

Business & Industry Involvement

Helena College and its partners in area high schools meet to refine, revise, and develop pathways to various careers throughout the school year.

To ensure that pathways lead to viable career opportunities, employers in the region serve on Advisory Committees to provide input regarding:

- Skill sets that employers need;
- Job openings that will be available;
- Opportunities for internships or apprenticeships; and
- Courses and programs needed to fulfill emerging industry needs.



Big Sky Pathways Bulletin

Information Technology Career Cluster Seminar Set for January 7

Helena College's Career Cluster Seminar for Information Technology is January 7, 8:30-1:30, 1115 North Roberts, in Rooms 002-003.

Because Montana has a critical need for graduates with high-level computer skills, developing pathways for students to move seamlessly from high school to college and into these high-paying positions is urgent.

High school teachers and counselors with students interested in pursuing careers in Computer Technology Network Administration or Computer Technology Programming shouldn't miss this opportunity to learn more about the latest trends in Information Technology and begin developing or renewing pathways for their students.

The Seminar will include speakers from the Montana Information Services Division and Anderson Zurmuehlen, speaking about job opportunities and the critical skills needed for employment in state government and the private sector. Recent graduates of Helena College will share a VoIP Primer Demonstration and a Systems Analysis and Design Project completed by a team of college students in 2013. Helena College faculty will discuss how their curriculum is changing to meet industry needs. These presenters will also field questions about their education and work experiences.

Gap Analyses list outcomes, such as "Design a software application using the software development process to deliver a product to the customer," with columns for college and high school faculty to complete with the course names that achieve each outcome. Using the analysis, faculty will locate significant overlaps between courses, which may signal opportunities for dual credit. They may also find industry-recognized outcomes missing in the course sequence.

Using the **Gap Analysis** as a basis for discussion about skills critical to a career, college and high school faculty will work out **Programs of Study**, listing the ideal set of courses a student should take in high school, Advanced Learning Opportunities, and the college course sequence. With a **Program of Study**, students can see the most efficient route to a career, from high school through obtaining a degree and credential.

Gap Analyses and **Program of Study** templates are posted on Helena College's Big Sky Pathways website: http://www.umhelena.edu/admissions_enrollment/careerpathways.aspx. Starting with partially-completed documents, teachers can begin the work before the Seminar.

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What are Career Clusters, Pathways, and Programs of Study?

Information Technology Advisory Committee Discusses Employment Trends

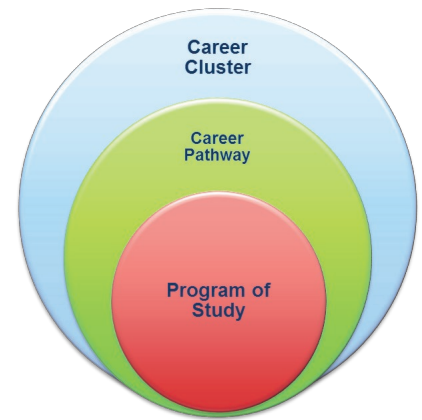
On October 22, Helena College's IT Advisory Committee, plus several students and recent graduates, met to discuss employment trends, skill sets, and the strengths and weaknesses of the Computer Technology Program. IT Management and Phone Systems are critical needs today. In the next few years, Application Development, Big Data, Tech Support, IT Security, Systems Analyst, Networking, and Web Developer shortages are expected. Participants also projected a growing need for skills in manipulating codes, rather than simply coding.

Employers are looking for people with the foundational skills to write software, networking skills, server administration abilities, and virtualization skills. Another important skill is the ability to communicate: to translate "IT" into English for customers and other employees.

The Advisory Committee suggested that students take internships whenever possible, work on open-source projects, volunteer in the service industry to obtain customer service skills, and participate in "Meet Ups."

Teachers can learn more about future jobs and explore ways students can attain these skills at the Information Technology Career Cluster Seminar at Helena College on January 7.

*To participate in Helena College's Pathways, contact
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The Information Technology Career Cluster encompasses several computer-related fields, including Computer-Aided Manufacturing, which straddles the IT and Manufacturing Clusters.

Part of the Pathway is the Gap Analysis, which shows where course outcomes at the college and high school levels overlap, for dual credit opportunities, and where gaps may reveal a need to add more content.

A Program of Study (POS) is the plan to get students through high school and college and into successful careers. A POS is unique for each high school.

Code Montana offers a coding course that can be taken online and used in a Program of Study for students all over Montana. It may be used to satisfy a Introduction to Programming course. How this course can fit into these Pathways will be discussed at the January 7 Seminar.

For more information about Big Sky Pathways, snap this QR Code:



January 7 Seminar
Information Technology
Computer Programming
Networking

Dual Credit Possibilities

- College Algebra or Probability and Linear Math;
- College Writing or Technical Writing;
- Psychology or Sociology.

For high schools with qualified teachers (Masters with 9 credits credit or participating in Dual Credit Incentive Program):

- Computer Literacy;
- Introduction to Programming;
- Programming with Java;
- Introduction to Networks;
- Databases & SQL.