



**FACULTY OF
EDUCATION**



FACULTY OF EDUCATION

The Faculty of Education was established in 1967, formerly known as the College of Education and subsequently changed to Srinakarinwirot University, Phitsanulok Campus and presently Naresuan University. The Faculty of Education is one of the leading institutions of teacher education in Thailand, especially serving people in the lower-northern region of Thailand. Through the years, the Faculty has produced qualified teachers and educators, many of whom are highly recognized among scholars in education.

In pursuit of its philosophy and mission, the Faculty of Education has pledged to:

1. produce well-qualified professional teachers from undergraduate students and equip graduate students with academic leadership;
2. develop educational research in search of new knowledge and innovation for subsequent applications in the community and commercial areas;
3. provide a wide range of academic services to the community, based on the expertise of academic staff in the organization;
4. enhance arts and culture conservation and promote morals and ethics for the teaching profession.

Master of Education Program in Biology

Research Focus

- Educational Management in Biology
- Instructional Development in Biology
- Holistic Student Development

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Required Course	3	3
- Core Courses	18	18
- Electives	3	9
Required Non-credit Courses	5	5
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Required Course

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	366511	3	366511	3
Total	1	3	1	3

3. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Plant, Animal and Microbial Interactions	257531	3	257531	3
Biotechnology	275511	3	275511	3
Instrumentation in Biotechnology	275572	3	275572	3
Scientific Literacy and Curriculum Development	378511	3	378511	3
Research in Science Education	378512	3	378512	3
Development of Learning Management in Biology	381501	3	381501	3
Total	6	18	6	18

4. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Plant Metabolism	257511	3	257511	3
Physiology of Environmental Adaptation	257521	3	257521	3
Comparative Vertebrate Anatomy	257523	3	257523	3
Population Ecology	257532	3	257532	3
Biological Sciences	257541	3	257541	3
Metabolism and Responses in Organism	257542	3	257542	3
Scientific Communication	257543	3	257543	3
Biosystematics	257544	3	257544	3
Advanced Molecular Bioscience	275512	3	275512	3
STEM Education	378513	3	378513	3
Organization of Science and Mathematics Camp	378514	3	378514	3
Total	≥1	≥3	≥3	≥9

5. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar 1	378581	1	378581	1
Seminar 2	378582	1	378582	1
Total	3	5	3	5

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	378583	6	-	-
Thesis 2, Option 1.2	378584	6	-	-
Independent Study 1	-	-	378591	2
Independent Study 2	-	-	378592	2
Independent Study 3	-	-	378593	2
Total	2	12	3	6

Master of Education Program in Chemistry

Research Focus

- Educational Management in Chemistry
- Instructional Development in Chemistry
- Context-focused Student Development

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Required Course	3	3
- Core Courses	18	18
- Electives	3	9
Required Non-credit Courses	5	5
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Required Course

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	366511	3	366511	3
Total	1	3	1	3

3. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Sample Preparations and Separation Techniques for Chemical Analysis	256557	3	256557	3
Waste and Wastewater Management in Chemical Industry	277543	3	277543	3
Petroleum and Petrochemical Industry	277561	3	277561	3
Scientific Literacy and Curriculum Development	378511	3	378511	3
Research in Science Education	378512	3	378512	3
Development of Learning Management in Chemistry	379501	3	379501	3
Total	6	18	6	18

4. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Bioorganic Chemistry	256529	3	256529	3
Current Topics in Inorganic Chemistry	256538	3	256538	3
Current Topics in Analytical Chemistry	256555	3	256555	3
Current Topics in Organic Chemistry	256571	3	256571	3
Advanced Industrial Chemistry	277511	3	277511	3
Investment and Management in Industrial Chemistry	277512	3	277512	3
STEM Education	378513	3	378513	3
Organization of Science and Mathematics Camp	378514	3	378514	3
Total	≥1	≥3	≥3	≥9

5. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar 1	378581	1	378581	1
Seminar 2	378582	1	378582	1
Total	3	5	3	5

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	378583	6	-	-
Thesis 2, Option 1.2	378584	6	-	-
Independent Study 1	-	-	378591	2
Independent Study 2	-	-	378592	2
Independent Study 3	-	-	378593	2
Total	2	12	3	6

Master of Education Program in Curriculum and Instruction

Research Focus

- Socially Relevant Curriculum Development
- Instructional Design for Learning Capacities
- Learning Development in Accordance with the National Development

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.1	Option 1.2	Option 2.1
Coursework	-	24	30
- Required Courses	-	6	6
- Core Courses	-	9	9
- Electives	-	9	15
Required Non-credit Courses	4	4	4
Thesis	36	12	-
Independent Study	-	-	6
Total	36	36	36

* Minimum credits required

2. Required Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	-	-	366511	3	366511	3
Information and Communication Technologies for Education	-	-	366515	3	366515	3
Total	-	-	2	6	2	6

