New Course Proposal by Chris Lacher: "Top 10 Algorithms", a senior level course, to be taught at Panama City, mostly via Distance Learning.

Justification: This course has been taught successfully under the title "Top 10 Algorithms" during 2013 and 2014. It provides both BS and BA students the opportunity to examine some of the most impactful algorithms in today's modern world from a point of view that is broad and rigorous but slightly less technical than the BS capstone course COP4531. The change in emphasis from theory to impact allows students to understand a wider range of algorithms and how these are changing the world.

Catalog Description: A wide-ranging selection of ten of the most influential algorithms in use today: what they are, how they work, and their impact on modern life.

Prerequisite: COP 4530

Course Objectives: At the end of this course, the student should be able to accomplish the following, for each algorithm studied in the course:

* Precisely describe the computational body of the algorithm

* State and give an informal argument for the asymptotic runtime and runspace of the algorithm

* Describe the scientific environment within which the algorithm functions

* Describe the issues involved in proving correctness of the algorithm

* Describe the scientific and economic impact of the algorithm

* Provide a brief history of the discovery and subsequent development of the algorithm

In addition the student should be able to describe the importance of the study of algorithms in general, in terms of scientific and economic advancement.