

## Course Tag Reflection Exemplar Critical and Creative Thinking

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**FSC 498: Capstone Seminar in Forensic Science**

**Identify the course learning objectives in the syllabus that are clearly aligned to Critical & Creative Thinking and respective assignment(s).**

1. Better appreciate the practices of forensic science professionals
2. Better understand the knowledge base underlying various forensic methods and the specific needs for research in these areas
3. Through the capstone project, gain a deep understanding of at least one particular aspect of forensic science that overlaps with the primary major and/or possible career direction
  - CLO1 helps students get familiarized with background of different tools and techniques used in forensic science preparing them to evaluate their effectiveness
  - CLO2 helps train students to critically analyze the practices and scholarly work in the field of forensic science in order to identify gaps or future directions
  - CLO3 allows students to intentionally reflect on a particular area of forensic science through in-depth literature review performed to justify their research question

**Explain the connection between specific assignment(s) and Critical & Creative Thinking. At least 30% of the course grade must engage students in the selected competency for the course to be tagged.**

1. Group article selection (2%)- Students work in a group to select a research paper containing original research data
  2. Group article review presentation (10%)- The students give a 15-min presentation on the selected research paper in the class
  3. Capstone outline (5%)-Students create an initial outline of their research project to answer the chosen research question
  4. Capstone draft report (10%)- Students build a draft of their scientific report based on their outline expanding on details about context/scope, introduction, methods, results and analysis
  5. Written capstone project report (30%)- Students complete the project encompassing their findings and conclusion. They update the final report based on feedback received on the draft
- 57% of the course grade relates to this competency.

**Describe in detail the instructional strategies faculty use to intentionally teach Critical & Creative Thinking in the course.**

One of the first steps of conducting forensic research is to review, analyze and critique scientific literature. Students are trained in this area by faculty-led class discussion on methods for reviewing papers followed by handouts students can use. The students utilize training to give an oral presentation on journal article containing original research. They receive verbal and written feedback from faculty and peers on their presentation. Faculty stress the importance of critical thinking and analysis as a key part of the capstone project during in-class discussions and rubrics, which underscore the importance of literature review to justify and support the chosen research question. Students are also directed to focus on scope and background areas of the report during the outline and draft submission as they keep working to complete the project. Coherence is identified as a key component and students are trained to use a rationale-driven approach for connecting and scaffolding ideas to support and/or justify their claim.

**Describe the feedback tool(s) faculty use to support students' competency development on Critical & Creative Thinking.**

Faculty provide verbal and written feedback on the literature review presentation to guide students in reviewing scientific work more effectively. Faculty use rubrics and written comments to provide feedback for different capstone-related assignments to steer the students towards areas that need more analysis and/or evidence thereby training them in using evidence-based approach.