**South Dakota Foundational Courses**

June 22-24, 2015

Pierre

Participants:

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Participants introduced themselves stating name, location, and curricular area of expertise.

An introductory video, *Success in the New Economy* written and narrated by Kevin Fleming and produced by Bryan Y. Marsh, was shared. This video (available on the Internet at https://vimeo.com/67277269), describes a fallacy in the traditional "college for all" model of education and encourages individuals to select career paths based on interests and skills.

It was noted that the purpose of the work was to develop South Dakota's state standards for foundational courses to ensure that they:

- Are aligned with industry needs
- Prepare students to be successful in employment and in postsecondary training
- Establish a sequence of courses leading to completion of a program of study.

It was clarified that standards describe "what" is to be learned, not "how" it is to be learned.

Program of study was defined as:

- A nonduplicative sequence of both academic and technical courses
- Beginning no later than grade 11 and continuing for at least two years beyond high school
- Culminating in a degree, diploma or certification recognized as valuable by business/industry partners.

A program of study was viewed as the bridge connecting preparatory and advanced work in high school with further study at the postsecondary level through a collegiate program or advanced training through work.

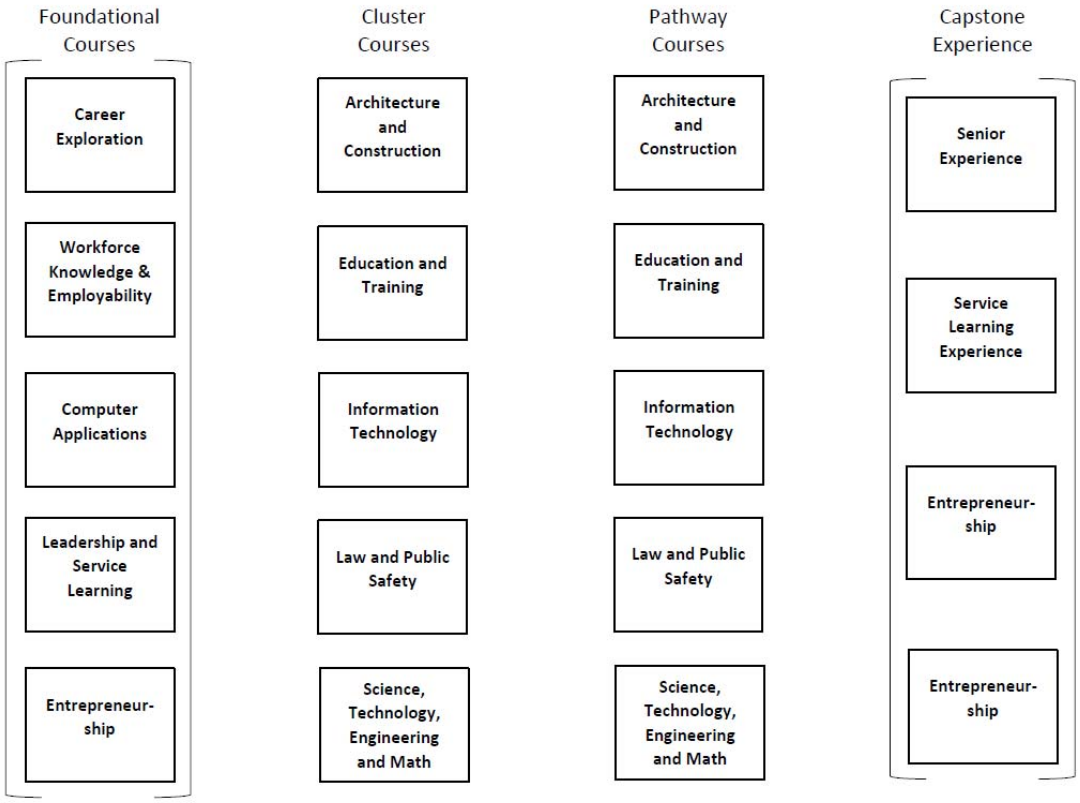
A summary of a recent labor market analysis for South Dakota was presented, with separate slides shown identifying the 20 largest industry clusters, the fastest growing industry clusters by percentage growth and increase in employment demand, and the occupations with a projected demand of 50 or more.

