

The National Engineering University

ARASOF-Nasugbu Campus

R. Martinez St., Brgy. Bucana, Nasugbu, Batangas, Philippines 4231

Tel Nos.: +63 917 107 2200

E-mail Address: cte.nasugbu@g.batstate-u.edu.ph | Website Address: http://www.batstate-u.edu.ph

College of Teacher Education

CURRICULUM Bachelor of Secondary Education (BSEd) Major in Sciences

Academic Year 2023- 2024
Reference CMOS: CMO No. 20 s. 2013, CMO No. 75, s. 2017, CMO No. 4 s.2018, CMO No. 39, s. 2021 and CMO No. 40, s. 2021

Curriculum Description

The BSEd is an undergraduate teacher education program designed to equip learners with adequate and relevant competencies to teach in their chosen area of specialization/major at the secondary level. It aims to develop highly motivated and competent teachers specializing in the content and pedagogy for secondary education. After successful completion of all academic requirements of the degree/program, graduates of BSEd should be able to practice the teaching profession at the Secondary Level.

Program Objectives

The BSED program aims to produce secondary teachers who have the ability to:

- 1. demonstrate comprehensive and up-to-date knowledge in a specific field of specialization in the secondary education curriculum by engaging in scholarly and research activities and maximizing opportunities for lifelong learning;
- 2. provide meaningful learning experiences to secondary students by using emerging educational technologies for quality and effective teaching and by creating an environment that encourages positive social interaction, active engagement and self-motivation:
- 3. demonstrate competence in teaching and testing through the design, adoption, and utilization of teaching methods, instructional materials, and assessment tools that are appropriate to the cognitive, affective and psychomotor development of secondary learners;
- 4. observe the code of ethics for professional teachers and internalize the importance of continuous professional development, as well as the need to work cooperatively and harmoniously with all members of the academic community; and
- 5. establish sustainable partnerships and linkages with the professional community and provide assistance to the undeserved, oppressed, illiterate and less skilled members of society through extension activities and community service.

Institutional Graduate Attributes (IGA)

IGA1: Knowledge Competence

Demonstrate a mastery of the fundamental knowledge and skills required for functioning effectively as a professional in the discipline, and an ability to integrate and apply them effectively to practice in the workplace.



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IGA2: Creativity and Innovation

Experiment with new approaches, challenge existing knowledge boundaries and design novel solutions to solve problems.

IGA3: Critical and Systems Thinking

Identify, define, and deal with complex problems pertinent to the future professional practice or daily life through logical, analytical and critical thinking.

IGA4: Communication

Communicate effectively (both orally and in writing) with a wide range of audiences, across a range of professional and personal contexts, in English and Filipino.

IGA5: Lifelong Learning

Identify own learning needs for professional or personal development; demonstrate an eagerness to take up opportunities for learning new things as well as the ability to learn effectively on their own.

IGA6: Leadership, Teamwork, and Interpersonal Skills

Function effectively both as a leader and as a member of a team; motivate and lead a team to work towards goal; work collaboratively with other team members; as well as connect and interact socially and effectively with diverse cultures.

IGA7: Global Outlook

Demonstrate an awareness and understanding of global issues and willingness to work, interact effectively and show sensitivity to cultural diversity.

IGA8: Social and National Responsibility

Demonstrate an awareness of their social and national responsibility; engage in activities that contribute to the betterment of society; and behave ethically and responsibly in social, professional, and work environments.

Program Outcomes

The graduates of the program have the ability to:

- a. demonstrate deep understanding of scientific concepts and principles;
- b. apply scientific inquiry in teaching and learning and;
- c. utilize effective science teaching and assessment methods.



