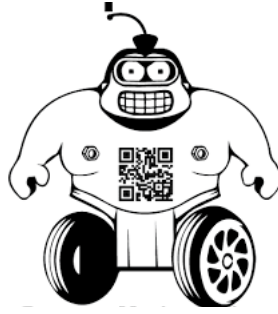


Autonomous Sumo Design Challenge (Robotics)  
AENG 101 Introduction to Engineering  
Dr. John Wright

Directions: In small teams, the groups are to design and construct a Sumobot that will seek out an opponent and force them out of the tournament competition ring.



<https://inter.payap.ac.th/sumobot-competition-2016/>

All Sumobots will be based on the same platform (robot kit) that is provided. Each robot may be modified, however, by adding sensors, weight, or other structural elements.

Sumobots may not use deliberately destructive weapons of any kind. They may employ structures to unbalance, impede or tip over their opponents. Further, a robot may not release fluid of any kind, and may not have offensive weapons or mechanical systems designed to dismantle other Sumobots. Contesting robots are to be designed to primarily push, lift, rotate, tip, impede or overturn the opponent.

<https://sunypoly.edu/sites/default/files/first/SUMO-Bot-Rules-and-Description.pdf>

The robot must be programmed in C++ and use the microcontroller provided. Each Team will compete with their robots against another and for 3-minute rounds until a champion is crowned.

Fail to Qualify	0pts
8 <sup>th</sup> place	65pts*
7 <sup>th</sup> place	70pts
6 <sup>th</sup> place	75pts
5 <sup>th</sup> place	80pts
4 <sup>th</sup> place	85pts
3 <sup>rd</sup> place	90pts
2 <sup>nd</sup> place	95pts
1 <sup>st</sup> place	100pts

*\*Must meet full design criteria (must pass qualification tests using real-time I/O) to score >0pts.*