

TEACHING TRANSFERABLE SKILLS

Instructor Resource Guide

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THE VALUE OF ESSENTIAL SKILLS

Higher education is evolving to prepare students for an unpredictable and rapidly changing world. While content knowledge remains important, research consistently shows that students also need transferable skills — such as communication, critical thinking, and teamwork — to navigate professional and civic life successfully (National Association of Colleges and Employers, 2021). The ten essential skills outlined in this resource guide equip students with the competencies they need to approach complex problems, collaborate effectively, and adapt to new challenges.

Employers emphasize these skills as crucial for career readiness. Surveys and frameworks from the AAC&U and NACE highlight that strong communication, problem-solving, and teamwork abilities are among the most sought-after competencies in the workforce (AAC&U, 2021; NACE, 2021). Yet, many students and instructors alike struggle with how to explicitly teach and assess these skills in coursework. This guide provides practical strategies for integrating skill development into course design, ensuring students not only learn content but also gain the ability to apply it effectively.

Designing Courses with Skills in Mind

A crucial step in integrating essential skills into coursework is aligning them with course learning objectives. Well-written learning objectives help students see the relevance of skill development and provide clear expectations for how they will engage with and demonstrate these skills.

Prompts to Encourage Skill-Based Learning Design

- How can students practice applying this concept in a novel situation?
- In what ways can students demonstrate their understanding beyond traditional exams or papers?
- How can students reflect on their skill development and articulate their growth?

Guidelines for Writing Learning Objectives that Incorporate Skills

- Use Bloom's Taxonomy to frame objectives in terms of cognitive processes (e.g., analyze, evaluate, create).
- Be explicit about the skill being developed alongside the content.
- Use active verbs that align with measurable outcomes.
- Connect the skill to real-world applications or discipline-specific challenges.

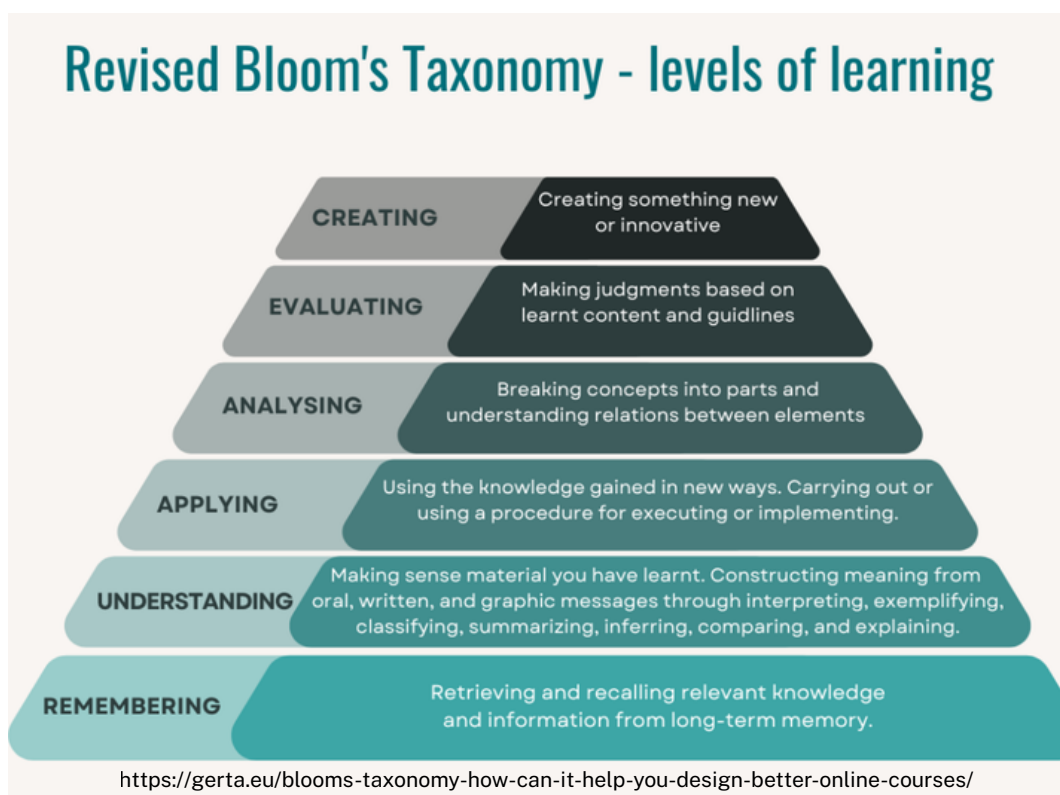
Instead of: *Students will understand research methods in sociology.*

Try: *Students will evaluate and communicate research findings through clear, structured written reports and oral presentations.*

Instead of: *Students will learn about ethical dilemmas in business.*

Try: *Students will analyze ethical dilemmas and articulate well-reasoned responses using professional and persuasive communication strategies.*

By intentionally crafting learning objectives that integrate essential skills, instructors can create a more meaningful and applied learning experience for students.



USING AI TO SUPPORT SKILL DEVELOPMENT

Why AI Matters in Skill Development

Artificial intelligence (AI) is rapidly transforming the way we learn, work, and communicate. While AI tools offer powerful ways to enhance problem-solving, streamline workflows, and support decision-making, they are most effective when used strategically and reflectively. Developing AI literacy is an essential component of career readiness, allowing students to use AI ethically, critically evaluate its outputs, and integrate AI-generated insights with human expertise (Mollick & Mollick, 2023).

