Division Mission

The East Campus Science Division will provide a college level program of general education science courses, specialized science courses, and activities designed to fulfill the requirements for obtaining a Valencia College degree, prepare students for transfer to Bachelor’s degree granting colleges and universities, and meet the needs of the community by preparing students for high wage, high-skill jobs in fields associated with the various aspects of the sciences. The Science Division courses and activities will prepare students for responsible citizenship, wholesome and creative participation in life, and for intelligent decision-making using scientific reasoning and critical thinking. All activities conducted and the courses provided by the Science Division will support the Valencia College Strategic Plan and mission statements.
Division Goal I

Support online education by providing resources to science faculty to help them implement Universal Design strategies in science courses to comply with the Americans with Disabilities Act (ADA). This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 1: Learning Assured, Objective 3.

Assessment Summary

Strategy
~ To ensure all science students have equal access to science courses in Blackboard’s online environment
~ To direct science faculty to available college resources that provide training, as well as assistance, in the implementation of Universal Design Principles
~ To support science faculty in the development and use of the “Best Practices” of Universal Design in their science courses.

Rationale
~ To help all science faculty understand the positive impact that Universal Design has on learning for all of our science students

Measurables /Deliverables
~ Invite professionals from the Office of Student with Disabilities (OSD) to speak at a Science Division meeting
~ Connect faculty with individuals in the OSD to help them produce ADA course materials
~ Introduce faculty to Professional Development (PD) courses pertaining to Universal Design, such as the series currently being taught by Karen Cowden
~ Provide assistance to faculty by providing work study students to aid with capturing dialog for closed captioned course materials
~ The effectiveness of these strategies will be determined through an online survey.

Achievement Targets
~ OSD professionals attend Science Division Meeting as recorded in Division minutes
~ Participation of science faculty teaching online and hybrid courses in PD courses or face-to face help with ODS professionals
~ Student helper(s) enlisted to help with video captioning

Findings
~ Assess faculty participation in Universal Design support through an online survey
~ Assess help given by work study students by documentation of work hours
Division Goal II

The Science faculty will continue to take part in the expansion of learning opportunities awarded to minorities through the National Science Foundation [NSF]/Louis Stokes Alliances for Minority Participation [LSAMP] grant opportunity. This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2012-2015, College Goal 2: Learning Assured, Objective 5.

Assessment Summary

Strategy

~ National Science Foundation [NSF]/Louis Stokes Alliances for Minority Participation [LSAMP] – The project goal is to significantly increase the quality and quantity of under-represented minority students who successfully transfer into upper division Science, Technology, Engineering, and Math [STEM] majors.

Valencia’s work is focused on providing a clear “STEM Pathway” to encourage students in a STEM-related bachelor degree.

Rationale

~ LSAMP is ongoing with direct relationship with the STEM advisor and participation in various related activities.

Measurables/Deliverables

~ Community-based and student recruiting: Inform students about LSAMP and increase their awareness about STEM careers. Engage current alliance students having interest and potential in STEM and increase their awareness about STEM majors and careers.

~ Faculty engagement and inclusive pedagogy: Encourage faculty to participate in the Faculty Development Course – “Engaging Historically Underrepresented Students in STEM”

~ Student research opportunities, mentoring, and training: Connect and support students with mentored research opportunities; organize research training experiences for alliance students to earn a research certificate

Achievement Targets

~ Increase in the number of Under-Represented Minority (URM) students choosing STEM

~ Improved persistence and graduation rates of LSAMP URM students

~ Attainment of a GPA of 2.75 or higher for Valencia’s LSAMP URM students

~ Consistent participation of faculty and students in LSAMP activities

~ The goal of CFSA is to double the number of underrepresented minority (URM) STEM graduates in the alliance who graduate and enroll in a baccalaureate degree program in a STEM field. Specifically, at the end of three-year grant period, 642
associate-degree graduates from CFSA institutions will enroll in bachelor’s STEM programs.
The starting number was 321.

Findings
~ Review the outcome of the grant review process.
Division Goal III

The Science Division will increase student accessibility to physics courses by researching opportunities to provide dedicated space for an additional physics laboratory. In addition, student accessibility to laboratory equipment and instruments will be increased so that all physics students have hands-on access to physics equipment and technology. This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 2: Learning Assured, Objective 7.

