Theoretical Mechanics

Statics, kinematics, and dynamics of systems of particles. Application of vector calculus to mechanics; Lagrangian and Hamiltonian formulations. Corequisite: PHYS377 or 477. Prerequisite: PHYS253 (recommended) or PHYS153; MATH173.

PHYS420 (2-4)

Advanced Topics in_____

Biophysics, astrophysics, high-energy physics, or other areas of current interest. Prerequisite: PHYS253 or 411. Repeatable to 8 credits.

PHYS430 Alt g (4)

Thermodynamics

Systematic introduction to thermodynamics, kinetic theory, and statistical mechanics (classical and quantum). Prerequisites: PHYS253 (recommended) or 153; MATH173. Corequisite: PHYS377 or 477.

PHYS431, 432 Alt-432 g (4,4)

Electricity and Magnetism

A treatment of electromagnetic phenomena in terms of potentials and vector fields. PHYS431 develops Maxwell's equations with descriptions of electrostatics and magnetostatics as solutions to Laplace's and Poisson's equations. PHYS432 addresses electromagnetic radiation in media, reflection and refraction, and the fields of waveguides and antennae. Prerequisite: PHYS253 or 411. Corequisite: PHYS377 or 477.

PHYS440 Alt g (4) Relativity

A study of the special theory of relativity and an introduction to the general theory of relativity as formulated by Einstein. Prerequisite: PHYS253 or 153; MATH173. Corequisite: PHYS377 or 477.

PHYS450 Alt g (4)

Atomic Physics

An introduction to wave mechanics as applied to experimental and theoretical atomic physics. Corequisite: PHYS377 or 477. Prerequisite: PHYS253 or 411.

PHYS460 Alt g (4)

Solid State Physics

A study of crystallography, x-ray diffraction, properties of crystalline and amorphous solids, band theory of solids, and lattice dynamics. Corequisite: PHYS377 or 477. Prerequisite: PHYS411.

PHYS470 Alt g (4)

Nuclear Physics and Particle Physics

A study of the subatomic phenomena: *nuclear* and particle properties, forces, and structure, as well as decay and reaction mechanisms in the context of currently accepted models. Prerequisite: PHYS450 or 480. Corequisite: PHYS377 or 477.

PHYS477 \$ g(1)

Advanced Physics Laboratory II

Acquaints students with important phenomena, equipment, and technique of modern experimental physics. Students taking a full-year sequence of upper division physics courses required to enroll for at least 2 quarters. Repeatable to 3 credits.

Quantum Mechanics

The mechanics of small-scale physical phenomena as developed by Heisenberg, Schroedinger, and Dirac. Treatment of square well, step, and harmonic oscillator potentials; uncertainty relations; and symmetries to include angular momenta. Prerequisite: PHYS411. Corequisite: PHYS377 or 477.

PHYS495 (1-3)

Independent Study/Research

Individually directed study or research in selected fields of physics. Repeatable to 9 credits. A minimum of 4 hours work per week and a written paper required for each credit earned. Approval of the instructor required.

PHYS520 (2-4)

Concepts in Physics

Study of the important concepts in physics in one of the following areas: mechanics, relativity, electromagnetism, optics, modern physics, elementary particles, and statistical physics. Particular area to be offered determined by demand as negotiated with the department chair. Repeatable to 16 credits. Prerequisite: Science teaching experience.

PHYS530 (2-4)

Topics in Teaching Physics

Each time the course is offered, one of the following areas is discussed:

- Principles of physics and effective approaches for teaching them.
- The physics lab, its purposes, administrative and safety procedures, essential equipment, seminal experiments, data analysis, lab journal, and reports.

Repeatable to 8 credits.

PHYS540 (2,4)

Topics in Physics

Study of one of the traditional areas of graduate physics such as electromagnetic theory, analytical mechanics, solid state physics, astrophysics, mathematical physics, and theoretical physics. Students must complete assigned readings and problems. Satisfactory performance on a written or oral comprehensive exam required. Repeatable to 8 credits.

PHYS648 (1-4) Workshop

PHYS690 (1-3)

Independent Study/Research

Independent problems of research in selected fields of physics. Open to qualified students who show ability and initiative. Repeatable to 9 credits. A minimum of 4 hours work per week expected for each credit earned. Prerequisite: Consent of department chair.

