

Language of Architecture & Construction (Construction Careers Exploration)

Course Description

Language of Architecture and Construction (Construction Careers Exploration) is a 10.0 credit seminar-style course that exposes students to many career industries and fields. The course is split into two sections, (each consisting of 4 units, which are taken in the freshman's year) in which students are actively taking two (four) of the eight topics/units covered during one academic year. These topics include: Graphic Design; Construction; Drafting-General; Freshmen Seminar; Leadership, Education and Training; Printing; Safety; and Automotive.

Students acquire introductory-level knowledge and skills of these disciplines, and allows them to make an informed decision about their continued program of study in a given career field.

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Pacing Guide		
Unit	Topic	Suggested Timing
<i>COHORT A – 36 weeks of instruction</i>		
Unit 1	Introduction and Overview of Graphic Design	approx. 9 weeks
Unit 2	Introduction and Overview of Construction	approx. 9 weeks
Unit 3	Introduction and Overview of Drafting - General	approx. 9 weeks
Unit 4	Introduction and Overview of Freshmen Seminar	approx. 9 weeks
<i>COHORT B – 36 weeks of instruction</i>		
Unit 5	Introduction and Overview of Leadership, Education and Training	approx. 9 weeks
Unit 6	Introduction and Overview of Printing	approx. 9 weeks
Unit 7	Introduction and Overview of Safety	approx. 9 weeks
Unit 8	Introduction and Overview of Automotive	approx. 9 weeks

Educational Technology Standards

8.1.12.A.3, 8.1.12.D.1, 8.1.12.F.1

➤ Technology Operations and Concepts

- Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.

Example from unit: Students will create and present a proposal for successful academic and social experiences.

➤ Digital Citizenship

- Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.

Example from unit: Students will correctly cite all utilized research, as well as identify appropriate sources.

➤ Critical Thinking, Problem Solving, Decision Making

- Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Example from unit: Students will assess technology and its use at in the given career field covered in the unit.

Career Ready Practices

Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

CRP1. Act as a responsible and contributing citizen and employee

Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

Example from unit: Students will articulate skills and practices required to be academically successful.

CRP2. Apply appropriate academic and technical skills.

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

Example from unit: Students will utilize academic best practices needed for academic success.

CRP4. Communicate clearly and effectively and with reason.

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

Example from unit: Students will articulate working introductory knowledge of study and test-taking practices.

Career Ready Practices

CRP11. Use technology to enhance productivity.

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

Example from unit: Students will utilize technology to transfer academic learning into a digital medium.

CRP12. Work productively in teams while using cultural global competence.

Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

Example from unit: Students will work collaboratively to develop materials that are culturally sensitive.

Differentiated Instruction

Strategies to Accommodate Students Based on Individual Needs

<u>Time/General</u>	<u>Processing</u>	<u>Comprehension</u>	<u>Recall</u>
<ul style="list-style-type: none"> • Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and school • Provide lecture notes/assignments, and tutorials outline 	<ul style="list-style-type: none"> • Extra Response time • Have students verbalize steps • Repeat, clarify or reword directions • Mini-breaks between tasks • Provide a warning for transitions • Video lessons online 	<ul style="list-style-type: none"> • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide immediate feedback • Small group instruction • Emphasize multi-sensory learning 	<ul style="list-style-type: none"> • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic organizers
<u>Assistive Technology</u>	<u>Tests/Quizzes/Grading</u>	<u>Behavior/Attention</u>	<u>Organization</u>
<ul style="list-style-type: none"> • Computer/whiteboard • Video lesson • Spell-checker • Text speech software 	<ul style="list-style-type: none"> • Adjusted rubrics for projects • Study guides • Shortened tests • Read directions aloud 	<ul style="list-style-type: none"> • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback 	<ul style="list-style-type: none"> • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials

Differentiated Instruction

Strategies to Accommodate Students Based on Content-Specific Needs

- Paired instruction
- Frequent one-on-one, informal and formal meetings
- Frequent revision of individualized goals and objectives
- Extra time for assigned tasks
- Adjust length of assignment
- Timeline with due dates for reports and projects
- Communication system between home and school
- Small group instruction

Enrichment

Strategies Used to Accommodate Based on Students Individual Needs:

- Adaption of Material and Requirements
- Evaluate Vocabulary
- Elevated Text Complexity
- Elevated Projects Rubrics
- Independent Written and Video Online Tutorials
- Projects completed individual or with Partners
- Self Selection of Research
- Tiered/Multilevel Activities
- Online Learning Communities
- Individual Response Board
- Independent Book Studies
- Open-ended activities
- Community/Subject expert mentorships

Assessments

Suggested Formative/Summative Classroom Assessments

- Presentation of unit applicability in professional and education sectors
- Teacher-created Unit Assessments, Topic Assessments, Quizzes
- Industry-applicable DBQs, Essays, Short Answer
- Spot site visits and demonstrations/role-plays
- Projects, Portfolio, Presentations, Prezi, Gallery Walks
- Homework
- Concept Mapping
- Primary and Secondary Source analysis
- Photo, Video, Political Cartoon, Radio, Game Analysis
- Create an Original Song, Animation, Board Game

