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Emergy–based Environmental Accounting of the Engineering Course at a Paulista University *Campus*

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Abstract

This study applies emergy accounting to assess an Engineering course offered in an educational building at Paulista University- UNIP. The building used by the Engineering course at *Campus* Indianópolis is occupied by teachers, students and staff. Energy and material flows used for construction and use of the building are evaluated. Information provided to students is also accounted. The total emergy of the building (construction and use) is 1.25 x 10^{18} sej / year, where the concrete presents the most significant contribution due to to the large number of classrooms and laboratories used by the Engineering course. The second major contribution is due to the large investment in equipments, suggesting a concern of the University with an appropriate engineer training. The total emergy of the Engineering course (including information) is 5.20 x 10^{19} sej (for a course with duration of five years). This value is much higher than that corresponding to the building construction, due to the high emergy of information. The emergy of the building contributes with 12.1% in the engineers training and the emergy from information received by students accounts for 87.9%. The transformity of the graduated engineer is 7.4 times higher than that of students entering the University. This increase is mainly associated to the knowledge acquired during the five years course.

Keywords: *Environmental accounting*; *emergy*; *University*; *Engineering, information*.