3. Core Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Curriculum Theory and Curriculum Development	-	-	369501	3	369501	3
Development of Learning Management and Assessment	-	-	369502	3	369502	3
Research for Curriculum and Instruction Development	-	-	369503	3	369503	3
Total	-	-	3	9	3	9

4. Electives

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Curriculum and Instruction Development	-	-	366512	3	366512	3
Curriculum Management	-	-	369511	3	369511	3
Innovation in Curriculum and Instruction	-	-	369512	3	369512	3
Learning Management for Thinking Process Development	-	-	369513	3	369513	3
Development and Evaluation of Curriculum Materials	-	-	369514	3	369514	3
Practicum in Curriculum, Instruction, and Supervision	-	-	369515	3	369515	3
Synthesis of Curriculum and Instructional Research	-	-	369516	3	369516	3
Problems in Curriculum and Instruction Development	-	-	369517	3	369517	3
Curriculum and Instruction Development in School	-	-	369518	3	369518	3
Training Curriculum Development	-	-	369519	3	369519	3
Inclusive Learning Development	-	-	369521	3	369521	3

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Instructional Assessment	-	-	369522	3	369522	3
Total	-	-	≥3	≥9	≥5	≥15

5. Required Non-Credit Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3	366513	3
Seminar	369591	1	369591	1	369591	1
Total	2	4	2	4	2	4

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.1	369561	9	-	-	-	-
Thesis 2, Option 1.1	369562	9	-	-	-	-
Thesis 3, Option 1.1	369563	9	-	-	-	-
Thesis 4, Option 1.1	369564	9	-	-	-	-
Thesis 1, Option 1.2	-	-	369571	3	-	-
Thesis 2, Option 1.2	-	-	369572	3	-	-
Thesis 3, Option 1.2	-	-	369573	6	-	-
Independent Study 1	-	-	-	-	369581	2
Independent Study 2	-	-	-	-	369582	2
Independent Study 3	-	-	-	-	369583	2
Total	4	36	3	12	3	6

Master of Education Program in Development Study

Research Focus

- Social Development
- Human Development
- Development Education
- Educational Development
- Current Research Trends in Education
- 21st Century Learning Skills: Pedagogy and Andragogy and Adult Learning
- Authentic Learning Development and Evaluation

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.1	Option 1.2	Option 2.1
Coursework	-	24	30
- Required Courses	-	6	6
- Core Courses	-	15	15
- Electives	-	3	9
Required Non-credit Courses	4	4	4
Thesis	36	12	-
Independent Study	-	-	6
Total	36	36	36

* Minimum credits required

2. Required Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	-	-	366511	3	366511	3
Information and Communication Technologies for Education	-	-	366515	3	366515	3
Total	-	-	2	6	2	6

3. Core Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Principles of Development Study	-	-	388501	3	388501	3
Thinking Process Development	-	-	388502	3	388502	3
Organization Development and Performance Management	-	-	388503	3	388503	3
Indigenous Wisdom Study and Human Development	-	-	388504	3	388504	3
Citizenship Development in the 21 st Century	-	-	388505	3	388505	3
Total	-	-	5	15	5	15

4. Electives

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Policy and Strategic Planning of Human Development in Education	-	-	388511	3	388511	3
Evaluation of Human Resource Effectiveness	-	-	388512	3	388512	3
Training and Human Development	-	-	388513	3	388513	3

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Comparative Education of Human Resource Development	-	-	388514	3	388514	3
Career Development Techniques	-	-	388515	3	388515	3
Knowledge-based Economy and Human Development	-	-	388516	3	388516	3
Field Study of Development Study	-	-	388517	1	388517	1
Total	-	-	≥1	≥3	≥3	≥9

5. Required Non-credit Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3	366513	3
Seminar	388571	1	388571	1	388571	1
Total	2	4	2	4	2	4

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.1	388591	8	-	-	-	-
Thesis 2, Option 1.1	388592	8	-	-	-	-
Thesis 3, Option 1.1	388593	8	-	-	-	-
Thesis 4, Option 1.1	388594	12	-	-	-	-
Thesis 1, Option 1.2	-	-	388595	2	-	-
Thesis 2, Option 1.2	-	-	388596	4	-	-
Thesis 3, Option 1.2	-	-	388597	6	-	-

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Independent Study 1	-	-	-	-	388581	2
Independent Study 2	-	-	-	-	388582	2
Independent Study 3	-	-	-	-	388583	2
Total	4	36	3	12	3	6

