UNIVERSITAS GADJAH MADA
Faculty of Mathematics and Natural Sciences
Mathematics Department
Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 552243 Fax: +62 274 555131 Email: math@ugm.ac.id Website: matematika.fmipa.ugm.ac.id

Master in Mathematics
Telp : +62 274 552243
Email : maths2@ugm.ac.id; kaprodi-s2-matematika.mipa@ugm.ac.id
sekprodi-s2-matematika.mipa@ugm.ac.id
Website : http://s2math.fmipa.ugm.ac.id/

MODULE HANDBOOK

Module name:	*Topology*
Module level, if applicable:	*Master Program*
Code, if applicable:	*MMM5106*
Subtitle, if applicable	
Courses, if applicable	*Topology*
Semester(s) in which the module is taught:	*1st semester*
Person responsible for the module:	*Chair of the Lab. Analysis*
Lecturer(s):	*Dewi Kartika Sari, M. Sc., Ph.D and Hadrian Andradi, M. Sc., Ph. D*
Language:	*Indonesia*
Relation to curriculum:	*Master Degree in Mathematics, compulsory for analysis track 1st semester*
Teaching methods	*Lectures, classroom discussion, and flipped classroom*
Workload:	• *3x50 minutes lectures,* • *3x50 minutes structured activities,* • *3x50 minutes individual study,* • *In 16 weeks per semester (including mid-term and final examinations).* • *Total: 144x50 minutes per semester.*
Recommended prerequisites:	-
Module objectives/intended learning outcomes:	*On successful completion of this course, students should be able to:* ***CO 1**. use properties of some topological concepts to prove their advanced properties.* ***CO 2.** characterize spaces using axioms of separation* ***CO 3.** prove some characteristics of continuous functions and some convergence theorems* ***CO 4.** prove some properties of compactness and connectedness*
Content:	1. *General topological structures: definition of topology space, open set, closed set, bases, sub-bases, subspace, cartesian products.* 2. *Axioms of separation, continuous maps, open maps and closed maps, homeomorphism* 3. *Convergence in topological spaces: nets and filters.* 4. *Subspaces, sums, cartesian products, and quotient spaces* 5. *Compactness and connectedness.*
Examination forms	*Essay and oral presentation*
Study and examination requirements and forms of examination:	*The final mark will be weighted as follows:* *No — Assessment methods (components, activities) — Weight (percentage)* *1 — Final Examination — 35%-45%* *2 — Mid-Term Examination — 30%-35%* *3 — Quiz, Homework, Presentation — 25%-30%* *To pass the course, the minimum grade is C*
Media employed:	*Board, LCD Projector, Laptop/Computer*

Reading List:	1. *Dugundji J., 1996, Topology, Allyn and Bacon Inc. Boston.* 2. *Engelking R., 1989, General Topology, Heldermann Verlag, Berlin.* 3. *Kelley J.L., 1975, General Topology, Spinger-Verlag, New York.* 4. *Munkres J.R., 2013, Topology: Pearson New International Edition, Pearson.*

Mapping of The COs and PLOs

	PLO – 1 S2 Mat	**PLO – 2 S2 Mat**	**PLO – 3 S2 Mat**	**PLO – 4 S2 Mat**	**PLO – 5 S2 Mat**	**PLO –6 S2 Mat**
CO 1	V	V				
CO 2	V		V			
CO 3	V	V				
CO 4	V		V			
CO 5	V	V				