Program	Type of studies (cycle)	Third cycle
	Name of the program	SEE Doctoral Studies in Mathematical Science

Course

Course title	**Analysis on manifolds**			
Course code	Semester	Course status	ECTS credits	Contact hours
PMAT 675		Optional	10	30

Teaching staff	Teacher	
	Other staff	
Course goals	Minimal goals are to bring a student a basic knowledge on developing a calculus on manifolds Desirable: An independent derivation of differential calculus on manifolds	

Course content/topics

- Manifolds
- Vector bundles
- Differential calculus on manifolds
- Bundle theory
- Bundle resolvents
- Differential geometry
- Riemannian geometry
- Generalized functions on manifolds

LITERATURE

[1] F. Varner, Foundation of Differential Manifolds and Lie Groups, Springer-Verlag, New York-Berlin, 1983. 272 pp

[2] Aubin, T.,A course in differential geometry. Graduate Studies in Mathematics,27. American Mathematical Society, Providence,RI, 2001. 184 pp

[3] Grosser, M., Kunzinger, M., Oberguggenberger, M., Steinbauer, R., Geometric theory of generalized functions with applications to general relativity. Mathematics and its Applications, 537. Kluwer Academic Publishers, Dordrecht, 2001. 505 pp

Grading

	Criterion	Points	Cut-off points
1.	Written assignment		
2.	Project	40	22
3	Final exam	60	33
	Total	100	55