Students graduating from the MEDS program should be able to:

1. **Core Knowledge**
   *Demonstrate the following, and apply to the solution of environmental problems:*
   - Broad knowledge of the mathematical and statistical foundations of data science.
   - Broad knowledge of the concepts in data science necessary to address environmental issues.
   - Broad knowledge of programming and database languages used in environmental data science, including Python, R, and SQL.
   - A deep understanding of one or more areas of environmental data science, including data storage and management, interoperability, modeling, mining, analysis, and visualization.

2. **Research Methods and Analysis**
   *Identify and understand the following:*
   - The range of qualitative and quantitative methodologies used in environmental data sciences, including regression analysis, simulation, big data methods, and other relevant computational methods, applying relevant methods to environmental problems.
   - Relevant academic and policy literatures; reviewing and cogently synthesizing this scholarship.
   - The institutions and stakeholders that are relevant to current environmental problems, applying relevant methods to specific problems.
   - Policy evaluation methods that are relevant to environmental problems.

3. **Independent Research**
   - Formulate research questions and hypotheses that are relevant to environmental problems.
   - Design, develop, and implement rigorous studies using data, methods, and techniques relevant to environmental data science.
   - Analyze, organize, and visualize data using data science methods in order to solve environmental problems.

4. **Communication & Dissemination**
   - Write research reports at a level and style appropriate for public dissemination.
   - Create and deliver compelling, professional-quality public presentations of research results.

5. **Professionalism**
   - Make effective contributions to a research team.
   - Formulate and follow a work plan to advance a research project or other investigation.
   - Cultivate and maintain strong professional relations with colleagues, professional associates, clients, and customers.
   - Create environmental data science products and reports that satisfy employer, client, and customer needs.