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College of Teacher Education Curriculum Components

| | Courses | Units | Total |
|---------------|--|-------|-----------|
| | A. General Education Courses (CMO No. 20 s. 2013 | | 42 units |
| | and CMO No. 4 s. 2018) | | |
| Fili 101 | Kontekstwalisadong Komunikasyon sa Filipino | 3 | |
| Fili 102 | Filipino sa Iba't Ibang Disiplina | 3 | |
| Fili 103 | Retorika – Masining na Pagpapahayag | 3 | |
| GEd 101 | Understanding the Self | 3 | |
| GEd 102 | Mathematics in the Modern World | 3 | |
| GEd 103 | Life and Works of Rizal | 3 | |
| GEd 104 | The Contemporary World | 3 | |
| GEd 105 | Readings in Philippine History | 3 | |
| GEd 106 | Purposive Communication | 3 | |
| GEd 107 | Ethics | 3 | |
| GEd 108 | Art Appreciation | 3 | |
| GEd 109 | Science, Technology and the Society | 3 | |
| Litr 101 | Sosyedad at Literatura/Panitikang Panlipunan | 3 | |
| Litr 102 | ASEAN Literature | 3 | |
| | B. Professional Education Courses | | 42 units |
| | Foundation/Theories and Concepts | | |
| Ed 101 | The Child and Adolescent Learners and Learning Principles | 3 | |
| Ed 102 | The Teaching Profession | 3 | |
| | The Teacher and the Community, School Culture and Organizational | | |
| Ed 103 | Leadership | 3 | |
| Ed 106 | Foundation of Special and Inclusive Education | 3 | |
| EG 100 | Pedagogical Content Knowledge | | |
| Ed 104 | Assessment in Learning 1 | 3 | |
| Ed 105 | Facilitating Learner-Centered Teaching | 3 | |
| Ed 107 | Technology for Teaching and Learning 1 | 3 | |
| Ed 108 | The Teacher and the School Curriculum | 3 | |
| Ed 109 | Assessment in Learning 2 | 3 | |
| Ed 110 | Building and Enhancing New Literacies Across the Curriculum | 3 | |
| Ed 110 | Experiential Learning | 3 | |
| Ed 111 | Field Study 1 | 3 | |
| Ed 112 | Field Study 2 | 3 | |
| Ed 115 | Teaching Internship | 6 | |
| Ed 113 | C. Major/Specialization Courses | | 73 units |
| SEd 111 | Inorganic Chemistry | 5 | 70 dilits |
| SEd 121 | Analytical Chemistry | 5 | |
| SEd 131 | Earth Science | 3 | |
| SEd 132 | Fluid Mechanics | 3 | |
| SEd 211 | Thermodynamics | 4 | |
| SEd 212 | Organic Chemistry | 5 | |
| SEd 221 | Biochemistry | 3 | |
| SEd 222 | Electricity and Magnetism | 4 | |
| SEd 223 | Genetics | 4 | |
| SEd 311 | Cell and Molecular Biology | 4 | |
| SEd 312 | Waves and Optics | 4 | |
| SEd 313 | Astronomy | 3 | |
| SEd 314 | Meteorology | 3 | |
| SEd 315 | Research in Sciences 1 | 3 | |
| SEd 321 | Technology Application in Science Teaching | 3 | |
| SEd 322 | Modern Physics | 3 | |



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| SEd 323 | Microbiology and Parasitology | 4 | |
|-------------|--|---|----------|
| SEd 324 | Anatomy and Physiology | 4 | |
| SEd 325 | The Teaching of Science (Teaching the Specialized Field) | 3 | |
| SEd 326 | Environmental Science | 3 | |
| | D. Mandated Courses | | 14 units |
| NSTP 111 | National Service Training Program 1 | 3 | |
| NSTP 121 | National Service Training Program 2 | 3 | |
| PATHFit 1 | Movement Competency Training | 2 | |
| PATHFit 2 | Exercise-Based Fitness Activity | 2 | |
| PATHFit 3 | Menu of Courses in Sports, Dance, Martial Arts, Group Exercise, Outdoor and Adventure Activities Menu Offering Traditional and Recreational Games | 2 | |
| PATHFit 4 | Menu of Courses in Sports, Dance, Martial Arts, Group Exercise, Outdoor and Adventure Activities Menu Offering Team Sports (Basketball and Volleyball) | 2 | |
| | E. Institutional Prerogative Courses | | 13 units |
| Ed 113 | Management of Students' Behavior and Wellness | 3 | |
| Ed 114 | Special Topics in Education | 3 | |
| Ed 116 | Comprehensive Examination | 3 | |
| MATH 121 | Precalculus | 3 | |
| SEd 327 | Research in Sciences 2 | 1 | |