Rather than viewing AI as a shortcut or replacement for essential skills, students should be encouraged to engage with AI as a cognitive partner, helping them build, refine, and reflect on their competencies. This section outlines how AI can support learning and skill development while reinforcing the importance of human judgment, creativity, and ethical reasoning in its use.

Approaches to AI Use as a Skill

Students and educators can leverage AI in three primary ways to support the development of essential skills:



Thought Partner

AI can help generate ideas, provide alternative perspectives, and refine arguments by offering structured prompts and insights



Research & Analysis Tool

AI can assist in finding patterns, summarizing complex information, and identifying trends across large datasets.



Skill Reflection & Improvement

AI can offer feedback on writing, communication, and critical thinking, helping students reflect on their work and refine their skills.



Essential Skill 9

APPLY ACADEMIC KNOWLEDGE, SKILLS, AND ABILITIES TO THEIR CHOSEN CAREER.

Graduates will be able to translate subject-specific or theoretical knowledge into practical applications within their chosen careers.

Essential Skill 9

KNOWLEDGE APPLICATION

Why It Matters

Applying academic knowledge to career contexts is not a simple matter of “knowing content” and then later using it at work. Students need structured opportunities to practice transferring concepts, skills, and ways of thinking into realistic situations. Research on problem-centered instruction suggests that learning is strengthened when students work with authentic problems, activate prior knowledge, observe examples, apply new knowledge, and integrate that learning into future use (Merrill, 2002).

This skill matters because professional life rarely presents students with neat, textbook-style questions. Graduates are often expected to analyze complex problems, weigh constraints, adapt to changing conditions, communicate with different audiences, and justify their decisions. Project-based learning and authentic assessment support this development by asking students to create meaningful products, solve realistic problems, and demonstrate knowledge in contexts that resemble how it will actually be used (Guo et al., 2020; Vlachopoulos & Makri, 2024).

Knowledge application also depends on how students connect academic learning with experience. Internships, service learning, research projects, simulations, fieldwork, clinical experiences, and community-based projects can help students see the relevance of their coursework. However, experience alone does not guarantee learning. Applied experiences are most powerful when intentionally connected to learning outcomes, supported by preparation and feedback, and paired with structured reflection (Ash & Clayton, 2009; Billett, 2009; Rowe & Zegwaard, 2017).

Finally, applying knowledge to a chosen career requires students to reflect on their goals, values, strengths, interests, and prior learning. Career development should not be treated as a one-time résumé workshop near graduation. Research on career choice interventions, career development learning, and employability suggests that students benefit from repeated opportunities to explore options, build career decision-making confidence, identify supports and barriers, and articulate realistic plans for continued learning after graduation (Healy, 2023; Ho et al., 2022; Whiston et al., 2017).

Integrating This Skill into Your Course

To help students apply academic knowledge, skills, and abilities to career contexts, consider the following strategies:

- Use authentic problems. Ask students to apply course concepts to realistic cases, scenarios, decisions, or challenges from the field.
- Scaffold application over time. Move students from identifying relevant concepts to solving bounded problems to analyzing complex, real-world situations.
- Assign career-relevant artifacts. Have students create products professionals might recognize, such as memos, proposals, prototypes, care plans, reports, presentations, or stakeholder recommendations (Guo et al., 2020).
- Build in theory-to-practice reflection. Ask students to connect experience, course concepts, evidence, and future action rather than simply summarize what happened (Ash & Clayton, 2009).
- Practice stakeholder communication. Have students explain decisions for clients, patients, supervisors, users, community partners, or public audiences.
- Embed career development. Ask students to identify skills, collect evidence of growth, reflect on career fit, and name next steps for continued learning (Bridgstock, 2009; Healy, 2023).

Addressing Student Buy-In

Some students may struggle to see how academic coursework connects to their future careers. To help students make those connections:

- Make transfer explicit. Name the skill, show where it appears in the field, and ask students how they might use it in a future role.
- Use realistic examples. Incorporate case studies, guest speakers, alumni examples, sample artifacts, or field-specific scenarios.
- Emphasize practice. Remind students that applying knowledge requires repeated practice with decisions, problems, feedback, and revision.
- Make reflection concrete. Use prompts that connect course concepts, experience, evidence, goals, and next steps.
- Normalize uncertainty. Frame career planning as an iterative process of exploration, learning, revision, and growth.

Ways to Identify Knowledge Application Development in Your Courses

Instructors may already be helping students apply academic knowledge to career contexts. Look for moments where students are asked to:

- Apply concepts to real or realistic problems. Do students use course knowledge to respond to cases, scenarios, or field-based challenges?
- Explain their reasoning. Do students justify why a concept, method, or framework applies?
- Create field-relevant products. Do students produce memos, reports, plans, prototypes, presentations, analyses, or recommendations?
- Connect experience with learning. Do students reflect on labs, internships, service learning, simulations, research, or projects using course concepts?
- Communicate to stakeholders. Do students tailor explanations for audiences beyond the instructor?
- Reflect on career fit. Do students connect coursework to strengths, interests, values, goals, skill development, and future learning?

Making these moments explicit helps students recognize knowledge application as a skill they are developing across the course, not just something they will need after graduation.

Example Scaffolded Skill Assignment Progression

A structured approach helps students move from career exploration and foundational concepts toward authentic problem-solving, theory-to-practice integration, and career development planning.

Stage	Activity Example
Early Semester	Students identify a career-related task, problem, or role connected to the course and name relevant concepts, skills, tools, or abilities.
Mid-Semester	Students apply course concepts to a realistic case, scenario, project, or field-based problem and explain the reasoning behind their choices.
End of Semester	Students produce a career-relevant artifact and justify their decisions using academic knowledge, reflection, and next steps for continued learning.