Results of a recent survey of employers were shared. The survey was designed to ascertain if employers were having hiring difficulties, if applicants were deficient in either soft or technical skills, and options for a state response. 140 survey responses were included in the results with largest participation from hospitality and tourism (30), architecture and construction (19), manufacturing (15), agriculture, food and natural resources (14), and transportation, distribution and logistics (10). In general:

- Four out of five employers noted having hiring difficulties in the previous 12 months.
- Primary reasons for this hiring difficulty were:
    - Low number of applicants (97)
    - Lack of work experience (67)
    - Lack of technical or occupational skills (34)
    - Inability to pass drug tests or having a criminal record (30)
    - Unwillingness to accept offered wages (29)
- Occupational areas noting the greatest hiring difficulties were hospitality (20), architecture & construction (16) and manufacturing (14) though these results are skewed by the response rate from the individual sector
- The most highly noted soft skills lacking were:
    - Initiative (85)
    - Attendance/dependability (84)
    - Communications (74)
    - Customer service (64)
    - Problem solving (55)
- Similarly, employers noted the highest needs for additional training in:
    - Attendance/timeliness/work ethic (75%)
    - Customer service (58%)
    - Problem-solving (53%)
    - Teamwork (41%)
- Two out of five employers noted that applicants lacked technical skills.
- Employers asked that the state response focus on:
    - Promotion of opportunities (11)
    - Teaching of ethics (11)
    - Teaching soft skills (6)

The current set of foundational courses was reviewed to see if they were the appropriate courses for standards development. Upon discussion it was decided to combine the separate courses in leadership and service learning. The five foundational courses then are, Career Exploration, Workforce Knowledge and Employability, Computer Applications, Leadership and Service Learning, and Entrepreneurship. The foundational courses and their role in career and technical education cluster development for the current year are shown in the following chart.

## Foundational Courses – Pathways




Information was provided about what makes good standards. These criteria included:

- Essential – does it define knowledge and skills that an individual must have to participate fully and effectively in programs that prepare them to enter careers with livable salaries, and to engage in career advancement in growing, sustainable industries?
- Rigorous – does it ask a student to demonstrate deep conceptual understanding through the application of knowledge and skills to new situations?
- Clear and specific – does it convey a level of performance without being overly prescriptive? Is it written in a way that the general public would understand?
- Teachable and Learnable – does it provide guidance to the development of curricula and instructional materials? Is it reasonable in scope?
- Measurable – Can it be determined by observation or other means that the student has gained the knowledge and skills to be demonstrated to show attainment of the standard?
- Coherent – Does it fit within the progression of learning that is expected for the program of study?
- Sequential – Does it reinforce prior learning without being unnecessarily repetitive? Does it provide knowledge and skills that will be useful as the student continues through the program of study?
- Benchmarked – Can the standard be benchmarked against industry or international standards? Does it prepare the student to be successful in the regional, state and global economies?

State agency staff met in May to review the processes to be used for standards review. During that session the staff identified other criteria to be considered when writing standards:

- Connections to postsecondary programs
- Relevant across the content area
- Compatible with virtual learning
- Reflects business/industry input
- Adaptable to change over time
- Allows for instructional creativity
- Appropriate for the target audience
- Aligned with relevant academic content
- Applicable to student organizations
- Recognizes unique features of CTE

These additional criteria were shared with participants for their consideration during standards development.

Participants were encouraged to identify a "big picture" concept statement describing what was to be accomplished within the course before developing standards. This "big picture" statement would eventually be revised to be an executive summary statement at the time that the standards were drafted.

A Standards Template was shared with the participants. A template was completed for each course. The elements of the template were reviewed with the group:

- The course title was inserted at the top.
- A grid of administrative information was completed to the extent the information was known. This grid included:
    - The Career Cluster [Foundational courses]
    - The Course Code [to be added by state staff]
    - Any prerequisites or recommended prior coursework
    - Credits [generally established by the individual school district]
    - Graduation requirement [generally established by the individual school district]
    - Program of study and sequence [a listing of the components of the program of study]
    - Student organization
    - Coordinating work-based learning [refer to spectrum of work-based learning activities]
    - Industry certifications [if appropriate for the course]
    - Dual-credit or dual enrollment
    - Teacher certification requirements
    - Resources
- Course description. Eventually this will be an executive summary describing the course, but in the process participants were encouraged to develop a "big picture" statement about the course to serve as a reminder when developing standards.
- Program of study application: a more detailed description of the elements within the program of study and where the particular course fits within a sequence.
- Course Standards and prods
    - "Prods" is a list of topics to keep in mind when developing standards to see that related topics are included. The prods identified by state staff include:
        - Safety

