

### Visual Physics Score Sheet

| Consideration         | What we have now   | What we would have in VP  | What the change costs  |
|-----------------------|--|---|--|
| Recitations           | 1-hr/week, separated from lectures, led by TA, typically nearly worthless  | Block-scheduled with lecture, led by professor, tightly integrated with course  | New classroom building   |
| TA training           | Nearly none  | 1 hr/week course, with serious pedagogic training.  | Part of workload for lecturers.  |
| Labs                  | Weakly coupled to curriculum, poor manuals, little is learned  | Tight coupling to curriculum, directly builds visualization skills, students must develop their modeling of data using physics tools.   | VP equipment for labs;<br>Part of workload for lecturers.  |
| Assessment            | nothing  | Ongoing authentic assessment of course elements and techniques → course will improve progressively, gains will be retained.   | Part of workload for lecturers.  |
| Faculty teaching load | 3 hrs/week   | 4 hrs/week  | + 1 hr/week for profs  |
| TA workload           | 3 2-hr labs,<br>3 1-hr recitations<br>report grading   | 3 2-hr labs, 1-2 hr helping prof in classroom recitation  | - 1-2hr/week for TA's  |
| Technical writing     | Nothing in physics course; TAMU will soon cease to teach technical writing but will require students to take worthless correspondence course from Texas Tech to satisfy core curriculum requirement. | <i>Students may choose to take VP with or without technical writing instruction</i> , lab reports written as short technical papers. Writing is taught in 1 hr/week lecture (additional hr for students), reports are graded by writing TA and by physics TA. Those who take TW and perform to standards receive credit for core requirement. | Students who opt for tech writing pay TW fee (same \$ as fee for the worthless correspondence course); fee income pays for TW staff. |
| Net result            | Same old, same old. Typical student leaves with marginal physics problem-solving skills.   | One of the best first-year physics programs in the country  | Is it worth the price?   |

