

**MVLA  
2019-20  
COURSE INFORMATION SHEET**

**Course Title:** Innovative Design Capstone (BC2050)

**Instructor:** Lydia Conoway

**UC/CSU:** “G” Elective - 1 year required

**Pre-Requisite:** 2 years of of any CTE coursework in engineering, computer science and/or architectural design

**Textbook and other learning resource:** Varies by project

**Student Learning Outcomes:**

The Innovative Design Capstone course follows two years of prior CTE coursework in engineering, computer science and/or architectural design. This yearlong project course gives students the freedom to propose, design, and refine their own project under the guidance of an industry panel. Students work in teams and collaborate on a long-term project utilizing emerging technologies and a range of skills. Students will present their project proposal to an industry panel and will receive feedback on their progress. Project proposals may fall under any of a variety of Career Technical Education pathways including mechanical, civil, software or electrical engineering, computer science, app and game design, product design, architectural design, or other subjects as approved by the instructor. Explicit instruction and activities will build professional skills in teamwork, project management, leadership, the design process, research, analysis, and 21st century communication skills. Students will present to the industry panel and receive feedback on four occasions: project proposal, two design reviews, and a final presentation. Students will follow their project through from conception to completion during the course of the year, and will document their design and manufacturing process as they develop a professional quality product. In addition to the specific design and technology skills that their project demands, students will develop skills in field research, project management, teamwork, leadership, time management, customer relations, and budget management.

**Assessment and Grading ([BP 5121](#) / [AR 5121](#)):** To ensure that every student has an equal opportunity to demonstrate their learning, the course instructors implement aligned grading practices and common assessments with the same frequency.

1. Grading categories and their percentage weights:

Teamwork – 20%  
Design Process and Development – 20%  
Leadership – 15%  
Project Management – 15%  
Research and Analysis – 15%  
Communication, Professional Review and Reflection – 15%

2. Achievement evidence collected within each grading category: All performance assessed through rubrics for each strand.

- Teamwork: Teamwork is a major component of the course. Students will select their own areas of focus from the teamwork rubric and will be assessed on their progress in these areas. Data will be collected from the students, their group and the teacher.
- Design Process and Development: The design and development of a professional quality product is a major component of the course. Students are expected to improve their designs using feedback from their peers, the teacher and the industry panel. Students will be assessed using the design and development rubric.
- Leadership: Students will assume a variety of leadership roles. All students will facilitate meetings, and will have leadership responsibility over part of their project. Each student will meet with the teacher and set personal leadership goals. The student will self-assess, team members will provide input and the teacher will mark progress on a rubric tailored to the agreed upon leadership goals.
- Project Management: Students will be responsible for contributing to the project plan and for meeting and managing their part of the plan. Students will set their own project management goals and will be assessed on the project management rubric using data from the student, their team and the teacher.
- Research and Analysis: Students will perform market research, user studies, focus groups, testing analysis and engineering analysis as appropriate for their project. This work will be assessed using the research and analysis rubric.
- Communication, Professional Review and Reflection – In addition to four major presentations to the industry panel, students will be assessed on their electronic communication, interpersonal communication and reflections of their own work.

3. Grading scales:

90-100%	A
80-89.99%	B
70-79.99%	C
60-69.99%	D
50-59.99%	F

4. Homework/outside of class practices ([BP 6154](#)):

This is a capstone project course. Students are expected to work outside of class time as needed to meet their milestones and deadlines. Students teams are responsible for developing their own project, so setting realistic and healthy expectations for the time needed to complete tasks is an important part of the personal development that this course aims to foster. Students should communicate with their group and the teacher if concerns about workload come up during the year. Working consistently and not waiting for deadlines will help balance the workload of the class.

5. Excused absence make up practices ([Education Code 48205\(b\)](#)):

Students must notify and work out a schedule prior to the due date or upon returning from an excused absence with their teacher to make up any work, quizzes, and exams beyond the due date.

6. Academic integrity violation practices ([MVHS Academic Integrity Policy](#)):

The Board expects that students will not cheat, lie, plagiarize or commit other acts of academic dishonesty. Examples of cheating include: anyone who copies another's work or turns in someone else's ideas as his or her own, collaboration with another student or students could be considered cheating if students are expected to complete an assignment independently, copying homework, allowing someone else to copy your work, plagiarism, copying or allowing others to copy from another's exam, improperly obtaining and/or using tests, questions, or answer keys, using unauthorized notes/materials or electronic equipment (calculators, cell phones, etc.), with greater access to the Internet and electronic sources, students need to be very clear about their responsibilities in using these tools with integrity. Check with your teachers if you are unsure or unclear about his/her expectations regarding the use of the Internet.

7. Late work practices:

All work must be completed by the due date and time in order to be graded for full credit. Unexcused late work will receive a maximum grade of 90%. Unexcused late work not turned in after one school week of the due date will not be accepted. Revisions and retakes are encouraged for most assignments. Students will be notified in advance of assignments that are not eligible for revision. Criteria and due dates for revisions will be dependent on course types. All late work submission will require a personal email informing the teacher.

Many projects and groupwork need to be completed on time to participate in the challenge. Additional time outside of class before the end of the project can be arranged with the instructor

8. Revision practices:

Most revisions must be completed within one week, and are allowed only once. The maximum grade a student can receive is a 90% for any revisions or retakes. Students will have only one week from the time the grade is posted to revise their work. All revision submission will require a personal email informing the teacher.

9. Extra credit practices:

There is no extra credit in this course.

10. Additional grading practices:

None

**Instructors' email addresses:**

Lydia.Conoway@mvla.net

**Additional information:**

SAFETY IS OF THE UTMOST CONCERN in this class. Students who create a classroom situation that is physically or emotionally unsafe for themselves or other students may be dismissed from the class.

Students are to be respectful to everyone including themselves. Students are expected to be focused and on task at all times.

Computer use is for class related activities only, and must in line with the MVLA Digital Device and Behavior Policies of the Parent/Student Handbook. All other electronics are to be silenced and stored out of sight.

Food and drinks are to be put away at all times in the lab except for water.

I am usually in my room, 517/518, during lunch and tutorial periods for help.