RELIGION AND BIBLICAL LANGUAGES

Griggs Hall, Room 108 (616) 471-3177 religion@andrews.edu http://www.andrews.edu/RELG

Faculty

Keith E. Mattingly, Chair Samuele Bacchiocchi Lael O. Caesar A. Josef Greig Mark B. Regazzi Ranko Stefanovic Woodrow W. Whidden II

Academic Programs	Credits
BA: Theology	
Pastoral Ministry	88-91
Secondary Education	54-57
Youth Ministry	93-96
BA: Religion	45-48
BA Distance Degree: Religion	52
Minor in Religion	30
Minor in Biblical Languages	31
Minor in Missions	30

Programs

BA: Theology

Choose from one of the following:

Pastoral Ministry Emphasis 88-91

RELB100, 210, 214, 304, 305, 374, 375, 425, 434, 435; RELH314, 315; HIST404; RELP200, 230, 321, 322, 323, 441, 442; RELT210, 250, 340, 426

Required Cognates: BIBL201, 202, 203, 301, 302, 303, 421, 422. Competence in Greek equivalent to the level represented by BIBL303 is required. Minimum grades of C- must be earned in HIST404 and in all RELB, RELH, RELP, and RELT courses to apply to major requirements.

Youth Ministry Emphasis 93-96

RELB100, 210, 214, 304, 305, 425; three courses from RELB374, 375, 434, 435; HIST404; RELH314, 315; RELP200, 230, 321, 322, 323, 335, 441, 442; RELT340, 426; two courses from BHSC220, PSYC204, 251, 252, 319, 455; two courses from SOCI120, 345, 415, 430; ANTH200; FMST454, 456

Required Cognates: BIBL201, 202, 203, 301, 302, 303, 421. Competence in Greek equivalent to the level represented by BIBL303 is required. Minimum grades of C- must be earned in HIST404 and in all RELB, RELH, RELP, and RELT courses to apply to major requirements.

Secondary-Education Empha5it-57

PHYS480 Alt g(4)

425, 434 or 435; RELH314 or 315; HIST404; RELP200, 230, 321; RELT208, 250, 340. **Denominational certification requirements:** Deduct from above programs Hebrew I and II and add the following credits: EDCI486; EDPC302, 478; EDTE215, 354, 417, 459, 465, 468, and 492. Students must consult with the certification clerk in the School of Education.

Required cognates: BIBL201, 202, 203, 301,

RELB100, 210, 214, 304 or 305, 374 or 375.

Competence in Greek equivalent to the level represented by BIBL303 is required. Minimum grades of C must be earned in HIST404 and in all RELB, RELH, RELP, and RELT courses to apply to major requirements.

BA: Religion—45-48

302, 303, 421, 422.

RELB100, 210, 214, 304, 305, 374 or 375. 425, 434 or 435; RELP200; RELT250,340, 426. Those electing Greek to meet the foreign language requirement must take Greek I and Greek II. Exceptions for transfer students must be cleared with the department chair.

BA: Religion—52 Otr (35 Sem)

(Distance Education)

The distance education degree requires a minimum of 190 quarter (128 semester) credits including all general education, major, and graduation requirements. The required courses are RELB210, 225, 304, 305, 374 or 375, 434; RELT208, 235, 260, 290, 340; HIST404. Those electing Greek to meet the foreign language requirement must take BIBL204V

AA: Personal Ministries—45 atr (30 sem)

(Distance Education)

This degree prepares students for personal outreach ministries, including Bible instruction, offers an opportunity to study a broad spectrum of courses covering both Old and New Testament. The courses listed below are required for distance education students only.

Requirements: RELB210, 225, 304, 305, 374 or 375, 434; RELT290, 320, 340; HIST404. See course descriptions.

Students may earn only one General Studies associate degree.

Minor in Religion—30

12 upper-division credits, and 15 credits from Biblical Studies (RELB courses). The remaining credits may be taken in Biblical Studies, General Religion, and Theology courses, or RELP230 or 340.

Minor in Biblical

and 6 credits in BIBL495.

Minor in Missions—30

ANTH200: RELG360: RELP230, 235, 325, 340, one or two courses from FDNT469,

HLED115, 420; one or two courses from EDTE215, BSAD265, 450; ENGL465; one course from GEOG260, COMM436, FMST350.

Note: Students planning to enter the Seventh-day Adventist Theological Seminary should select a major in theology. A religion major may be selected but must be supplemented with additional courses. For entrance requirements, see the Theological Seminary section of this bulletin.

Courses

(Credits)

See inside back cover for symbol code.