| SUMMARY | |
|-----------------------------------|-----------------|
| Courses | Number of Units |
| General Education | 42 |
| Professional Education | 42 |
| Specialization | 73 |
| Elective/Cognates | - |
| Mandated | 14 |
| Institutional Prerogative Courses | 13 |
| TOTAL | 184 |

| | FIRST YEAR | | | | | |
|----------------|---|-------|-----|-----|--------------|--|
| FIRST SEMESTER | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| NSTP 111 | National Service Training Program 1 | 3 | 3 | - | - | |
| PATHFit 1 | Movement Competency Training | 2 | 2 | - | - | |
| GEd 101 | Understanding the Self | 3 | 3 | - | - | |
| GEd 102 | Mathematics in the Modern World | 3 | 3 | - | - | |
| GEd 103 | Life and Works of Rizal | 3 | 3 | - | - | |
| Fili 101 | Kontekstwalisadong Komunikasyon sa Filipino | 3 | 3 | - | - | |
| Ed 101 | The Child and Adolescent Learners and Learning Principles | 3 | 3 | - | - | |
| SEd 111 | Inorganic Chemistry | 5 | 3 | 6 | - | |
| | TOTAL | 25 | 23 | 6 | | |



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| | FIRST YEAR | | | | | |
|-----------------|--|-------|-----|-----|--------------|--|
| SECOND SEMESTER | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| NSTP 121 | National Service Training Program 2 | 3 | 3 | - | NSTP 111 | |
| PATHFit 2 | Exercise-Based Fitness Activity | 2 | 2 | - | PATHFit 1 | |
| GEd 104 | The Contemporary World | 3 | 3 | - | - | |
| GEd 105 | Readings in Philippine History | 3 | 3 | - | - | |
| GEd 106 | Purposive Communication | 3 | 3 | - | - | |
| Litr 101 | Sosyedad at Literatura/Panitikang Panlipunan | 3 | 3 | - | - | |
| Ed 102 | The Teaching Profession | 3 | 3 | - | - | |
| MATH 121 | Precalculus | 3 | 3 | - | - | |
| SEd 121 | Analytical Chemistry | 5 | 3 | 6 | SEd 111 | |
| | TOTAL | 28 | 26 | 6 | | |

| | FIRST YEAR | | | | | |
|---------|-----------------|-------|-----|-----|--------------|--|
| | MIDYEAR TERM | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| SEd 131 | Earth Science | 3 | 3 | - | - | |
| SEd 132 | Fluid Mechanics | 3 | 3 | - | MATH 121 | |
| | TOTAL | 6 | 6 | • | | |

| | SECOND YEAR FIRST SEMESTER | | | | | |
|-----------|---|-------|-----|-----|-----------------|--|
| | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| PATHFit 3 | Menu of Courses in Sports, Dance, Martial Arts, Group Exercise, Outdoor and Adventure Activities Menu Offering Traditional and Recreational Games | 2 | 2 | - | PATHFit 1 and 2 | |
| GEd 107 | Ethics | 3 | 3 | - | - | |
| GEd 108 | Art Appreciation | 3 | 3 | - | - | |
| Ed 103 | The Teacher and the Community, School Culture and Organizational Leadership | 3 | 3 | - | Ed 102 | |
| Ed 104 | Assessment in Learning 1 | 3 | 3 | - | - | |
| Ed 105 | Facilitating Learner-Centered Teaching | 3 | 3 | - | Ed 101 | |
| SEd 211 | Thermodynamics | 4 | 3 | 3 | MATH 121 | |
| SEd 212 | Organic Chemistry | 5 | 3 | 6 | SEd 111 | |
| | TOTAL | 26 | 23 | 9 | | |

| | SECOND YEAR | | | | | | |
|-----------|---|-------|-----|-----|-----------------|--|--|
| | SECOND SEMESTER | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | | |
| PATHFit 4 | Menu of Courses in Sports, Dance, Martial Arts, Group Exercise, Outdoor and Adventure Activities Menu Offering Team Sports (Basketball and Volleyball) | 2 | 2 | - | PATHFit 1 and 2 | | |
| GEd 109 | Science, Technology and the Society | 3 | 3 | - | - | | |
| Fili 102 | Filipino sa Iba't Ibang Disiplina | 3 | 3 | - | - | | |
| Ed 106 | Foundation on Special and Inclusive Education | 3 | 3 | - | - | | |