Interdisciplinary Connections

English Language Arts

- Close reading of unit-specific industry-related content (NJSLSA.R1)
- Develop a proposal to increase recruitment in a given industry (NJSLSA.W2)

Social Studies

- Research the history of careers in field of site assignment (6.1.12)
- Research prominent historical individuals in a given industry/profession (6.2.12)

Fine & Performing Arts

- Create a poster recruiting young people to focus their studies on a specific career or industry (1.2.12)
- Create a brochure for a specific industry (1.2.12)

Math

- Unit topic-specific/ industry applications (N.Q.A.1)
- Unit topic-specific/industry projection scenarios (A.CED.A.1)

Science

- Research and discuss latest developments in unit/industry-specific technology (HS-ETS1-4)
- Investigate applicable-careers within the field of the given unit (9.2.12)

World Language

- Translate unit-specific industry content (7.1.ILA)
- Create a translated index of unit-specific industry vocabulary (7.1.ILA)

NJSLS - English-Language Arts – Anchor Standards for Reading

Craft and Structure:

- NJSLSA.R4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

Integration of Knowledge and Ideas:

- NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
- NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

NJSLS - English-Language Arts – Anchor Standards for Writing

Text Types and Purposes:

- NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

Research to Build and Present Knowledge:

- NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.
- NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

NJSLS - English-Language Arts – Anchor Standards for Speaking and Listening

Comprehension and Collaboration:

- NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Presentation of Knowledge and Ideas:

- NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

NJSLS – Mathematics Standards 2016

Number and Quantity:

- N.Q.A.1. Use units as a way to understand problems and to guide the solution of multi-step problems; Choose and interpret units consistently in formulas; Choose and interpret the scale and the origin in graphs and data displays.
- N.Q.A.2. Define appropriate quantities for the purpose of descriptive modeling.

Functions:

- F.BF.A.1. Write a function that describes a relationship between two quantities.

<p>Course: Language of Architecture & Construction (Construction Careers Exploration)</p> <p>Unit: 4- Freshmen Seminar</p> <p>Grade Level: 9-12</p>	<p>Unit Overview: In this unit, students will develop skills needed to be academically and socially successful, by increasing levels of character education awareness. Learning how to actively and effectively set goals and manage time.</p>
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New Jersey Student Learning Standards (NJSLS):
 8.1, 8.2, 9.1, 9.2
 RL.9-10.1; RI.9-10.5; SL.9-10.1; SL.9-10.4; SL.9-10.5; SL.9-10.6; L.9-10.1; L.9-10.2; L.9-10.3; L.9-10.4; L.9-10.6; W.9-10.2; W.9-10.5; W.9-10.6; W.9-10.7; W.9-10.8; W.9-10.10