BIBLICAL LANGUAGES

BIBL201, 202, 203 (3,3,3)Greek I

Elements of grammar and syntax of the Koine Greek of the New Testament, including vocabulary, translation, and reading from the First Epistle of John and the Gospel of John. To be taken in 3 successive quarters. Weekly lab.

BIBL 204

V (6.5 qtr; 4 sem)

Elementary Greek I

Distance education course. See content above. BIBL204V and 205V must be taken successively. BIBL205 V (6.5 qtr; 4 sem)

Elementary Greek II

Distance education course. A continuing study of the elements of the language of the New Testament in the context of a good working vocabulary and carefully selected readings. Prerequisite: BIBL204V or equivalent. BIBL 204V and 205V together are equivalent to BIBL 201, 202, 203.

BIBL301, 302, 303 (3,3,3)Greek II

Reading of selected portions of the New Testament and instruction in intermediate grammar and syntax. To be taken in 3 successive quarters. Prerequisite: Greek I. A lab may be required.

BIBL304 V (6.5 qtr; 4 sem)

Intermediate Greek I

Distance education—intermediate course in Greek to provide a fair working knowledge of the New Testament in the original language. Prerequisite: BIBL205V or equivalent.

V (6.5 qtr; 4 sem)

Intermediate Greek II

Distance education course. Continues to refine the student's working knowledge of the New Testament in the original language. Prerequisite: BIBL304V or equivalent. BIBL 304V and 305V together are equivalent to BIBL 301,302,303.

BIBL421 Hehrew I

Fundamentals of Biblical Hebrew including a practical vocabulary, an understanding of the grammatical structure of the language, and practice in translation. Provides ministers with a practical study tool. A lab may be required.

BIBL422 Hebrew II

Development of reading ability in narrative portions of the Hebrew Bible. Prerequisite: Hebrew I. A lab may be required.

BIBL495 (1-4)

Independent Study

Provides a variety of topics, such as basic and advanced exegesis and the history and development of the biblical text. Must be taken twice for a total of 6 credits by students minoring in Biblical Languages.

BIBLICAL STUDIES

RELB100 **(4)**

God and Human Life

How God confronts human beings—includes the process of revelation, principles of interpreting Scripture and similarly inspired material, the nature of God and His expectations for humans, and the evaluation of these concepts as presented in Scripture and classic literature of various religions.

RELB100 V (4.5 qtr; 3 sem)

God and Human Life

Distance education—see content above.

RELB180-50 (2-4)

Honors in Religion (topic specified)

Readings and seminar observations on various topics. Area of study announced in advance. Repeatable as topics vary.

RELB210 **(4)**

Jesus in His Time and Ours

The mission, message, and meaning of Jesus for His day and for ours. What aspects of the Christian story has captured so much of history's attention? Examines the connection between Christ's first advent and His second. Prerequisite: RELB100.

V (4.5 qtr; 3 sem)

Jesus in His Time and Ours

Distance education—see content above.

(4)

Law and Writings of the Old Testament An introduction to The Pentateuch and the "Writings" (historical books, Psalms, and Wisdom literature).

RELB225 **(4)**

Doctrines of the Adventist Faith

Defines and clarifies the biblical doctrines of the Seventh-day Adventist faith, distinguishing them within the background of the Judeo-Christian tradition. Prerequisite: RELB100.

RELB225 V (4.5 qtr; 3 sem)

Doctrines of the Adventist Faith

Distance education—see content above.

(4)

Studies in Daniel

Study of the background and content of the book with emphasis upon the interpretation of the symbolic prophecies.

RELB304 V (4.5 qtr; 3 sem)

Studies in Daniel

Distance education—see content above.

RELB305 (4)

Studies in Revelation

Study of both the content and construction of Revelation. Special attention given to interpreting the apocalyptic imagery and symbols. RELB304 advised prior to RELB305.

RELB305 V (4.5 qtr; 3 sem)

Studies in Revelation

Distance education—see content above.

The Prophets of Israel—Early Prophets

Includes the history of prophecy, the pre-writing prophetic figures, and the books of the writing

prophets of the 8th and early 7th century B.C. Re-

RELB374

Alt (4)

Topics in Religion

department.

Designed to add flexibility to the department offerings and to meet diverse student needs. Repeatable as topics vary. Consult the class

RELB374 V (4.5 qtr; 3 sem)

search paper may be required.

The Prophets of Israel—Early Prophets Distance education—see content above.