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Essential Skill 9: Apply academic knowledge, skills, and abilities to their chosen career

Graduates will articulate and apply the theoretical content of their academic preparation with relevant knowledge and abilities essential to their chosen careers.



Benchmark College Entry	Milestone End of Two Years of College	Capstone Bachelor's Program Completion
Identifies the type of work within their desired career path and how this work aligns to career opportunities.	Applies learned knowledge to resolve foundational problems pertinent to the desired career pathway.	Analyzes and solves complex, real-world problems in the field using advanced knowledge, skills, and abilities to achieve solutions.
Describes foundational knowledge, skills, and abilities needed for career.	Explains concepts that support the practical application of knowledge, skills, and abilities related to professional interests.	Integrates academic learning with hands-on experience to critically assess and solve complex challenges encountered in professional environments, providing a clear rationale tailored to a range of stakeholders.
Engages in career exploration, while considering personal strengths, interests, values, and goals.	Reflects on personal and academic experiences to assess compatibility and provide reasoning for career choice.	Articulates career development plan that builds on prior learning and experiences to define clear goals for achievement and continued learning after graduation.

Instructional Materials



*Explore adaptable
example activities,
assignments, and
assessments*

Activity

Career Task-to-Course Map

Objective

To help students identify a career-related task, describe the foundational knowledge, skills, and abilities connected to that task, and reflect on how it aligns with their strengths, interests, values, and goals.

Context

At the Benchmark level, students may not yet know exactly what career path they want to pursue. The goal is not to choose a permanent career direction, but to begin noticing how academic learning connects to real types of work. This activity asks students to explore one possible career-related task and map it back to course concepts, foundational skills, and personal fit. This activity aligns with research on problem-centered instruction and career development learning. Merrill's first principles emphasize that learning is strengthened when students connect knowledge to real-world tasks, while career development research encourages students to treat career planning as an ongoing learning process rather than a one-time decision (Merrill, 2002; Healy, 2023).

Instructions

1. Select a career-related role or task

Students choose one role, task, or professional activity connected to the course or discipline.

Examples:

- Public health: designing a wellness campaign
- Biology: monitoring water quality
- Business: preparing a market recommendation
- Education: planning a lesson for a specific learner group
- Engineering: choosing materials for a prototype
- Humanities: creating a public-facing interpretation or exhibit label
- Social sciences: analyzing a community issue or policy question

Students may choose from instructor-provided options or identify one of their own.

Activity

Career Task-to-Course Map

2. Describe the type of work

Students answer:

- What kind of work does this role or task involve?
- Who benefits from or uses this work?
- Where might this work happen?
- What career opportunities could connect to this work?

3. Identify foundational knowledge, skills, and abilities

Students complete a brief planning table:

Career-related task	Course concept or knowledge needed	Skill or ability needed	Why it matters for the task

Encourage students to include both discipline-specific knowledge and transferable skills.

4. Connect to personal fit

Students write a brief reflection:

- Which part of this work interests me?
- Which strengths might help me do this work well?
- Which values connect to this work?
- What would I need to learn or practice next?
- Does this work seem like a possible fit? Why or why not?

Activity

Career Task-to-Course Map

5. Share and debrief

In pairs or small groups, students share:

- One career-related task they explored
- One course concept connected to that task
- One skill or ability they would need
- One question they still have about the career path

Close by emphasizing that career exploration is iterative. Students are not expected to have a final career plan; they are practicing how to connect academic learning with possible future work.

TIPS



- Keep the task low stakes and exploratory.
- Provide sample roles or tasks for students who feel unsure.
- Encourage students to name uncertainty honestly.
- Focus on connections between course learning and possible work.
- Remind students that “not a fit” is still useful career learning.

Activity

Example Assessment

Career Task-to-Course Map and Reflection

Students submit:

- One career-related role or task
- A short description of the type of work
- A completed knowledge/skills/abilities table
- A brief reflection on strengths, interests, values, goals, and next steps

This assessment should focus on whether students can make meaningful connections between academic learning and possible career-related work, not whether they have selected a final career path.

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Career Task Identification	Clearly identifies a relevant career-related task and explains how it connects to possible opportunities	Identifies a relevant task with some connection to career opportunities	Identifies a task, but the career connection is vague or limited	Does not identify a meaningful career-related task
Foundational Knowledge & Skills	Clearly connects course knowledge, skills, and abilities to the task	Identifies relevant knowledge and skills with some explanation	Lists knowledge or skills, but connections are general or incomplete	Does not identify relevant knowledge, skills, or abilities
Personal Fit Reflection	Thoughtfully connects the task to strengths, interests, values, goals, and next steps	Connects the task to some personal factors and next steps	Reflection is present but mostly general or descriptive	Reflection does not meaningfully address personal fit
Career Exploration Mindset	Treats career exploration as an active learning process and identifies useful questions for further exploration	Identifies at least one question or area for further exploration	Names a question or next step, but it is vague	Does not identify a next step or question

AI-Supported Activity

AI-Assisted Career Task Exploration

Objective

To help students use AI as a brainstorming partner to explore possible career-related tasks, identify relevant knowledge and skills, and reflect on personal fit while maintaining responsibility for their own judgment.

Context

At the Benchmark level, AI can help students generate possibilities when they are unsure where to begin. However, AI should not decide a student's career path or replace careful reflection. In this activity, students use AI to brainstorm possible roles, tasks, and skills connected to the course, then evaluate, revise, and verify those suggestions. This activity positions AI as a thought partner, consistent with the guide's broader emphasis on using AI strategically and reflectively rather than as a shortcut. Students still make the final choices and explain their reasoning.