        - Soft skills
        - Reinforcing academic concepts in math, language arts, science and social studies
        - Addressing all aspects of the industry
        - Trends [so that students are thinking of the direction that an industry is moving]
    - Indicators – the main topics written in terms of a demonstration of knowledge and skills
    - Sub-indicators – statements identifying in more detail how the indicator will be demonstrated
    - Integrated content – A space that allows for examples, explanation, reference to credentials, alignment with other academic standards or other useful information to bring clarity to the understanding about the intent of the sub-indicator
    - Notes – a place for additional information to clarify the intent and expectations of the indicator.

An example was shared to ensure understanding.

Working teams were then established to write the standards. Each team selected a course to begin the work. Early drafts were reviewed by the consultants and participants were led with guiding questions so that they could refine their own work. Eventually, when standards had been developed for all courses, the participants did a final group review of all standards to give their approval. However, except for computer applications, consensus was not reached. Final and draft documents were reviewed by the consultants for format and structure, and saved to the shared Dropbox. The consultants will work with state staff to determine the best next steps to reach consensus on the remaining foundational course standards.

**Computer Applications**

CA 1 Create a variety of documents using word processing software
- CA 1.1 Modify and manipulate paragraphs and paragraph formatting
- CA 1.2 Use tables to enhance documents
- CA 1.3 Customize document formatting
- CA 1.4 Create a mail merge document
- CA 1.5 Create and use the advanced features of word processing software
- CA 1.6 Format characters
- CA 1.7 Use help features

CA 2 Create and manipulate workbooks using spreadsheet software
- CA 2.1 Format a spreadsheet to enhance its appearance
- CA 2.2 Insert formulas into a worksheet to enhance its functionality
- CA 2.3 Manipulate data within and between workbooks
- CA 2.4 Create charts within a spreadsheet to represent data graphically

CA 3 Create a professional presentation using appropriate software
- CA 3.1 Create a presentation using presentation software
- CA 3.2 Modify a presentation
- CA 3.3 Add visual appeal and animation to a presentation
- CA 3.4 Add visual elements to a presentation
- CA 3.5 Share and present professional presentations

CA 4 Demonstrate and communicate an understanding of an operating system's file management system
- CA 4.1 Use an operating system's file manager to navigate using various methods to different locations and manage files
- CA 4.2 Manipulate the operating system's built-in features

CA 5 Manage administrative features of an operating system
- CA 5.1 Demonstrate knowledge of features in the operating system
- CA 5.2 Analyze operating system capabilities and restrictions

CA 6 Distinguish and apply key elements of Internet browsers and search engines
- CA 6.1 Demonstrate advanced search techniques within a search engine
- CA 6.2 Analyze different search engines
- CA 6.3 Evaluate different Internet browsers

CA 7 Demonstrate an understanding of computer preventive maintenance and security
- CA 7.1 Demonstrate various methods of backing up files using different options
- CA 7.2 Conduct Internet browser maintenance
- CA 7.3 Explain the importance of antivirus software
- CA 7.4 Communicate an understanding of the importance of password creation and management

CA 8 Develop digital literacy and citizenship skills
- CA 8.1 Demonstrate an understanding of the importance of privacy and security within relevant technological tools
- CA 8.2 Analyze the effect of technology on relationships and communication
- CA 8.3 Demonstrate the complexity of safe, legal and responsible creation of digital footprints and reputations
- CA 8.4 Follow ethical and legal guidelines in gathering and using digital information and applications
- CA 8.5 Effectively decipher reliable information on the web

A cover letter has been drafted to guide business/industry feedback to the standards developed through this process. The standards documents will be reformatted with three columns for business/industry feedback at the sub-indicator level utilizing a 1 (low) to 5 (high) scale:

- Is the sub-indicator essential?
- Is the sub-indicator clear and specific?
- Is the sub-indicator measurable?

Business/industry partners will also be asked if the standards reflect the preparation necessary for a student to enter an occupational preparation program. A sample of the reformatted document follows.

Following business/industry review, state staff will revise the standards documents as necessary to incorporate business/industry suggestions. The revised documents will be shared with participants in the standards development process and, eventually, with teachers of foundational courses throughout the state for their feedback. Final documents will be taken through public hearings and delivered to the State Board of Education for adoption.