Master of Education Program in Educational Administration

Research Focus

- Leadership
- Theory into Practice in Educational Administration

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.1	Option 1.2	Option 2.1
Coursework	-	24	30
- Core Courses	-	15	15
- Required Courses	-	6	6
- Electives	-	3	9
Required Non-credit Courses	4	4	4
Thesis	36	12	-
Independent Study	-	-	6
Total	36	36	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Principles of Educational Administration	-	-	354501	3	354501	3
Principal and Educational Leadership	-	-	354502	3	354502	3
School-based Management	-	-	354503	3	354503	3

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Policy Development and Strategic Planning in Education	-	-	354504	3	354504	3
Academic Affairs Administration	-	-	354505	3	354505	3
Total	-	-	5	15	5	15

3. Required Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	-	-	366511	3	366511	3
Information and Communication Technologies for Education	-	-	366515	3	366515	3
Total	-	-	2	6	2	6

4. Electives

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Organization Development	-	-	354511	3	354511	3
Student Affairs Administration	-	-	354512	3	354512	3
Laws for Educational Administrators	-	-	354513	3	354513	3
School and Community Participation	-	-	354514	3	354514	3
Regional Studies	-	-	354515	3	354515	3
Management Practice	-	-	354516	3	354516	3
Statistics and Research in Educational Administration	-	-	354521	3	354521	3
Project Evaluation in Educational Administration	-	-	354522	3	354522	3
Total	-	-	≥1	≥3	≥3	≥9

5. Required Non-credit Courses

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3	366513	3
Seminar	354571	1	354571	1	354571	1
Total	2	4	2	4	2	4

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.1		Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.1	354593	8	-	-	-	-
Thesis 2, Option 1.1	354594	8	-	-	-	-
Thesis 3, Option 1.1	354595	8	-	-	-	-
Thesis 4, Option 1.1	354596	12	-	-	-	-
Thesis 1, Option 1.2	-	-	354597	2	-	-
Thesis 2, Option 1.2	-	-	354598	4	-	-
Thesis 3, Option 1.2	-	-	354599	6	-	-
Independent Study 1	-	-	-	-	354590	2
Independent Study 2	-	-	-	-	354591	2
Independent Study 3	-	-	-	-	354592	2
Total	4	36	3	12	3	6

Master of Education Program in Educational Research and Evaluation

Research Focus

- Educational Research and Development
- Educational Measurement and Evaluation
- Educational Assessment
- Educational Statistics

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Core Courses	9	9
- Required Courses	6	6
- Electives	9	15
Required Non-credit Courses	4	4
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Educational Research and Development	390511	3	390511	3
Applied Statistics for Research and Evaluation	390521	3	390521	3
Educational Evaluation	390531	3	390531	3
Total	3	9	3	9

3. Required Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	366511	3	366511	3
Information and Communication Technologies for Education	366515	3	366515	3
Total	2	6	2	6

4. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Educational Research and Development:				
Research Instruments	390512	3	390512	3
Qualitative Research in Education	390513	3	390513	3
Experimental Research in Education	390514	3	390514	3
Synthesis Method for Research	390515	3	390515	3
Survey Research in Education	390516	3	390516	3
Classroom Research	390517	3	390517	3
Sampling Technique	390518	3	390518	3
Institutional Research	390519	3	390519	3
Applied Statistics in Education:				
Advanced Applied Statistics for Research and Evaluation 1	390522	3	390522	3
Advanced Applied Statistics for Research and Evaluation 2	390523	3	390523	3
Nonparametric Statistics	390524	3	390524	3
Computer for Statistical Data Analysis	390525	3	390525	3
Trend and Time Series Analysis	390526	3	390526	3
Factor Analysis	390527	3	390527	3
Logistic Regression Analysis	390528	3	390528	3
Multi-level Analysis	390529	3	390529	3

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Educational Measurement and Evaluation:				
Theory of Measurement and Testing	390532	3	390532	3
Measurement of Achievement	390533	3	390533	3
Development of Psychological Scaling	390534	3	390534	3
Authentic Assessment	390535	3	390535	3
Measurement of Intelligence and Aptitude	390536	3	390536	3
Measurement of Personality and Attitude	390537	3	390537	3
Indicators Development Methodology	390538	3	390538	3
Foundation of Educational Quality Assurance	390539	3	390539	3
Total	≥3	≥9	≥5	≥15

5. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar	390591	1	390591	1
Total	2	4	2	4

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	390571	3	-	-
Thesis 2, Option 1.2	390572	3	-	-
Thesis 3, Option 1.2	390573	6	-	-
Independent Study 1	-	-	390581	2
Independent Study 2	-	-	390582	2
Independent Study 3	-	-	390583	2
Total	3	12	3	6

Master of Education Program in Educational Technology and Communications

Research Focus

- Application Development on Mobile Devices
- Augmented Reality in Education
- Blended Learning
- Computer Education
- E-learning
- Instructional Design and Development on Tablets
- Instructional System Design
- Instructional Technology
- Learning Environment
- M-learning
- Mass Media for Education
- Media Development
- Multimedia Design and Development
- Resource Center