Instructions

1. Start with the course context

Students identify:

- Course topic or unit
- One concept, method, issue, or skill from the course
- One broad career area they may want to explore

Example: "I am in an environmental studies course. We are learning about water quality. I am interested in public health, sustainability, or local government."

2. Use AI to brainstorm career-related tasks

Students ask AI to suggest possible roles or tasks connected to the course topic. They should request:

- Possible career-related tasks
- Foundational knowledge needed
- Skills or abilities connected to each task
- Questions a student should ask before deciding whether the task is a good fit

AI-Supported Activity

AI-Assisted Career Task Exploration

3. Choose and revise one task

Students review the AI suggestions and choose one task to explore. They mark AI suggestions as:

- Useful
- Needs revision
- Too broad
- Not relevant
- Needs verification

Students revise the selected task in their own words.

4. Complete the Career Task-to-Course Map

Students complete the same table from the non-AI activity, using their own judgment:

Career-related task	Course concept or knowledge needed	Skill or ability needed	Why it matters for the task

Students may use AI suggestions as a starting point, but they must revise the language and connect it to actual course content.

5. Verify one claim

Students verify at least one AI-generated claim using a credible source, such as:

- A course reading
- A professional organization website
- A career center resource
- A job posting or internship description
- A discipline-specific resource recommended by the instructor

Students record what they checked and whether the AI suggestion was accurate, incomplete, or misleading.

AI-Supported Activity

AI-Assisted Career Task Exploration

6. Reflect on AI use and personal fit

Students submit a short reflection:

- What did AI help me notice?
- What did I revise or reject?
- What did I verify?
- How does this task connect to my strengths, interests, values, or goals?
- What would I need to learn or practice next?

Prompt Template (for Student Use)

"I am practicing how to connect academic knowledge to possible career-related work. My course is [course name/topic], and we are learning about [concept, method, issue, or skill]. I am interested in [broad career area, field, or type of work]. Suggest 5 possible career-related tasks connected to this course topic. For each task, list foundational knowledge, skills or abilities, and questions I should ask to decide whether this work fits my strengths, interests, values, and goals. Do not invent specific job statistics or credentials. Focus on brainstorming possibilities I can evaluate and verify."

Follow-up Questions to Ask

Students can use these follow-up questions to push the AI's suggestions further:

- Which of these tasks is most directly connected to my course?
- Which task would be appropriate for an introductory student to explore?
- What course concepts might help someone do this work?
- What skills would I need to practice?
- What assumptions am I making about this career path?
- What should I verify before trusting this suggestion?

TIPS



- Remind students that AI suggestions are starting points, not answers.
- Ask students to revise AI language in their own words.
- Require at least one verification step.
- Encourage students to reject irrelevant or overconfident AI output.
- Keep the reflection focused on learning, not career certainty.

Activity

Example Assessment

AI Career Exploration Transcript, Verification Note, and Reflection

Students submit:

- Their AI prompt and selected AI output
- A marked-up list of what they used, revised, rejected, or verified
- A completed Career Task-to-Course Map
- One verification note
- A brief personal fit reflection

Criteria	Exemplary	Proficient	Developing	Needs Improvement
AI Use for Brainstorming	Uses AI to generate relevant possibilities and thoughtfully selects one to explore	Uses AI to generate usable possibilities and selects one task	Uses AI output, but selected task is broad or weakly connected to the course	Uses AI output without a meaningful task selection
Revision & Judgment	Clearly revises, rejects, or narrows AI suggestions using course context and personal judgment	Revises or narrows at least some AI suggestions	Minimal revision; mostly repeats AI language	Accepts AI output uncritically
Knowledge & Skill Mapping	Clearly connects the task to course knowledge, skills, abilities, and purpose	Connects the task to relevant knowledge and skills	Connections are vague or incomplete	Does not meaningfully connect task to course learning
Verification & Reflection	Verifies at least one claim and thoughtfully reflects on fit, learning, and next steps	Verifies one claim and reflects on personal fit	Verification or reflection is limited	No meaningful verification or reflection

Activity

Concept-to-Practice Decision Memo

Objective

To help students apply course knowledge to a foundational career-related problem, explain the concepts behind their decision, and reflect on how the work connects to their interests, strengths, values, and career goals.

Context

At the Milestone level, students should move beyond identifying possible career-related work and begin practicing how academic concepts support action in the field. This activity asks students to solve a bounded, realistic problem and explain the reasoning behind their choice.

This activity draws on authentic assessment and applied learning research. Students learn more deeply when they apply knowledge to realistic tasks, connect academic and practice settings, and use reflection to make meaning from experience rather than simply summarize it (Ash & Clayton, 2009; Billett, 2009; Vlachopoulos & Makri, 2024).

Instructions

1. Select or assign a foundational career-related problem

Students begin with a realistic but manageable problem connected to the course.

Examples:

- Public health: Which first intervention should a campus use to address student stress?
- Biology: Which environmental factor should be tested first in a local water-quality concern?
- Business: Which customer segment should a small business prioritize?
- Education: Which instructional strategy would support a specific learner group?
- Engineering: Which design constraint should guide the next prototype revision?
- Humanities: Which interpretation strategy would best serve a public audience?
- Social sciences: Which policy response should a community organization consider first?

Activity

Concept-to-Practice Decision Memo

2. Identify the course concepts that apply

Students complete a brief planning table:

Problem or decision	Course concept/framework	What the concept helps explain	Skill or ability needed

Encourage students to select 1-2 concepts rather than trying to use everything from the course.