CA 1 – Create a variety of documents using word processing software

| | | | Essential 1 (low) – 5 (high) | Clear and Specific 1 (low) – 5 (high) | Measurable 1 (low) – 5 (high) |
|---|---|---|---|---|---|
| *Webb Level* | *Sub-indicator* | *Integrated Content* | | | |
| Two | CA1.1 Modify and manipulate paragraphs and paragraph formatting.<br>Examples:<br>• Apply paragraph and section shading<br>• Use text flow options such as keeping lines together<br>• Sort list, paragraphs, and tables<br>• Change line spacing<br>• Reveal the formatting | | | | |
| Two | CA1.2 Use tables to enhance documents.<br>Examples:<br>• Create and modify worksheets in a table<br>• Select and perform calculations in a table<br>• Move a table | | | | |
| Two | CA1.3 Customize document formatting<br>Examples:<br>• Use the auto-text feature<br>• Create a header or footer<br>• Create or revise footnotes and endnotes<br>• Create a watermark<br>• Format the first page differently than the subsequent pages<br>• Insert page numbers | | | | |

September 8, 2015 Supplement

To finalize work of the standards review team from June 22-24, 2015, an additional team was assembled by the South Dakota Department of Education. This team was comprised of the following members:

Daniel Smith, CTE Consulting, Chaska, MN
Erin Larsen, South Dakota Department of Education, Pierre, SD
Andrea Diehm, South Dakota Department of Education, Pierre, SD
Michelle Nelson, South Dakota Department of Education, Pierre, SD
Tiffany Beste, Technology Education, Yankton Middle School, Yankton, SD
Leah Brink, Daktronics, Brookings, SD
Jean Clarke, Family and Consumer Science, South Dakota Virtual School
Joe Dalton, Career Exploration, Northeast Technical High School, Watertown, SD
Nikki Melius, Family and Consumer Science, Faulkton High School, Faulkton, SD
Brenda Merkel, Health Science, Virtual School,
Charlotte Mohling, FACS, Educational Technology, Curriculum Coordinator, Wessington Springs High School, Wessington Springs, SD
Deb Nelson, Metabank, Sioux Falls, SD
Mark Otten, Principal, Burke High School, Burke, SD
Zonya Tantype, Counselor, Flandreau Indian School, Flandreau, SD

Participants participated in two activities: a webinar on August 31, 2015, and a one-day face-to-face meeting in Madison, South Dakota on September 22, 2015.

*The August 31 Webinar:*
Following introductions, the purpose of the August 31 Webinar was stated to be to give the background on the process used to develop standards in this project, give information about work done to date for standards in the foundational courses, discuss resources available to you via a Dropbox, present a concept for consideration about the organization of the foundational courses, and make assignments to help all prepare for the face-to-face meeting on September 22, 2015 at Dakota State University in Madison.

The video, *Success in the New Economy* by Kevin Fleming and Brian Marsh, was not viewed, but participants were encouraged to view the video on their own prior to the September 22 meeting.

It was noted that the purpose of the work was to develop South Dakota's state standards for foundational courses to ensure that they:

- Are aligned with industry needs
- Prepare students to be successful in employment and in postsecondary training
- Establish a sequence of courses leading to completion of a program of study.

It was clarified that standards describe "what" is to be learned, not "how" it is to be learned.

The role of the standards committees was clarified.

Program of study was defined as:

- A nonduplicative sequence of both academic and technical courses
- Beginning no later than grade 11 and continuing for at least two years beyond high school

- Culminating in a degree, diploma or certification recognized as valuable by business/industry partners.

A program of study was viewed as the bridge connecting preparatory and advanced work in high school with further study at the postsecondary level through a collegiate program or advanced training through work.

A brief review of the labor market analysis for the state was shared, and it was noted that the individual standards review teams engaged in discussion pertaining to new, emerging and outdated practices within their industries. For the foundational courses, it was suggested that a more thoughtful analysis would be to discuss general workplace trends. Participants were asked to give thought to this topic and be ready to discuss trends at the September 22 meeting.

Highlights of the state's survey of employers were shared. It was noted that, while lack of technical skills was listed by employers as a reason for hiring difficulties, employers wanted the state to place a high emphasis on the development of soft skills.