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Core Courses	18	18
- Electives	6	12
Required Non-credit Courses	4	4
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretica Foundation of Education	366511	3	366511	3
Information and Communication Technologies for Education	366515	3	366515	3
Research in Educational Technology and Communications	355510	3	355510	3
Instructional Systems Design and Development	355511	3	355511	3
Advanced Educational Technology and Communications	355530	3	355530	3
Management of Learning Resources	355531	3	355531	3
Total	6	18	6	18

3. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Educational Technology and Communications for Human Resource Development	355532	3	355532	3
Integrating Technology in Learning Management	355533	3	355533	3
Development of Education Innovation	355535	3	355535	3
Computer Graphics for Education	355540	3	355540	3
Multimedia for Education	355541	3	355541	3
Computer Technologies of Instruction	355542	3	355542	3
Applied Computer Programming for Education	355543	3	355543	3
Advanced e-Learning System	355545	3	355545	3
Web-based Learning Management	355547	3	355547	3
Intelligent Computer Assistance Instruction	355548	3	355548	3
Distance Education Technology	355550	3	355550	3
Mass Media for Education	355551	3	355551	3
Intelligent Web-Based Instruction	355553	3	355553	3

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Selected Topics in Educational Technology and Communications	355582	3	355582	3
Regional Studies	366581	1	366581	1
Total	≥2	≥6	≥4	≥12

4. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar	355581	1	355581	1
Total	2	4	2	4

5. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	355594	3	-	-
Thesis 2, Option 1.2	355595	3	-	-
Thesis 3, Option 1.2	355596	6	-	-
Independent Study 1	-	-	355597	2
Independent Study 2	-	-	355598	2
Independent Study 3	-	-	355599	2
Total	3	12	3	6

Master of Education Program in Mathematics

Research Focus

- Educational Management in Mathematics
- Developmental Mathematical Education
- Context-focused Math Education

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Core Course	18	18
- Electives	3	9
Required Non-credit Courses	5	5
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Advanced Analysis	252511	3	252511	3
Linear Algebra and Matrix Theory	252523	3	252523	3
Graph and Combinatoric	252531	3	252531	3
Mathematics Literacy and Curriculum Development	382501	3	382501	3
Research in Mathematics Education	382502	3	382502	3

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Development of Learning Management in Mathematics	382503	3	382503	3
Total	6	18	6	18

3. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
History of Mathematics	252442	3	252442	3
Set Theory and Its Applications	252443	3	252443	3
Advanced Calculus	252512	3	252512	3
Advanced Abstract Algebra 1	252525	3	252525	3
Mathematics in School	252572	3	252572	3
STEM Education	378513	3	378513	3
Organization of Science and Mathematics Camp	378514	3	378514	3
Total	≥1	≥3	≥3	≥9

4. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar 1	382581	1	382581	1
Seminar 2	382582	1	382582	1
Total	3	5	3	5

5. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	382583	6	-	-
Thesis 2, Option 1.2	382584	6	-	-
Independent Study 1	-	-	382591	2
Independent Study 2	-	-	382592	2
Independent Study 3	-	-	382593	2
Total	2	12	3	6

Master of Education Program in Physics

Research Focus

- Physics Education Management
- Holistic Student Development in Physics
- Context-focused Physics Instruction

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Required Course	3	3
- Core Courses	18	18
- Electives	3	9
Required Non-credit Courses	5	5
Thesis	12	-
Independent Study	-	6
Total	36	36

* Minimum credits required

2. Required Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	366511	3	366511	3
Total	1	3	1	3

3. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Advanced Mathematical Physics 1	271511	3	271511	3
Classical Mechanics	271512	3	271512	3
Electromagnetic Theory	271513	3	271513	3
Scientific Literacy and Curriculum Development	378511	3	378511	3
Research in Science Education	378512	3	378512	3
Development of Learning Management in Physics	380501	3	380501	3
Total	6	18	6	18

4. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Nuclear and Particle Physics 1	261553	3	261553	3
Astrophysics	261574	3	261574	3
Advanced Physics Laboratory	261580	3	261580	3
Geophysics and Earth Science	271545	3	271545	3
Renewable Energy Technology	271554	3	271554	3
Thermo-fluid Mechanics	271556	3	271556	3
STEM Education	378513	3	378513	3
Organization of Science and Mathematics Camp	378514	3	378514	3
Total	≥1	≥3	≥3	≥9

5. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar 1	378581	1	378581	1
Seminar 2	378582	1	378582	1
Total	3	5	3	5

6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	378583	6	-	-
Thesis 2, Option 1.2	378584	6	-	-
Independent Study 1	-	-	378591	2
Independent Study 2	-	-	378592	2
Independent Study 3	-	-	378593	2
Total	2	12	3	6