3. Write a short decision memo

Students write a 1–2 page memo that includes:

- The problem or decision
- The course concept(s) used
- A recommended action or solution
- A rationale explaining why the concept applies
- One limitation, uncertainty, or missing piece of information
- One next step for learning, action, or feedback

4. Reflect on career compatibility

Students add a short reflection using these prompts:

- What part of this problem-solving process did I find engaging or meaningful?
- Which strengths or skills did I use?
- Which values or goals connect to this kind of work?
- What felt challenging or less aligned?
- What does this tell me about my possible career interests?

Activity

Concept-to-Practice Decision Memo

5. Share and debrief

In pairs or small groups, students share:

- One concept they applied
- One reason behind their recommendation
- One limitation or uncertainty they noticed
- One career insight from the reflection

Close by emphasizing that career fit is developed through repeated experiences, feedback, and reflection, not one final decision.

TIPS



- Keep the problem bounded and realistic.
- Ask students to explain concepts in plain language before applying them.
- Push students to justify why a concept fits the situation.
- Treat uncertainty as part of professional reasoning.
- Remind students that “this is not a fit” is still useful career learning.

Activity

Example Assessment

Concept-to-Practice Decision Memo and Career Reflection

Students submit:

- A completed concept-to-practice table
- A 1–2 page decision memo
- A brief career compatibility reflection

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Problem & Concept Framing	Clearly frames the problem and selects course concepts that fit the situation	Frames the problem and selects mostly relevant concepts	Problem or concept connection is present but broad or unclear	Does not meaningfully connect the problem to course concepts
Knowledge Application & Rationale	Applies knowledge effectively and explains a clear, well-reasoned recommendation	Applies knowledge with a reasonable explanation	Recommendation is present but weakly connected to course knowledge	Recommendation is unsupported or mostly disconnected from course learning
Reflection on Career Compatibility	Thoughtfully connects the work to strengths, interests, values, goals, and future learning	Connects the work to some personal and career factors	Reflection is general or mostly descriptive	Reflection does not meaningfully address career fit
Professional Communication & Next Steps	Communicates clearly, names uncertainty, and identifies a useful next step	Communicates adequately and identifies a next step	Communication or next step is vague	Communication is unclear or no next step is identified

AI-Supported Activity

AI-Assisted Reasoning Check

Objective

To help students use AI as a feedback partner to test their reasoning, identify possible gaps, and strengthen a decision memo while maintaining responsibility for the final recommendation.

Context

At the Milestone level, AI can help students examine their thinking after they have already selected a problem and identified relevant course concepts. AI should not choose the answer, invent evidence, or replace the student's own reasoning. Instead, students use AI to check whether their explanation is clear, whether their recommendation considers relevant constraints, and whether their reflection connects academic learning to career fit. This approach aligns with the guide's emphasis on AI as a cognitive partner rather than a shortcut. Students use AI to refine their thinking, but they must verify concepts against course materials and make the final judgment themselves.

Instructions

1. Complete the initial concept-to-practice table first

Before using AI, students should complete the following table:

Problem or decision	Course concept/framework	What the concept helps explain	Skill or ability needed

Students should not ask AI to choose the concept for them before they have tried.

2. Draft a preliminary recommendation

Students write a short draft that includes:

- The problem
- The course concept(s)
- Their recommendation
- Their reasoning
- One limitation or uncertainty

AI-Supported Activity

AI-Assisted Reasoning Check

3. Use AI to test the reasoning

Students paste their draft into AI and ask for feedback on clarity, reasoning, missing assumptions, and possible stakeholder questions. AI should be instructed not to add invented facts, sources, or citations.

4. Mark the AI feedback

Students label AI suggestions as:

- Useful and supported by course learning
- Useful but needs checking
- Too broad or generic
- Not relevant
- Incorrect or unsupported

Students must explain at least two choices they made in accepting, revising, or rejecting AI feedback.

5. Verify and revise

Students check any concept-related feedback against course materials, instructor-provided resources, or credible field resources. Then they revise the memo. The final memo should show the student's reasoning, not AI's reasoning.

6. Reflect on AI use and career fit

Students submit a short reflection:

- What did AI help me notice?
- What feedback did I reject or revise?
- What did I verify using course or field resources?
- How did my recommendation change?
- What did this process reveal about my interests, strengths, values, or goals?

AI-Supported Activity

Prompt Template (for Student Use)

“I am practicing how to apply academic knowledge to a career-related problem. My problem is: [describe problem]. The course concept I am applying is: [name concept/framework]. My draft recommendation is: [paste draft]. Please help me identify whether my reasoning is clear, what assumptions I may be making, what questions a professional or stakeholder might ask, and what parts of my explanation may need more support. Do not invent facts, sources, or citations. Base your feedback only on what I provide.”

Follow-up Questions to Ask

After the AI provides an initial response, students should practice asking specific follow-up questions to deepen their analysis and test their reasoning.

Students can ask:

- What part of my reasoning is least clear?
- What assumption should I explain more directly?
- What would a supervisor, client, patient, user, or community partner ask?
- What limitation or uncertainty should I acknowledge?
- What would make my recommendation more practical?
- What should I verify before using this feedback?

TIPS



- Require students to draft before using AI.
- Ask students to keep their AI transcript.
- Make verification part of the grade.
- Encourage students to challenge AI feedback.
- Remind students that AI can help revise reasoning, but it cannot determine career fit.

