Phys 280 RE3v2 rubric: **No hard copy submitted: -5 No writer’s memo: -10**

**RE3v2 submitted late: -15 No RE3v1 attached: -12**

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| **Features**: | **Description:** | **Range**: | **Comments on student paper for each feature (noting problems and strengths)**: |
| **Coverage of issues and information** | Includes the following:   1. A brief summary. 2. An introductory paragraph that describes some of the most important nuclear-explosive nuclides. 3. A paragraph that (a) lists the isotope requirements for making a uranium weapon, (b) lists the technologies currently available to produce uranium that meets these requirements, and (c) notes and describes the particular technology that is currently favored. 4. A paragraph that describes the simplest way to create a nuclear explosion using weapons-grade uranium. 5. A paragraph that lists the usually quoted isotope requirements for making a plutonium weapon and describes the technologies used to produce plutonium that meets these requirements. 6. A paragraph that describes how to create a nuclear explosion using weapons-grade plutonium. 7. A paragraph that explains why the production method that is optimal for producing weapons-grade plutonium is incompatible with efficient power generation. 8. A paragraph that describes why it is more difficult to make a bomb using reactor-grade plutonium than using weapons-grade plutonium. Indicate whether it is possible to create a nuclear explosion using reactor-grade plutonium. 9. A final paragraph that explains briefly why restricting the availability of nuclear explosive nuclides is the most effective way to prevent the spread of nuclear weapons. | 20%  **High**  **Mid**  **Low** |  |
| **Precise and accurate use of concepts** | Course concepts from lecture and readings are employed clearly, accurately, and with a sufficient level of detail (i.e. quantified) in service of the above objectives. | 15%  **High**  **Mid**  **Low** |  |
| **Explanation & argument** | Rationale for arguments (particularly regarding sections 3c, 4, 7, 8, and 9) is clear and convincing. | 15%  **High**  **Mid**  **Low** |  |
| **Professional style** | Geared toward college-educated member of congress.  Congruent with Congressional Research Service report style. Language (word choice, sentence structure, flow of information etc.) is precise and straightforward, attending to:  Concision  Clarity  Brevity  Professional tone  Organization  Comprehensive and thoughtful use of sources (need all three).  - Source info clearly cited.  - Uses a mixture of quotation, paraphrase, and summary. | 10%  **High**  **Mid**  **Low** |  |
| **Conformity to conventions** | 3-4 pages  Title and section headings specified in prompt  Header and date in correct format  Page numbers  12-point Times New Roman font throughout (including page numbers)  1.25" side margins and 1" top margins and .5" bottom margins.  Citation practices specified in prompt.  Key terms bolded in first use  (check = all correct, x = some mistakes (-10))  \*\*If you can't find the error, come to office hours! | 10% |  |
| **Copy editing and use of standard language** | Grammar and mechanics are edited for correctness and legibility.  Perfect polish is not necessary in a first draft, but out of respect for your reader, you should make some effort to make the draft an easy read. | 5%  **High**  **Low** |  |
| **Quality and thoughtfulnessof revision and rationale** |  | 25%  **High**  **Mid**  **Low** |  |
| **Overall Comments:** | | | |