RELB375 Alt (4)

The Prophets of Israel—Later Prophets Includes the books of the writing prophets of the 7th century B.C. to the end of the prophetic canon. Research paper may be required.

RELB375 V (4.5 qtr; 3 sem)

The Prophets of Israel—Later Prophets Distance education—see content above.

RELB380-50 (2-4)

Honors in Religion (topic specified)

RELB424 Alt (4)

Doctrines of the Christian Church I Survey of fundamental Christian teachings regarding revelation/inspiration, creation, Trinity, the human nature, and salvation. Designed to clarify the meaning of Christian doctrine and to do so at a level appropriate for theology and religion majors.

(4)

Doctrines of the Christian Church II Survey of the basic Seventh-day Adventist perspective regarding the nature of the Church, the Sabbath, and eschatology. Designed to clarify the meaning and relevance of these doctrines and to do so at a level appropriate for theology and religion majors.

RELB434 Alt (4)

Acts and Epistles I

A brief introduction to the principles of New Testament interpretation followed by a study of Acts and the early Pauline Epistles. An exegesis paper may be required.

RELB434 V (4.5 qtr; 3 sem)

Acts and Epistles I

Distance education—see content above.

RELB435 Alt (4)

Acts and Epistles II

Studies in the interpretation and message of the later Pauline Epistles, from Romans to the pastoral epistles, followed by an introduction to Hebrews and the General Epistles. An exegesis paper may be required.

GENERAL RELIGION

RELG160 (1-4)

Topics in Religion

Designed to add flexibility to the department offerings and to meet diverse student needs. Repeatable as topics vary. Consult the class schedule for the current topic.

RELG248 (1-4)Workshop

Provides flexibility for the occasional workshop where it is appropriate to offer religion credit. Workshop requirements must be approved by the RELG360 (1-4)

schedule for the current topic.

RELG360 V (4.5 qtr; 3 sem)

Topics in Religion: World Religions

Distance education course. Surveys the major religious traditions of the world. Study includes an overview of origins, major philosophical and theological underpinnings, typical aspects of worship and ethics, and major social, cultural, and political influences. Study is done from a consciously Christian framework.

RELG496

Special Projects in Religion

By special permission of the Department of Religion and Biblical Languages.

RELIGIOUS HISTORY

Alt (4)

History of the Christian Church I From its origins to the Protestant Reformation. Prerequisite: HIST115 or permission of instructor. Not applicable to the General Education requirements in

RELH314 V (4.5 qtr; 3 sem)

History of the Christian Church I Distance education—see content above.

religion nor a major or minor in religion.

Alt (4) History of the Christian Church II

From the time of the Protestant Reformation, including the rise of modern denominations, world-wide mission expansion, and the ecumenical movement. Prerequisite: HIST116 or permission of instructor. Not applicable to the General Education requirements in religion.

RELH315 V (4.5 qtr; 3 sem)

History of the Christian Church II Distance education—see content above.

APPLIED RELIGION

RELP200

Pastoral Practicum

A weekly seminar giving instruction in the many aspects of ministering in small churches. Required of all theology and religion majors.

RELP230

Christian Witnessing/Public Evangelism Acquaintance with the dynamics of Christian witnessing in the neighborhood, at work, and in the friend-to-friend approach of personal Bible study. Christ's example of witnessing is highlighted. Weekly lab may be required, or may be fulfilled by assisting in an evangelistic crusade.

RELP235

Christianity in a World Context

An introduction to the status and role of Christianity and Mission worldwide. Includes a brief history of Christian Mission, current facts about mission needs, Christian and mission relationships to world religions, political ideologies, national development, and non-Western cultures.

RELP321 (3)

Homiletics I - Introduction to Preaching Lays the foundation for biblical sermon construction and delivery. Includes supervised field preaching. A lab may be required.

RELP322 (3)

Homiletics II - Advanced Biblical Preaching Addresses the crucial nature of expository preaching, stressing proper principles of interpreting and applying the text to practical life. Includes supervised field preaching. A lab may be required.

(3)

Homiletics III - Evangelistic and Special **Events Preaching**

Addresses the needs of special preaching events such as evangelistic crusades, weddings, funerals, and dedications. Includes supervised field preaching. A lab may be required.

RELP325 (3-9)

Preparation for Mission Service

An orientation of mission candidates to contemporary mission. A maximum of 3 credits is allowed for student missionaries and 6-9 credits for appointees to the Mission Institute. A maximum of 4 credits is applicable to the General Education religion requirement.