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<p>1. Communication Skills / Active Listening</p> <ul style="list-style-type: none"> • Getting to Know You • Following Directions • Improving Listening Skills • Strategies for Learning <p>STANDARD 9.2</p> <p>All students will</p>	<p>How will developing a relationship with the teacher and others in the class help me to develop socially and be a successful high school student?</p> <p>How is listening different from hearing?</p> <p>Why is following clear directions important?</p> <p>What types of questions</p>	<ul style="list-style-type: none"> ▪ Communication Skills <ul style="list-style-type: none"> ○ Cultural Awareness ○ Active Listening ○ Presentations Collaboration 	<p>http://www.studygs.net/listening.htm</p> <ul style="list-style-type: none"> • Listening Skills Handout • Listening Rubric 	<p>See Link below for “Active Listening” Handout and Guide</p> <p>https://www.dropbox.com/sh/27go8wohm02maub/AADV18AfuFFhgzePsA3i3yaZa?dl=0</p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<p>demonstrate critical life skills in order to be functional members of society.</p> <p>All students will develop career awareness and planning, employability skills, and foundational knowledge necessary for success in the workplace.</p>	<p>should be written in the left column of the Cornell notes?</p>			
<p>2. Organizational Skills</p> <ul style="list-style-type: none"> • Educational Binder Creation • Learning Styles • Cornell Note System <p>STANDARD 8.1</p> <p>All students will use computer applications to gather and organize information and to solve problems.</p>	<p>Why should all students carry and maintain a 3-4in binder? How should the binder be organized? What should go into the binder?</p> <p>How can a person determine which learning style is best for them? How can knowing your</p>	<ul style="list-style-type: none"> ▪ Organizational Skills <ul style="list-style-type: none"> ○ Binder ○ Cornell Notes 	<ul style="list-style-type: none"> • Computers • Different colored cards or sticky notes • Poster board <p>www.engr.ncsu.edu/learningstyles/ilsweb.html</p> <p>www.berghuis.co.nz/abiator/lsi/lsiframe.html</p> <p>www.learning-styles-online.com/inventory</p>	<p>See Link Below on Cornell Note-Taking – “Cornell Note-taking Skills”</p> <p>“Note-taking Activities”</p> <p>https://www.dropbox.com/sh/27go8wohm02maub/AADV18AfuFFhgzEPsA3i3yaZa?dl=0</p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
	learning style help you improve your learning?			
<p>3. Computer & Technology Skills</p> <ul style="list-style-type: none"> • Power Point presentations • Excel Spreadsheets and Graphing • Word Basics • Prezy <p>Standard 8.1 All students will use computer applications to gather and organize information and to solve problems.</p> <p>Standard 9.2: All students will use information, technology, and other tools.</p> <p>STANDARD 8.2 All students will develop</p>	<p>What options does PowerPoint offer in terms of creative presentations?</p> <p>How can students improve their study skills?</p> <p>How can students better prepare themselves for their classes?</p>	<ul style="list-style-type: none"> • Computer & Technology Skills <ul style="list-style-type: none"> ○ PowerPoint ○ Excel 	<ul style="list-style-type: none"> • Microsoft PowerPoint program • Power Point Rubric 	<p>By example show the students how to create a basic slide show using your own or a pre-made template pointing out the basic features once more.</p> <p>Students will use the Power Point Program and create their own presentation independently. Possible topics can include: Background information, goals and aspirations, hobbies and interests, etc.</p> <p>See Link Below PowerPoint Lesson Plan and Rubric</p> <p>https://www.dropbox.com/sh/27go8wohm02maub/AADV18AfuFFhgZEPsA3i3yaZa?dl=0</p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<p>an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, society, and the environment.</p>				
<p>4. Study Skills Research Skills</p> <ul style="list-style-type: none"> • Strategies for Learning • Learning Myths • MLA / APA formats <p>STANDARD 9.2</p> <p>All students will demonstrate critical life skills in order to be functional members of society.</p>	<p>Why don't students work to the best of their abilities?</p> <p>Why do students think that "good enough" is acceptable?</p> <p>How can student's perceptions of learning be aligned to teacher expectations?</p>	<ul style="list-style-type: none"> • Study Skills <ul style="list-style-type: none"> ○ Test Taking Strategies ○ Tutorials ○ Learning Styles ○ Research 	<ul style="list-style-type: none"> • Microsoft Publisher • Computers • Create a public service advertisement/poster 	<p>Warm-up questions on board—1. What is plagiarism? 2. List everything you know about citing your sources.</p> <p>Discuss why plagiarism is bad and possible consequences of it. Invite students to share what they already know about finding good sources and how those sources should be cited.</p>
<p>5. Test Taking Strategies</p> <ul style="list-style-type: none"> • Study skills 	<p>What are test taking tips which will better prepare students for</p>	<ul style="list-style-type: none"> • Study Skills <ul style="list-style-type: none"> • Test Taking Strategies 	<ul style="list-style-type: none"> • Internet • Yes, You Can Handle 	<p>Students will explore the Web sites below for 4-5 test-taking tips.</p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<ul style="list-style-type: none"> • Writing questions • Flash Cards • Positive attitude • Reducing test taking anxiety <p>STANDARD 8.1 All students will use computer applications to gather and organize information and to solve problems.</p> <p>STANDARD 8.2 All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, society, and the environment.</p>	<p>assessments?</p> <p>How can students improve their study skills?</p> <p>How can students better prepare themselves for their classes?</p>	<ul style="list-style-type: none"> • Tutorials • Learning Styles • Research 	<p>Standardized Tests!</p> <ul style="list-style-type: none"> • How to Beat Test Stress • Getting Ready to Take a Test • Top Ten Test Tips • How do I Get Ready for Test Day? (Follow the first two links in the article.) • Students Can Plan to Succeed on Standardized Tests • Eating Your Way to Higher Test Scores • Help Your Child Do Their [sic] Best on Standardized Tests 	<p>Students will be given opportunities to choose their own presentation format for information researched. Suggested formats of presentation may include:</p> <ul style="list-style-type: none"> • Classroom poster made with Microsoft Excel • Trading Cards made with Microsoft Word • Interactive PowerPoint or Keynote 2 presentation • Brochures • Newsletter made with Microsoft Word or other computer software. <p>Classroom banner.</p>

Suggested Unit Projects

Choose At Least One

<p>Holiday Food Drive</p> <p>Provide Food for Home Bound (Meals on Wheels, etc.)</p>	<p>Arrange festivities at local Home for the Aged</p> <p>Identify an area for a community cleanup</p>
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Suggested Structured Learning Experiences

<p>Food Bank</p> <p>Home for the Aged</p>	<p>Homeless Shelter</p> <p>Great Falls National Park</p>
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