Assessment Summary

Strategy
~ Improve and enhance physics laboratory experiences to provide for greater student learning

Rationale
~ Equitable access to laboratory space and equipment will strengthen student learning outcomes

Measurables/Deliverables
~ A survey of college space to determine potential room availability for a dedicated physics laboratory
~ An inventory of current physics equipment
~ A proposal will be developed to rectify insufficiencies of space and equipment by investigating the possibility of changing a classroom to a physics lab. The numbers of physics classes cannot increase since there is only one lab which is being used to the maximum. Because of our location to UCF our enrollment is increasing.

Achievement Targets
~ The determination of a site to be used solely as a physics laboratory classroom
~ A list of the physics laboratory classroom equipment and technology needed to provide an access ratio of two students per station for 100% of the physics labs.

Findings
~ The approval of a new physics laboratory classroom location
~ A list of the physics laboratory classroom laboratory equipment and technology needed to provide an access ratio of two students per station will be created and provided for review by faculty.
~ A list of physics laboratory equipment and technology needed to achieve the preferred student ratio will be created with a request for inclusion in the Valencia College Strategic Funding process.
Division Goal IV

The science dean will develop a systematic approach to reviewing and measuring the impact of academic organization infusion of resources for science faculty and dean. The hiring/reassignment of two discipline-based coordinators will have a positive impact in meeting this goal. This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 2: Learning Assured, Objective 8.

Assessment Summary

Strategy

~ The hiring/reassignment of two discipline-based coordinators will have a positive impact of academic organization and be of great benefit for science faculty and the science dean.

Rationale

~ Academic Organization Charge: Redesign the academic department to streamline and balance work, assign work appropriately and efficiently based on departmental needs, similarities, and differences, and to create an organizational structure that creates capacity for the work that we want to do but cannot, due to staff and organizational constraints.
~ To enable the science dean to have more time for strategic planning.

Measurables/Deliverables

~ Clarify roles, responsibilities, relationships and decision-making in the division through the development of job descriptions for discipline coordinators. Some of the duties will include reviewing all syllabi of each adjunct in the respective disciplines as well as mentoring and onboarding all new adjuncts and peer review all new adjunct as well as 50% of returning adjunct professors.
~ Effectively and efficiently utilize staff and/or technology to accomplish work
~ Develop models that are flexible, can be adapted to change, and that can be brought to scale:
  • To increase capacity of deans as they need time and space for leadership
  • To increase learning capacity of divisions
~ Dean will evaluate the effectiveness of the academic organization plan each term.

Achievement Targets

~ Documentable improvement of services

Findings
Dean will evaluate the effectiveness of the academic organization plan each term and provide an interim report to the campus president by March 2016.
Division Goal V

The Science faculty will improve and enhance facilities to provide for an enriched student experience through an “Outdoor Living Laboratory and Distributed Museum”. This will include a “rooftop” Garden, which is interdisciplinary, as well an “Osprey” tower. This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, Learning Assured, Objective 7.

Assessment Summary

Strategy
   ~ Faculty and students will work together with businesses and organizations to develop and create an “Outdoor Living Laboratory and Distributed Museum”.

Rationale
   ~ The “Outdoor Living Laboratory and Distributed Museum” will use native plantings, habitat enhancements, kiosks, and indoor displays to educate Valencia students about native flora, fauna, the hydrologic cycle, climate change, and natural history of central Florida. These features will also benefit our campus community, and help meet our commitment to sustainability. The project will provide an excellent opportunity for outreach and interdisciplinary cooperation for the betterment of the student experience.

Measurables/Deliverables
   ~ A comprehensive plan will be developed for college/campus approval.
   ~ Input will be gathered from all key parties critical to the decision making process of the plan implementation.
   ~ The Valencia Earth Studies Association (VESA) will network with businesses and organizations that are able to provide input and resources to work towards the execution of the laboratory and museum.
   ~ VESA members, other students, staff, and faculty will be invited to participate in “work days” to establish the area with native plants, and design and install kiosks and displays.

Achievement Targets
   ~ Plan proposal to be submitted for college/campus approval.