Activity

Example Assessment

AI Feedback Transcript, Revised Memo, and Reflection

Students submit: Initial concept-to-practice table; Preliminary recommendation draft; AI transcript or selected feedback; Marked notes showing what they used, revised, rejected, or verified; Revised decision memo; Brief reflection on AI use and career compatibility

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Initial Reasoning	Provides a clear initial recommendation grounded in course concepts before using AI	Provides an initial recommendation with some course connection	Initial reasoning is incomplete or weakly connected to course concepts	No meaningful initial reasoning before AI use
Critical Engagement with AI	Thoughtfully accepts, revises, or rejects AI feedback using course knowledge and judgment	Identifies useful and limited AI feedback with some explanation	Responds to AI feedback generally but with limited evaluation	Accepts AI feedback uncritically
Verification & Revision	Verifies key points and uses that checking to strengthen the memo	Verifies at least one point and makes a meaningful revision	Verification or revision is limited	No meaningful verification or revision
Reflection on Learning & Fit	Clearly explains what was learned about the concept, the problem, and career compatibility	Reflects on learning and career fit with some specificity	Reflection is mostly descriptive	Reflection does not meaningfully address learning or fit

Activity

Applied Problem-Solving Brief & Career Development Plan

Objective

To help students analyze a complex field-based problem, integrate academic learning with hands-on experience, communicate a stakeholder-specific rationale, and articulate a career development plan for continued learning after graduation.

Context

At the Capstone level, students should be able to use advanced knowledge, skills, and abilities to address complex problems in their field. This activity asks students to bring together coursework, applied experience, evidence, reflection, and career planning in one culminating product.

Authentic assessment is especially useful at this level because it asks students to complete real-world tasks that mirror how knowledge, skills, and judgment are used beyond the classroom (Vlachopoulos & Makri, 2024). Critical reflection also helps students move beyond simply having an experience toward analyzing what they learned, why it matters, and what they will do next (Ash & Clayton, 2009).

Instructions

1. Select a complex field-based problem

Students identify a real or realistic problem connected to the course, program, internship, research project, clinical experience, service-learning project, simulation, or capstone. The problem should be specific enough to address within the assignment, but complex enough that students must use more than basic recall. It should require analysis, judgment, and a clear rationale.

Examples:

- Public health: Recommend an intervention for a community health concern.
- Business: Propose a strategy for a client, organization, or market challenge.
- Engineering: Evaluate design options under technical, ethical, and cost constraints.
- Education: Recommend supports for a specific learner group or instructional challenge.
- Environmental studies: Develop a response to a local sustainability problem.
- Humanities: Create a public-facing interpretation, exhibit, archive, or preservation plan.
- Social sciences: Analyze a policy or organizational problem and recommend action.

Activity

Applied Problem-Solving Brief & Career Development Plan

2. Define the problem, context, and stakeholders

Students begin by explaining the situation they are responding to. This step helps them avoid jumping too quickly to a solution before they understand the problem. Students identify:

- What problem, need, question, or challenge is being addressed?
- Where does this problem occur?
- Who is affected by it?
- Who will use or evaluate the recommendation?
- What constraints shape the situation?
- What would count as a strong or responsible solution?

This section can be completed as a short problem statement, planning table, or project proposal before students begin drafting the final product.

3. Analyze the problem using academic knowledge and experience

Students explain how their academic learning helps them understand the problem. They should connect the situation to relevant course concepts, theories, methods, tools, evidence, or field-specific practices. Students may draw from:

- Course concepts, theories, or frameworks
- Field-specific methods, tools, or evidence
- Prior coursework or feedback
- Internship, clinical, research, lab, service-learning, or project experience
- Ethical, cultural, technical, contextual, or practical considerations

The emphasis should be on explanation. Students should not simply name a concept; they should explain how that concept helps them understand the problem or make a better decision.

Activity

Applied Problem-Solving Brief & Career Development Plan

4. Develop a solution, recommendation, or professional product

Students create a final artifact that resembles the kind of work someone in the field might produce. Depending on the course, this might be a brief, presentation, report, prototype, portfolio entry, proposal, policy memo, lesson plan, care plan, exhibit text, design rationale, or stakeholder recommendation. The final product should include:

- A clear recommendation, solution, interpretation, or action
- A rationale grounded in academic knowledge
- Evidence from coursework, research, experience, or field practice
- Alternatives considered
- Constraints, risks, limitations, or uncertainties
- Next steps for implementation, revision, or further inquiry

This is where students demonstrate that they can apply academic knowledge in context, not just retrieve it.

5. Tailor the rationale for stakeholders

Students adapt their explanation for at least two audiences. This step helps students practice communicating professional reasoning in ways that are appropriate for different people, needs, and levels of expertise.

Examples of stakeholder pairings:

- Client and supervisor
- Patient and care team
- Community partner and funder
- User and technical team
- Students and families
- Public audience and disciplinary audience
- Organization leadership and frontline staff

Students should consider:

- What does this audience need to know?
- What language or evidence will be most useful to them?
- What concerns might they have?
- What should be simplified, expanded, or reframed?
- What action do they need to take next?

Activity

Applied Problem-Solving Brief & Career Development Plan

6. Articulate a career development plan

Students conclude by connecting the project to their own learning and future development. This should be more than a general statement about wanting a job in the field. The plan should use evidence from the project and prior learning to identify what the student can do now, what they still need to develop, and what steps they will take after graduation.

Students identify:

- Knowledge, skills, and abilities demonstrated in the project
- Evidence of growth from prior coursework or experience
- Strengths they want to continue developing
- Gaps or areas for further learning
- Short-term next steps after graduation
- Long-term goals for continued learning or professional development

A strong career development plan should be specific, evidence-based, and realistic.

