

Module designation	<i>Fundamental of Operation Research (AGBP09)</i>
Semester(s) in which the module is taught	<i>5th semester</i>
Person responsible for the module	<i>Sofyan</i>
Language	<i>English</i>
Relation to curriculum	<i>Compulsory module</i>
Teaching methods	<i>lecture, lesson, case, seminar.</i>
Workload	<ul style="list-style-type: none"> ▪ 100 minutes of lecture and discussion per week ▪ 120 minutes of structured tasks per week ▪ 190 minutes of independent activity per week ▪ 100 minutes of laboratory work
Credit points	<i>3 (lesson 2 and lab works 1) = 4.8 ECTS</i>
Required and recommended prerequisites for joining the module	<i>Economic and Business Mathematics</i>
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. <i>Have the ability to solve linear program problems formulated by methods, graphs, simplex, Big-M and two-phase.</i> 2. <i>Able to analyze the results of solving linear program formulations with duality theory and sensitivity analysis.</i> 3. <i>Able to solve transportation, transshipment, and assignment problems by using appropriate solution finding methods.</i> 4. <i>Able to find solutions to network and inventory model formulations and analyze the resulting solutions</i>
Content	<i>The Agribusiness Operations Research course discusses a number of operations research methods, ranging from Linear Program methods to specially structured decision-making programs such as PERT/CPM and others.</i>
Exams and assessment formats	<i>Essay, case study</i>
Study and examination requirements	<i>5 % activity participative</i> <i>55% course work and study cases analysis</i> <i>5% quizzes</i> <i>15% midterm examination</i> <i>20% final examination</i>
Reading list	<ol style="list-style-type: none"> 1. Lieberman, H, 2008. Introduction To Operation Research, Andi, Yogyakarta 2. Levin, Richard, David S Rubin, Joel P Stinson, dan Everette S Gardner, 2003. Pengambilan Keputusan Secara Kuantitatif (terjemahan) "Quantitative Approaches to Management". Jakarta: Rajawali Press. 3. Bronson, Ricard. 1991. Seri Buku Schaum,s, Teori dan Soal-soal Operations Research. Penerbit Erlangga. Jakarta. 4. Dimiyati, Tjutju tarliah dan Ahmad Dimiyati . 2009. Operations Research. Model-model Pengambilan Keputusan. Penerbit Sinar Baru Algesindo. Bandung. 5. Taha, Hamdy A. 1996. Riset Operasi. Binarupa Aksara. Jakarta