

Department of Mathematics
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Course	Course Name : Algebra II
	Course Code : KM184504
	Credit : 3
	Semester : 5

Description of Course	
Discussion of Algebra II courses includes assessment of ring, integral Domains, field, characteristic of ring, ideal and Quotient rings, Ring Homomorphisms and Division field. In the lecture discussion used SAGEMATH software to equip learners have the ability to perform symbolic computation related to the problem of algebra with two binary operations. In the learning process in the classroom learners will learn to identify problems, express symbolic math ideas and express them into writing. In addition to being directed to independent learning through tasks, learners are directed to cooperate in group work.	
Learning Outcome	
PLO 1	[C2] Students are able to identify and explain foundations of mathematics that include pure, applied, and the basic of computing
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
Course Learning Outcome	
<ol style="list-style-type: none"> 1. Students are able to follow developments, develop and apply math and able to communicate actively and correctly both oral and written 2. Students are able to explain basic and advanced principles of the theory they understand in particular with regard to the structure of a finite field and capable of performing symbolic computations 3. Students are able to explain intelligently and creatively about the significant role of Algebra application in the field of related knowledge clusters and other fields 	

4. Students are able to present their knowledge in Algebra field independently or in teamwork
Main Subject
Ring, Integral Domains, Field, Characteristic of Ring, Ideal and Quotient Rings, Ring Homomorphisms and Division Field
Prerequisites
Reference
<ol style="list-style-type: none"> 1. Subiono., "Catatan Kuliah : ALJABAR II", Jurusan Mathematics FMIPA-ITS, 2014. 2. Joseph A. Gallian, " Contemporary Abstract Algebra, 7th Edition", Brooks/Cole, (2010) 3. Joseph J. Rotman,"Advanced Modern Algebra", Prentice Hall, (2003).
Supporting Reference
<ol style="list-style-type: none"> 1. William Paulsen," Abstract Algebra, An Interactive Approach ", CRC Press, (2010). 2. Robert A. Beezer," SAGE for Abstract Algebra, A Supplement to Abstract Algebra, Theory and Applications ", Department of Mathematics and Computer Science, University of Puget Sound, 2013.