It was noted that earlier work identified five foundational courses, and that programs of study relied on students bringing certain foundational skills to their advanced work within each cluster or pathway.

The concept of a "big picture" statement about each of the foundational courses was presented, and participants were encouraged to develop big picture statements about each foundational course prior to the meeting on September 22.

Information was provided about criteria for good standards, and ten additional criteria identified by state staff were shared for consideration. Participants then viewed four draft standards to see if they met the criteria.

Participants were given information about available resources in the Dropbox that had been established for their use. These resources were grouped into four categories: career development resources, economic analysis resources, state standards resources, and Webb level resources.

The Standards Template was shared and an example shown incorporating elements into the template.

The work done by the prior team was discussed and the location of those documents in the Dropbox shared. Participants were asked to review those documents prior to the September 22 meeting.

A concept was presented to see if it would be possible to draft standards in such a way that individual school districts could combine standards from more than one foundational course into a customized course for the school.

Participants were given assignments to complete prior to the September 22 meeting:

- Access the Dropbox
- View the video, *Success in the New Economy*
- Give thought to how the workforce is changing
- Formulate a "big picture" description for each foundational course
- Review all draft standards completed by the previous working group
- Review the standards criteria

- Select three foundational courses for which the participant felt individual expertise and communicate those positions to state staff.

*The September 22 Standards Review meeting:*

Participants gathered on September 22, 2015 at Dakota State University in Madison to continue work on standards for the foundational courses. Following introductions, participants were reminded of the purpose of the activity, the role of the standards review committee, and the working definition of a program of study.

Participants shared ideas they had formulated about how the workforce is changing. Through discussion, the following attributes were listed:

- Face-to-face contact is occurring later in employment process with more review being conducted electronically prior to an interview
- Generational differences are being noted, particularly in regards to feedback, coaching, and mentoring
- New graduates bring an expectation for rapid advancement in their work
- Primarily due to electronic communications, applicants can access more information up front about companies in which they are interested
- There seems to be more attention to a "culture fit" between companies and their new employees
- Companies come and go, necessitating greater retraining needs
- There is an increase in the virtual world and opportunities to telework
- In the past, the expectation was that a job was attained through hard work. Now there seems to be more of an expectation that a job will be provided
- There is instant access to information
- Youth seem to carry an attitude of entitlement
- There is an expectation that employees will be allowed second and third chances to do their work
- New employees seem scared to fail
- Teamwork is not deemed essential among employees though often expected by employers
- Today's organizations were built by boomers and do not reflect the culture of the past
- There is changing workplace etiquette with work relationships appearing to be more casual
- Today's youth see a need for self-fulfillment
- Because of the increasing virtual world, today's youth seem to have no sense of place
- Job change happens more frequently, which seems to diminish the sense of company loyalty
- Today's youth are more entrepreneurial.

The currently proposed set of course titles for the foundational courses was presented and there was consensus that the right sequence was identified, though specific course titles were modified as further work was done to identify the final draft of standards. Indicators, as proposed by the summer working team, were shared and participants did some work to move these indicators among the course titles as deemed appropriate.

Information was shared pertaining to what other standards teams had identified as appropriate background gained through the foundational courses.

- The architecture and construction team wanted students to bring specific technical understandings about X-Y-Z coordinates, G-code [for computer numerical control], and some programming.
- The STEM team wanted students to be self-directed, independent thinkers who had the ability to place information into a real-world context.
- The education and training team wanted students to have strong verbal and written communication skills, work integrity, and a sense of good attendance and proper conduct.

Time was spent explaining the importance of a big picture and participants shared some of the big picture concepts they brought to the table:

- Career Exploration
    - Development of a personal learning plan/career learning plan
    - Exploration of sixteen career clusters
    - Understanding of ability and aptitude
    - Understanding of the relationship of career exploration to academic coursework
    - Access to experiential learning
- Workforce Knowledge and Employability
    - An opportunity to view the application of skills to a work setting
    - The opportunity to interact with business and industry
    - An understanding of the relationship between educational choices and workplace options
    - An awareness of employability skills
    - Practice in interviewing tactics
    - An understanding of the employability process
    - An understanding of access points to postsecondary education and training
    - Self-awareness
- Computer Applications
    - Confidence to use technology
    - Digital literacy
    - Internet safety and etiquette
    - Use of help tools and self-analysis of technology problems
    - An understanding of technology maintenance and security
    - Ethical use of technology
- Leadership and Service
    - An understanding of leadership characteristics
    - Practice in teamwork
    - Access to career and technical student organizations and their use as a leadership development tool
    - Development of soft skills
- Entrepreneurship
    - Self-awareness

    - An understanding of marketing and branding
    - Practice in innovation and creativity
    - Recognition of the concept of a “big idea”
    - Global awareness
    - Finance

Time was also spent reviewing criteria for good standards and how these criteria were used to place standards within the standards template.