TIPS



- Encourage students to choose problems with real stakes but manageable scope.
- Require process artifacts before the final product, such as a problem statement, stakeholder map, concept map, annotated evidence list, or draft rationale.
- Ask students to explain both what they recommend and why.
- Treat uncertainty, constraints, and limitations as part of professional judgment.
- Push students to tailor language for actual audiences, not just “the general public.”
- Make the career plan evidence-based, not just aspirational.
- Consider using peer review focused on stakeholder clarity before final submission.

Activity

Example Assessment

Applied Problem-Solving Brief, Stakeholder Rationale, and Career Plan

Students submit:

- A professional brief, presentation, project product, or portfolio entry
- A stakeholder rationale tailored for at least two audiences
- A career development plan grounded in prior learning and experience

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Complex Problem Analysis	Clearly analyzes a complex real-world problem using advanced course knowledge, evidence, and field-specific reasoning	Analyzes a real-world problem using relevant knowledge and evidence	Addresses a problem, but analysis is broad, incomplete, or weakly connected to advanced knowledge	Does not meaningfully analyze a complex problem
Solution & Knowledge Integration	Develops a well-supported solution that integrates academic learning, hands-on experience, constraints, and limitations	Develops a reasonable solution with some integration of learning and experience	Solution is present but weakly supported or only loosely connected to experience	Solution is unsupported or disconnected from academic learning
Stakeholder Rationale	Tailors a clear, persuasive rationale for different stakeholder audiences	Explains the rationale for at least one stakeholder audience with some tailoring	Rationale is mostly generic or only minimally adapted	Does not provide a meaningful stakeholder rationale
Career Development Plan	Articulates clear goals for continued learning after graduation, grounded in evidence of prior learning, strengths, gaps, and experiences	Identifies goals and connects them to prior learning or experience	Plan is vague, mostly aspirational, or weakly connected to evidence	Does not articulate a meaningful career development plan

AI-Supported Activity

AI-Supported Stakeholder Review and Career Plan Revision

Objective

To help students use AI as a structured review partner to test their reasoning, anticipate stakeholder questions, identify gaps, and revise their career development plan while maintaining responsibility for the final judgment.

Context

At the Capstone level, AI can support revision, perspective-taking, and planning, but it should not replace disciplinary expertise, evidence, lived experience, or student judgment. In this activity, students complete an initial draft first, then use AI to review their reasoning, simulate stakeholder questions, and identify areas for clarification.

This activity reinforces the idea that students remain responsible for verifying claims, evaluating feedback, and deciding what belongs in the final product. It also supports career development as an ongoing learning process involving reflection, adaptation, and future planning (Healy, 2023).

Instructions

1. Draft the capstone product first

Before using AI, students prepare a working draft or detailed planning notes. This should include enough substance for AI to respond to the student's actual reasoning rather than generate generic advice.

Students should draft:

- A problem statement
- Initial analysis of the problem
- Proposed solution or recommendation
- Evidence, experience, or course knowledge used
- Stakeholders or audiences
- Limitations, risks, or uncertainties
- Draft career development plan

This step matters because AI feedback is only useful if students have already done the intellectual work of defining the problem, applying knowledge, and making initial decisions.

AI-Supported Activity

AI-Supported Stakeholder Review and Career Plan Revision

2. Prepare notes for AI review

Students should paste only their own writing, notes, summaries, or project excerpts into AI unless the instructor explicitly allows otherwise. They should not paste full copyrighted readings, confidential placement materials, client information, patient information, or proprietary workplace documents.

Students prepare a short AI review packet that includes:

- Course or field context
- Problem being addressed
- Proposed solution or recommendation
- Stakeholder audiences
- Current rationale
- Areas where they feel uncertain
- Draft career development goals

3. Ask AI to review the reasoning

Students ask AI to respond as a reviewer, not as the author. The feedback should focus on clarity, reasoning, assumptions, stakeholder needs, and places where the student may need stronger support.

Students ask AI to identify:

- Unclear or underdeveloped reasoning
- Missing assumptions
- Stakeholder concerns
- Practical constraints
- Ethical or contextual questions
- Places where more evidence may be needed
- Parts of the recommendation that may need clarification

Students should remember that AI may sound confident even when its feedback is too generic, incomplete, or not aligned with the course. They must evaluate the feedback before using it.

AI-Supported Activity

AI-Supported Stakeholder Review and Career Plan Revision

4. Ask AI to simulate stakeholder questions

Students then ask AI to generate possible questions from at least two stakeholder perspectives. This helps them practice tailoring their rationale for different audiences.

Examples:

- What would a community partner ask about this recommendation?
- What would a supervisor need clarified before approving this plan?
- What might a patient, client, user, or student worry about?
- What would a technical audience challenge?
- What would a public audience need explained in plain language?
- What would a funder, administrator, or decision-maker want to know?

Students should use these questions to strengthen their stakeholder rationale, not to replace actual stakeholder feedback when real feedback is available.

5. Annotate and verify the AI feedback

Students review the AI output carefully and label each major suggestion. They mark feedback as:

- Useful and supported
- Useful but needs checking
- Too broad or generic
- Not relevant to this context
- Incorrect or unsupported

Students explain at least three decisions they made about accepting, revising, or rejecting AI feedback. They should verify feedback using:

- Course concepts or readings
- Instructor feedback
- Field-specific evidence
- Data or project materials
- Experience from internships, clinical work, service learning, research, labs, or other applied settings

AI-Supported Activity

AI-Supported Stakeholder Review and Career Plan Revision

6. Revise the capstone project

Students revise their brief, stakeholder rationale, professional artifact, presentation, portfolio entry, or project product based on feedback they judged useful and verified. The revision should make clear:

- What changed
- Why it changed
- What evidence or reasoning supported the change
- What stakeholder need was addressed
- What feedback was rejected or limited

7. Revise the career development plan

Students also use AI feedback to review the specificity and realism of their career development plan. Students ask:

- Are my goals specific enough?
- Are my next steps realistic?
- Did I identify evidence of my growth?
- Did I name skills or knowledge I still need to develop?
- Did I connect my plan to this project and prior learning?

