discuss college readiness, share best-practices, work on curriculum alignment, and take part in activities that increase knowledge and use of the CCSS and PARCC;
  - ❑ Promote alignment around the CCSS in areas including, but not limited to, academic courses and standards, data accountability, and teacher development (pre-service and in-service);
  - ❑ Establish a Core to College team to discuss the CCSS, PARCC, and curricular alignment;
  - ❑ Develop and share instructional strategies and activities that increase knowledge of the CCSS and PARCC and promote curriculum alignment

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# College Readiness Conference

- Limited funds are available for institutions to hold a College Readiness Conference.
- Conference must include district personnel, teachers, faculty, and administrators.
- Agenda should include overview of student data, Common Core, and an opportunity to discuss college-readiness issues.





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## Next Steps

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# Get Started

- The Division of Florida Colleges and Board of Governors do not dictate curriculum.
  - Work should be reviewed and approved through proper institution channels.
- Now that alignment of postsecondary curriculum is complete, begin implementing.
  - Start small with a few components and continue to include more.

# Tips for Getting Started

## ■ Implement.

- Begin with the frameworks you have in place
- Will not know if it works until attempts are made

## ■ Restructure goals and meetings to include actionable next steps and benchmarks.

- Give serious thought to what you want to accomplish and how you will do it.
- Everyone should leave with a task or component they will implement.

## ■ Begin internally tracking students.

- Make note of your students and ask where they are going.

# Tips for Getting Started

## ■ Promote your network.

- Tell colleagues and students.

## ■ Get plugged in!

- Join state listservs,
- Follow Common Core and PARCC developments.
- Sign up for standards and assessment reviews.

## ■ Explore.

- Ask to be included in district trainings.
- Identify and connect with local STEM businesses.

## ■ Connect.

- Form small contact groups – district, college, university
- Establish content leads and have regular lead meetings to discuss progress.

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# Establishing Connections

- Write your name, e-mail address, and area (district, college, university) on two sheets of paper.
- During your content meeting this afternoon, form core groups of three.
- Your group members can serve as your direct point of contact for general communication, questions, and opportunities.

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# Contact Information

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