Findings
   ~ Evaluation of funding sources and project initiation for the “Outdoor Living Laboratory and Distributed Museum” plan
Division Goal VI

Science faculty will work with college wide academic partners on building relationships and strengthening collaboration to achieve desired goals and objectives. This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 3: Invest in Each Other, Objective 13.

Assessment Summary

Strategy
~ Engaging faculty in cooperative activities will strengthen the academic community to improve academic outcomes
~ Identify areas between campuses and disciplines that need cooperative action. The focus will be improving the lab experience for all chemistry students. The lab schedules from each campus will be assessed to determine the best way to improve each lab in all of the chemistry classes.

Rationale
~ Networking between campuses and disciplines will allow faculty to engage with like-minded individuals building academic scientific communities.
~ College-wide science faculty meetings allow opportunities to identify strengths and weaknesses in academics.
~ The engagement of faculty in conversations will lead to excellence in teaching.

Measurables/Deliverables
~ Fall and spring meetings between campuses as well as disciplines within the sciences
~ Agendas, meeting notes, and applicable PowerPoint presentations emailed to college-wide science faculty

Achievement Targets
~ Identification of faculty-led initiatives
~ Artifacts pertaining to meeting outcomes

Findings
~ Review of college-wide faculty goals
Division Goal VII

Full-time science faculty will mentor all newly hired adjunct faculty in order to promote collegiality and proper orientation. *This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for August 2015 - August 2016, College Goal 3: Invest in Each Other, Objective 14.*

Assessment Summary

**Strategy**

~ Develop an effective plan for communicating with new faculty
~ Provide mentors for all new faculty as well as those faculty who request mentoring
~ Provide pedagogical resources to engage adjunct faculty who are subject matter experts

**Rationale**

~ To acknowledge that adjuncts are critical team members of the college learning community
~ To better integrate adjuncts into the learning culture at Valencia
~ To increase student success and retention

**Measurables/Deliverables**

~ Creation and distribution of a survey inquiring about the perception of collegiality by adjunct faculty
~ Creation and distribution of a survey inquiring about the level of comfort of adjunct faculty within the science department

**Achievement Targets**

~ Record of meeting minutes with adjuncts April 1, 2015
~ Distribution of two faculty surveys with seventy percent (70%) participation from full-time faculty; seventy percent (70%) participation from adjunct faculty

**Findings**

~ Review of data collected
Division Goal VIII

Science Department faculty, with the support of the Dean of Science, will identify engagement opportunities to leverage Valencia's curricular and institutional influence and abilities in the community. *This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 4: Partner with the Community, Objective 16.*

Assessment Summary

**Strategy**
~ The Physics' faculty will host an April Fools Lab and a Haunted Physics Lab with the assistance of LSAMP (Louis Stokes Alliances for Minority Participation) students.

**Rationale**
~ To help Valencia students and members of the community understand that science and physics can be fun

**Measurables/Deliverables**
~ Advertisements of the spring and fall classroom events
~ Record of number of faculty and students and community members in attendance of each event

**Achievement Targets**
~ Visitation of fifty individuals to each event

**Findings**
~ Review of advertising tools
~ Determination of the use of facility resources, e.g. adequate space
Division Goal IX

Valencia will continue to engage the community through collaboration of teachers and students from Lawton Chiles Elementary School and Valencia's "Health Academy". This goal supports the Valencia College Goals, East Campus and Winter Park Campus Strategic Plan for 2015-2016, College Goal 4: Partner with the Community, Objective 16.

Assessment Summary

Strategy

~ Collaboration of Valencia College students and faculty with Lawton Chiles Elementary teachers and elementary school students through the “Health Academy” nutrition workshops

Rationale

~ To engage the community through service to elementary school children
~ To provide Valencia College students with teacher training opportunities
~ To increase the number of participating elementary classes from one to three

Measurables/Deliverables

~ Nutrition workshops are provided by Valencia college students in the elementary school setting.

Achievement Targets

~ Nutrition workshops delivered in each spring and fall
~ Increase the number of participating elementary classes from one to three

Findings

~ Continued implementation of the Valencia East “Health Academy” with Lawton Chiles Elementary School that was initially funded (January 23, 2015) by Florida Hospital's Foundation and extended with funding through an Endowed Chair.