From this background, working teams were established and writing commenced. Three four-person teams were established first:

- Career Exploration
    - Tiffany Beste
    - Joe Dalton
    - Andrea Diehm
    - Mark Otten
- Workforce Knowledge and Employability
    - Leah Brink
    - Jean Clarke
    - Nikki Melius
    - Michelle Nelson
- Entrepreneurship
    - Brenda Merkel
    - Charlotte Mohling
    - Deb Nelson
    - Zonya Tantype

Following their work, participants were reconfigured into two six-person teams for the remaining courses:

- Leadership and Service
    - Leah Brink
    - Jean Clarke
    - Nikki Melius
    - Charlotte Mohling
    - Michelle Nelson
    - Zonya Tantype
- Technology Applications
    - Tiffany Beste
    - Joe Dalton
    - Andrea Diehm
    - Brenda Merkel
    - Deb Nelson
    - Mark Otten

The final set of course titles, descriptions and standards follows. These were shared with all participants electronically following the end of the session, and final comments were incorporated after participant electronic review.

**Career Exploration**

Career Exploration is an exploratory course that helps students identify their skills and interests while also providing direction towards possible career choices within the sixteen career clusters. This course will help students develop personal learning plans/career learning plans through experiential learning and hands on activities.

CE 1 Identify personal aptitudes, abilities, strengths, talents and weaknesses

CE 2 Investigate the knowledge and skills associated with the career clusters

CE 3 Explore relevant factors that impact success and satisfaction in careers

CE 4 Develop a personal learning plan

**Employability**

Employability skills are fundamental to creating an employable individual. Students must have skills and knowledge necessary to understand the factors that contribute to life-long work success. These standards are designed to provide students with foundational knowledge to promote successful transition from school to career.

E 1 Evaluate positive work behaviors and personal qualities

E 2 Demonstrate skills to seeking and successfully securing employment

E 3 Demonstrate effective workplace communication

E 4 Generalize employer and employee responsibilities toward each other

E 5 Make connections between educational choices and employment options

**Foundations of Technology**

The student will learn to identify the general usage of technology, software, and applications. Utilizing that knowledge, this course will cover topics such as, but not be limited to, word processing, spreadsheets, presentations, operating systems, Internet browsers, search engines, preventive maintenance and security, digital literacy, netiquette and citizenship. This course expands the student's skills, knowledge and confidence in various forms of software platforms and applications (e.g. PC, Mac, Google Apps, smart phone, apps, etc.)

FT 1 Create and format word processing documents for a variety of personal and work applications

FT 2 Create and format spreadsheets for a variety of personal and work applications

FT 3 Create and format professional presentations

FT 4 Demonstrate and communicate an understanding of an operating system's file management system

FT 5 Manage administrative features of an operating system

FT 6 Distinguish and apply key elements of Internet browsers and search engines

FT 7 Demonstrate an understanding of computer preventive maintenance and security

FT 8 Develop digital literacy, netiquette and citizenship skills

**Leadership and Service**

Students will be able to identify leadership characteristics, practice teamwork, and improve their use of soft skills while in the workplace or in environments which strengthen the community.

LS 1 Investigate skills for leadership in the workplace and community

LS 2 Demonstrate standards of effective communication

LS 3 Summarize standards of behaviors in leadership situations

LS 4 Understand the importance of diversity and mutual respect

**Entrepreneurship**

Entrepreneurship education prepares students to carry out the entrepreneurial process and experience the entrepreneurial spirit. Developing an innovative idea is one of the first steps of a successful business.

ENT 1 Summarize the skills and characteristics necessary to be a successful entrepreneur

ENT 2 Analyze the importance of entrepreneurship opportunities within a global market

ENT 3 Apply marketing and economic concepts to an entrepreneurial venture

ENT 4 Use financial and accounting concepts and tools to make business decisions

ENT 5 Analyze how government regulations and business ethics affect entrepreneurial ventures