The revised plan should be grounded in evidence from the student's coursework, projects, feedback, applied experiences, strengths, and areas for continued growth.

8. Reflect on AI use and professional judgment

Students submit a short reflection explaining how AI shaped their revision process.

Reflection prompts:

- What did AI help me notice?
- What feedback did I reject or revise?
- What did I verify using course, field, or experiential evidence?
- How did stakeholder questions improve my final product?
- How did this process clarify my goals for continued learning?
- Where did my own judgment matter most?

AI-Supported Activity

AI-Supported Stakeholder Review and Career Plan Revision

Prompt Template (for Student Use)

"I am revising a capstone project that applies academic knowledge to a career-related problem. My field or course context is: [insert context]. The problem is: [describe problem]. My proposed solution is: [describe recommendation]. My stakeholders are: [list stakeholders]. My current rationale is: [paste draft or notes]. My career development plan is: [paste draft or notes]. Please help me identify unclear reasoning, missing assumptions, stakeholder questions, practical constraints, and areas where I may need stronger evidence. Do not invent facts, sources, or citations. Base your feedback only on what I provide."

Follow-up Questions to Ask

Students can ask:

- What part of my rationale is least clear?
- What might each stakeholder audience need explained differently?
- What assumption should I address directly?
- What limitation, risk, or uncertainty should I acknowledge?
- What evidence would strengthen this recommendation?
- What goals in my career plan are too vague?
- What should I verify before using this feedback?
- What feedback seems too generic for my specific context?

TIPS



- Require students to draft before using AI.
- Ask students to preserve the AI transcript.
- Make annotation and verification part of the task.
- Remind students that AI feedback is not evidence.
- Encourage students to reject generic or inaccurate suggestions.
- Ask students to focus on stakeholder clarity, not just polished writing.
- Keep the final emphasis on student judgment and disciplinary reasoning.
- Do not allow students to upload confidential, private, copyrighted, or workplace-protected materials unless appropriate permissions and guidelines are in place.

Activity

Example Assessment

AI Review Transcript, Revised Capstone Product, and Reflection

Students submit: Initial draft or planning notes; AI transcript or selected AI feedback; Annotation showing what was used, revised, rejected, or verified; Revised capstone brief, stakeholder rationale, or portfolio product; Revised career development plan; Reflection on AI use and professional judgment

Criteria	Exemplary	Proficient	Developing	Needs Improvement
Responsible AI Preparation	Provides a substantive draft before AI use and gives AI appropriate context without relying on invented sources	Provides a draft and uses AI for feedback with mostly appropriate context	Draft or context is incomplete, limiting the usefulness of AI feedback	Uses AI before developing meaningful student reasoning
Critical Engagement with AI	Clearly evaluates, verifies, revises, and rejects AI feedback using course knowledge and professional judgment	Evaluates AI feedback with some verification and revision	Responds to AI feedback generally but with limited checking	Accepts AI feedback uncritically
Revision of Capstone Product	Uses verified feedback to strengthen problem analysis, solution, stakeholder rationale, and limitations	Makes meaningful revisions to improve the capstone product	Revisions are minor, generic, or weakly connected to evidence	No meaningful revision is made
Career Plan & Reflection	Revises a clear, evidence-based career development plan and explains how the process shaped future learning goals	Connects the revision process to career goals and continued learning	Career reflection is present but vague or mostly descriptive	Does not meaningfully connect the process to career development

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Additional Resources

Essential Skill 9: Knowledge Application

Podcasts

“Feedback, Voice, and AI in the Writing Classroom” Teaching in Higher Ed

<https://teachinginhighered.com/podcast/feedback-voice-and-ai-in-the-writing-classroom-with-anna-mills/>

“Classroom Assessment Techniques” Teaching in Higher Ed

<https://teachinginhighered.com/podcast/classroom-assessment-techniques/>

“Evidence-Based Teaching Practices” Teaching in Higher Ed

<https://teachinginhighered.com/podcast/evidence-based-teaching-practices/>

“The New College Classroom” Teaching in Higher Ed

<https://teachinginhighered.com/podcast/the-new-college-classroom/>

Web Resources & Articles

“High-Impact Practices” AAC&U

<https://www.aacu.org/resources/high-impact-practices>

“VALUE Rubrics” AAC&U

<https://www.aacu.org/initiatives/value-initiative/value-rubrics>

“What Is Career Readiness?” National Association of Colleges and Employers

<https://www.nacweb.org/career-readiness/competencies/career-readiness-defined/>

“Authentic Learning for the 21st Century: An Overview” EDUCAUSE Learning Initiative

<https://net.educause.edu/ir/library/pdf/ELI3009.pdf>

“Work-Integrated Learning” CEWIL Canada

<https://www.cewilcanada.ca/CEWIL/About-Us/Work-Integrated-Learning.aspx>

“Career Readiness Resources” National Association of Colleges and Employers

<https://www.nacweb.org/career-readiness/resources/>

“Project-Based Learning” University of Michigan Center for Research on Learning and Teaching

<https://crlt.umich.edu/tstrategies/tscbt>

“Teaching with Cases” Stanford Teaching Commons

<https://teachingcommons.stanford.edu/teaching-guides/foundations-course-design/teaching-cases>