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| Ed 107 | Technology for Teaching and Learning 1 | 3 | 3 | - | - |
|---------|--|----|----|---|----------|
| Ed 108 | The Teacher and the School Curriculum | 3 | 3 | - | 1 |
| SEd 221 | Biochemistry | 3 | 3 | - | SEd 212 |
| SEd 222 | Electricity and Magnetism | 4 | 3 | 3 | MATH 121 |
| SEd 223 | Genetics | 4 | 3 | 3 | - |
| | TOTAL | 28 | 26 | 6 | |

| | THIRD YEAR | | | | | |
|----------------|---|-------|-----|-----|--------------|--|
| FIRST SEMESTER | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| Fili 103 | Retorika – Masining na Pagpapahayag | 3 | 3 | - | Fili 101,102 | |
| Ed 109 | Assessment in Learning 2 | 3 | 3 | - | Ed 104 | |
| Ed 110 | Building and Enhancing New Literacies Across the Curriculum | 3 | 3 | - | - | |
| SEd 311 | Cell and Molecular Biology | 4 | 3 | 3 | SEd 221,223 | |
| SEd 312 | Waves and Optics | 4 | 3 | 3 | SEd 222 | |
| SEd 313 | Astronomy | 3 | 3 | - | | |
| SEd 314 | Meteorology | 3 | 3 | - | SEd 131 | |
| SEd 315 | Research in Sciences 1 | 3 | 3 | - | - | |
| | TOTAL | 26 | 24 | 6 | | |

| | THIRD YEAR | | | | | |
|-----------------|--|-------|-----|-----|--------------|--|
| SECOND SEMESTER | | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| Litr 102 | ASEAN Literature | 3 | 3 | - | _ | |
| SEd 321 | Technology Application in Science Teaching | 3 | 3 | - | Ed 107 | |
| SEd 322 | Modern Physics | 3 | 3 | - | SEd 222 | |
| SEd 323 | Microbiology and Parasitology | 4 | 3 | 3 | - | |
| SEd 324 | Anatomy and Physiology | 4 | 3 | 3 | - | |
| SEd 325 | The Teaching of Science (Teaching the Specialized Field) | 3 | 3 | - | Ed 105 | |
| SEd 326 | Environmental Science | 3 | 3 | - | - | |
| SEd 327 | Research in Sciences 2 | 1 | 1 | - | SEd 315 | |
| | TOTAL 24 22 6 | | | | | |

| | FOURTH YEAR FIRST SEMESTER | | | | | |
|--------|---|-------|-----|-----|-------------------------------------|--|
| Code | Course Title | Units | Lec | Lab | Prerequisite | |
| Ed 111 | Field Study 1 | 3 | 3 | - | Ed 101 to 110 All SEd Courses | |
| Ed 112 | Field Study 2 | 3 | 3 | - | Ed 101 to 110 All SEd Courses | |
| Ed 113 | Management of Students' Behavior and Wellness | 3 | 3 | - | - | |
| Ed 114 | Special Topics in Education | 3 | 3 | - | - | |
| | TOTAL | 12 | 12 | - | | |



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| FOURTH YEAR | | | | | |
|-----------------|---------------------------|-------|-----|-----|-------------------------|
| SECOND SEMESTER | | | | | |
| Code | Course Title | Units | Lec | Lab | Prerequisite |
| Ed 115 | Teaching Internship | 6 | 6 | - | Ed 111, 112 |
| Ed 116 | Comprehensive Examination | 3 | 3 | _ | All Academic Courses |
| TOTAL | | 9 | 9 | - | |

^{*}Corequisite course