Since the college began offering aviation classes in 1969, our programs have evolved to meet and exceed the increasingly stringent demands of nationwide airlines and corporate flight departments looking for pilot candidates.

In terms of training, our operational base at the Salt Lake International Airport makes us the only four-year collegiate flight program that operates out of “class B airspace”—a busy international airport environment. That means, from day one of their training, our students are learning to fly in the same environment they will fly in as airline, corporate, or cargo pilots. Those complex conditions require us to maintain strict safety protocols, and the result has been impressive: over 70,000 hours of accident-free training flights.

NEW CURRICULUM FOCUSED ON CRITICAL, ANALYTICAL, AND INTEGRATIVE THINKING

Clearly, we have a lot of things to be proud of. But we wanted to create an even more effective program because we saw some weaknesses in the traditional curriculum, and so we have created a unique and innovative flight-training curriculum, which we began offering in fall 2011.

Traditional training models require students to complete a series of flight maneuvers and skills within prescribed total-hour requirements for each flight certificate or rating. This model assumed that students were completing flight training in virtually identical training environments (not a busy class B airspace) and would become proficient with flight maneuvers in a specified number of hours. Additionally, traditional models gave students relatively few opportunities to practice and demonstrate decision-making and critical-thinking skills in the ways that employers demand.

After serious consideration and planning, we have produced a new curriculum that changes all of that: While students will still earn the same pilot certificates and ratings as they did under our old curriculum, the new courses require students to learn much more than the minimum FAA certification requirements. Our program now “systematically builds pilot skills and abilities in more interconnected, realistic, and applicable ways.”

SCENARIO-BASED TRAINING

Among the many innovative features in the new curriculum is a focus on scenario-based training. Rather than building a student’s flight training around specific, isolated maneuvers and procedures such as departing a field with a short runway or using instruments to fly,
the new curriculum demands that students apply their skills and flight knowledge to address scenarios that more closely replicate situations they will encounter as commercial or corporate pilots. Students make real-world, real-time decisions such as how to conduct a flight, which might mean altering their flight plan, diverting to an alternate airport, interacting with passengers and other crew members, or best handling in-air emergencies.

**FOCUS ON DECISION-MAKING**

The new curriculum also enhances decision-making, a particularly important skill in aviation because a relatively high percentage of aviation accidents is related to pilot judgment. Airlines and corporate flight departments have been working to address pilot-judgment issues for some time and have been quite successful in reducing the number of accidents related to poor decision-making.

Our new curriculum is one of the few in academic aviation that uses many of the techniques that have proven to be effective in developing strong decision-making skills. Scenario-based training, for example, puts students into positions where they must make realistic decisions and practice decision-making skills right from the very beginning of their training. As they move into the Pilot in Command Development course, flight experiences and simulator training enable students to take command of situations by making decisions and then reflecting on the appropriateness of those decisions. The continued coursework sequence presents students with increasingly challenging scenarios as they further practice and develop their decision-making and teamwork skills.

**LEARNER-CENTERED GRADING**

We have also implemented a learner-centered grading approach. In traditional models, when a student and instructor completed a flight lesson, the instructor would give verbal feedback and then issue a grade for the lesson. The student had very limited participation in that exchange. Under the new curriculum, students reflect upon the lesson, complete a self-evaluation of their performance, and explain verbally to their instructor why they evaluated themselves the way they did. The instructor then provides additional feedback and a final overall evaluation of the lesson. In this approach, the learning continues to take place beyond the flight, and students develop reflective and realistic self-assessment skills, along with stronger communication skills.

**COST SAVINGS TO STUDENTS**

In the new Advanced Flight course, we have adopted the newest FAA Industry Training Standards program to reduce the total number of hours required for the commercial certificate. Under this new program, the FAA allows pilots to obtain a Commercial Pilot Certificate when they can demonstrate the necessary competencies, rather than requiring them to have a specific number of total hours. In the past, students had to complete a number of solo cross-country flights that had relatively little training value beyond reaching the specified number of hours. In the new curriculum, every hour of flight will maximize student learning opportunities and will not serve to simply “build time.”

Our approach emphasizes college-wide learning goals: it focuses on critical, analytical, and integrative thinking and on providing students with more opportunities to develop leadership, collaboration, and teamwork skills. These innovative changes make the Westminster College aviation program distinctive and will better prepare students for success in the rapidly changing world of aviation.