Math 595: Reading and Research I
Quasi-Projective Modules over Commutative Rings

Proposed for Semester 082

by
Jawad Abuihlail

Text-book:

F. Anderson and K. Fuller, *Rings and categories of modules*. Graduate Texts in Mathematics, Vol. 13. Springer-Verlag, New York-Heidelberg, 1974.

Further Reading:

T. Y. Lam, *A first Course in Noncommutative Rings*, 2nd edition, Springer Verlag, 2001.

R. Wisbauer, *Foundations of Ring and Module Theory*, Gordon and Breach Science Publishers, Philadelphia, PA, 1991.

Articles:

1) D. Alexeev, *Quasi-projectivity over domains*, Bull. Austral. Math. Soc. 60 (1999), 129-135.

2) J. S. Golan, *Characterization of rings using quasiprojective modules*, Israel J. Math. 8 (1970) 34-38.

3) L. E. Wu and J. P. Jans, *On quasi projectives*, Illinois J. Math. 11 (1967) 439-448.

4) S. Singh and A. Mohammad, *Rings in which every finitely generated left ideal is quasi-projective*, J. Indian Math. Soc. 40 (1-4) (1976) 195-205.

Grading Policy:

Midterm	30 %
Final	40 %
Presentations	30 %

Detailed Syllabus

Topic	Details	Week(s)
Section 16	The Hom Functors and Exactness-Projectivity and Injectivity	1-2
Section 17	Projective Modules and Generators	3
Section 18	Injective Modules and Cogenerators	4
Section 19	The Tensor Functors and Flat Modules	5
Section 20	Natural Transformations	6
	MIDTEREM	
Section 27	Semiperfect Rings	7
Section 28	Perfect Rings	8
Section 29	Modules with Perfect Endomorphism Rings	9
Article I	L. E. Wu and J. P. Jans, *On quasi projectives*, Illinois J. Math. 11 (1967) 439-448.	10
Article II	J. S. Golan, *Characterization of rings using quasiprojective modules*, Israel J. Math. 8 (1970) 34-38.	11-12
Article III	S. Singh and A. Mohammad, *Rings in which every finitely generated left ideal is quasi-projective*, J. Indian Math. Soc. 40 (1-4) (1976) 195-205.	13-14
Article IV	D. Alexeev, *Quasi-projectivity over domains*, Bull. Austral. Math. Soc. 60 (1999), 129-135.	15-16
	FINAL	