Framework of the Courses

The credit requirements for the Master's Programme are outlined as follows. These ensure a balanced academic structure to support specialized learning and research:

Credit Requirements for Master's Programme

Course Category	Credits
Major Courses	20
Minor Courses	08
Supporting Courses	06
Common Courses	05
Seminar	01
Thesis Research	30
Total	**70**

Course Categories

1. **Major Courses:** Courses from the primary discipline in which the student is enrolled. Core courses that are mandatory will be marked with an asterisk (*).

2. **Minor Courses:** Courses from disciplines closely related to the student's major subject area.

3. **Supporting Courses:** Subjects outside the major discipline that are relevant to the student's research or overall competence. These may include areas like *Statistical Methods* or *Design of Experiments.*

4. **Common Courses:** Five one-credit courses offered across all Master's disciplines to build general competence:

   ● Library and Information Services

   ● Technical Writing and Communication Skills

   ● Intellectual Property and Its Management in Agriculture

   ● Basic Concepts in Laboratory Techniques

   ● Agricultural Research, Research Ethics, and Rural Development Programmes

   ● Students may opt for equivalent online courses (e.g., SWAYAM or similar platforms) with prior approval. If a course has already been completed during undergraduate studies, alternative related courses may be chosen.

5. Seminar:

   A 1-credit seminar focusing on developing skills in presentation and discussion.

6. **Thesis Research:** Independent research culminating in a thesis, which constitutes a significant component of the credit requirement (30 credits).

7. **A student can obtain up to 16 credits per semester excluding master's research.**

8. **A student can only take minor courses that are offered by other disciplines during a given semester.**

9. **A student can select supporting courses of their choice from the list of supporting courses provided herewith**.

BRAINWARE UNIVERSITY
SCHOOL OF AGRICULTURE
DEPARTMENT OF AGRICULTURE
Master of Science in Agriculture – Soil Science and Agricultural Chemistry – 2025

SEMESTER I

Sl No	Course Code	Course Name	Course Type	L	T	P	Evaluation Scheme CIA	Evaluation Scheme TEE	Total	Credits
1	SOIL501	Soil Physics*	Major Course	2	-	2	40	60	100	3(2+1)
2	SOIL502	Soil Fertility and Fertilizer Use*	Major Course	2	-	2	40	60	100	3(2+1)
3	SOIL506E/ SOIL505E	Soil Biology and Biochemistry/ Soil Erosion and Conservation	Major Course	2/1	-	2/2	40	60	100	3(2+1)/ 2(1+1)
4	PGS502	Technical Writing and Communications Skills	Common Course	0	-	2	40	60	100	1 (0+1)
5	AGRON505	Conservation Agriculture	Minor Course	1	-	2	40	60	100	2 (1+1)
6	BIOCHEM501	Basic Biochemistry	Supporting Course	3	-	2	40	60	100	4 (3+1)
TOTAL				10/9	-	12/12	240	360	600	16(10+6)/ 15(9+6)

* Core course

SEMESTER-II

Sl No	Course Code	Course Name	Course Type	L	T	P	Evaluation Scheme CIA	Evaluation Scheme TEE	Total	Credits
1	SOIL504	Soil Mineralogy, Genesis, Classification and Survey*	Major Course	2	-	2	40	60	100	3(2+1)
2	SOIL503	Soil Chemistry*	Major Course	2	-	2	40	60	100	3(2+1)
3	SOIL511E/ SOIL509E/ SOIL510E	Management of Problematic Soils and Water/ Remote Sensing and GIS Technique for Soil and Crop Studies/ Analytical Technique and Instrumental Methods in Soil and Plant Analysis	Major Course	1/2/0	-	2/2/4	40	60	100	2(1+1)/ 3(2+1)/ 2(0+2)
4	PGS501	Library and Information Services	Common Course	0	-	2	40	60	100	1 (0+1)
5	PGS503	Intellectual Property and its Management in Agriculture	Common Course	1	-	0	40	60	100	1 (1+0)
6	AGRON511	Cropping System and Sustainable Agriculture	Minor Course	2	-	0	40	60	100	2 (2+0)
7	STAT502	Statistical Methods for Applied Sciences	Supporting Course	3	-	2	40	60	100	4 (3+1)

TOTAL	11/ 12/ 10	-	10/ 10/ 12	280	420	700	16 (11+5)/ 17 (12+5)/ 16 (10+6)

* Core course

SEMESTER-III

SI No	Course Code	Course Name	Course Type	L	T	P	Evaluation Scheme CIA	Evaluation Scheme TEE	Total	Credits
1	SOIL508E/ SOIL507E/ SOIL513E/ SOIL512E	Soil, Water and Air Pollution/ Radioisotopes in Soil and Plant Studies/ Soil Survey and Land Use Planning/ Land Degradation and Restoration	Major Course	2/ 1/ 2/ 1	-	2/ 2/ 0/ 0	40	60	100	3(2+1)/ 2(1+1)/ 2(2+0)/ 1(1+0)
2	PGS504	Basic Concepts in Laboratory Techniques	Common Course	0	-	2	40	60	100	1(0+1)
3	PGS505	Agricultural Research, Research Ethics and Rural Development Programmes	Common Course	1	-	0	40	60	100	1 (1+0)
4	AGRON512	Dryland Farming and Watershed Management	Minor Course	2	-	2	40	60	100	3 (2+1)
TOTAL				5/ 4/ 5/ 4	-	6/ 6/ 4/ 4	160	240	400	8 (5+3)/ 7 (4+3)/ 7 (5+2)/ 6 (4+2)

SEMESTER-IV

SI No	Course Code	Course Name	Course Type	L	T	P	Evaluation Scheme CIA	Evaluation Scheme TEE	Total	Credits
1	SOIL514	Introduction to Nanotechnology	Major Course	2	-	2	40	60	100	3 (2+1)
2	AGRON513	Principles and practices of organic farming	Minor Course	2	-	2	40	60	100	3 (2+1)
3	SOIL591	Master's Seminar	Major Course	-	-	-	40	60	100	1
4	SOIL599	Master's research	Major Course	-	-	-	40	60	100	30
TOTAL				4	-	4	160	240	400	37

Course Code	Course Title	Credit Hours
STAT 511	Experimental Designs	2+1

STAT 512	Basic Sampling Techniques	2+1
STAT 521	Applied Regression Analysis	2+1
STAT 522	Data Analysis Using Statistical Packages	2+1
MCA 501	Computers Fundamentals and Programming	2+1
MCA 502	Computer Organization and Architecture	2+0
MCA 511	Introduction to Communication Technologies, Computer Networking and Internet	1+1
MCA 512	Information Technology in Agriculture	1+1
BIOCHEM 501	Basic Biochemistry	3+1
BIOCHEM 505	Techniques in Biochemistry	2+2

Course Code	Course Title	Credit Hours
PGS501	Library and Information Services	0+1
PGS502	Technical Writing and Communications Skills	0+1
PGS503	Intellectual Property and its Management in Agriculture	1+0
PGS504	Basic Concepts in Laboratory Techniques	0+1
PGS505	Agricultural Research, Research Ethics and Rural Development Programmes	1+0