RELP335 **(4)**

Foundations of Youth Ministry

Designed for the youth specialist who wishes to work as a youth pastor, youth director, academy Bible teacher, or in any other youth-training capacity.

RELP340 (3)

Strategies for Service

Creates the vision that all Christians can serve in mission. Shows how to witness in cross-cultural situations and introduces students to ways they can perform mission in any occupation. Alternate forms of mission like tent-maker ministries, non-resident missionaries, urban ministry, and work with refugees and foreign students are addressed

RELP400 **(4)**

Capstone Seminar

A team-taught, interdisciplinary capstone seminar for seniors addressing theoretical and practical spiritual issues in specified areas. Students choose from the area that most closely relates to their major: humanities, physical/natural science, social science, health professions.

RELP441, 442 Alt (3,3) Pastoral Ministry I, II

A study of the minister as leader of worship, as nurturing pastor, as administrator of the church, and as evangelist.

THEOLOGY

RELT208 (2)

The Gift of Prophecy

Study of the life, ministry, and writings of Ellen G. White and the gifts of the Holy Spirit. Not applicable toward the theology concentration or a religion major. A student cannot earn credits in both RELT208 and RELT426.

RELT208

V (3 qtr; 2 sem)

The Gift of Prophecy

Distance education—see content above.

RELT210 Alt (4)

Biblical Backgrounds

Archaeological, cultural, geographical, and historical backgrounds of the Bible with special emphasis on the Hebrew patriarchs and the Exodus-Conquest events.

RELT216 **(2)**

Workshop in Prayer

Study of faith, private prayer, family worship, conducting prayer groups, public prayer, and prayer as a ministry. Not applicable toward the theology concentration or major in religion.

RELT235 V (4.5 qtr; 3 sem)

Principles of Bible Instruction

Distance education course to help students develop necessary skills and expertise vital for success in Bible instruction.

RELT250

Personal Spirituality and Faith

Biblical perspective on the act and the life of faith. How does a person begin and nurture a spiritual and devotional life? Evaluates the role of spiritual nurture in various settings. Prerequisite: RELB100.

RELT260 V (4.5 qtr; 3 sem)

Church Leadership and Management

Distance education course. A study of good church administration, combining pastoral leadership with church management. Addresses the four-dimensional role of the pastor—person, administrator, church leader, and priest.

RELT290

Introduction to Pastoral Counseling

Distance education course. Understanding that pastoring is by definition counseling. Introduces both the actual skill of counseling and the acquisition of knowledge and insights based on reading and experience.

RELT300 (4)

Studies in the Sanctuary

Sanctuary/temple symbols, services, observance days, and major festivals examined. Attention given to the interpretation of the sanctuary by the apocalyptic books, Daniel and Revelation.

RELT320 V (4.5 qtr; 3 sem)

Personal Evangelism

Distance education course. The dynamics of personal evangelism with primary emphasis on instruction rather than exhortation. A clear biblical perspective on the priesthood of all believers; practical counseling for leading someone to Christ; a strategy for visitation; a Bible study methodology; and techniques in getting decisions.

RELT340 **(4)**

Religion and Ethics in Modern Society

Considers how Judeo-Christianity confronts the moral complexities of today's society. Are there universal absolutes or are all values relative? Designed to help adults articulate what molded their value system and what should help shape it. Prerequisite: RELB100.

RELT340

V (4.5 qtr; 3 sem)

Religion and Ethics in Modern Society Distance education—see content above.

RELT348

The Christian and the Environment

A religious, philosophical, and activist approach to environmental issues, analyzing ideological causes of environmental degradation, and offering philosophical and theological perspectives which inform and sensitize the student to the Christian's environmental responsibility. Contains a service component.

RELT390

Christian Business Ethics

Examines ethical models to help students develop a basis for their own value decisions. The developed model is then used to examine ethical issues which confront people in daily affairs of business life. A student cannot earn credits in both RELT340 and RELT390. Open only to upper division BBA students.

RELT426 Alt (4)

Ministry and Message of Ellen G. White

Study of the ministry of prophets with an emphasis on the ministry and the writings of Ellen G. White. Students cannot earn credits in both RELT208 and RELT426.

SOCIAL **WORK**

Nethery Hall, Room 08 (616) 471-6196 FAX: (616) 471-3686 sowk@andrews.edu http://www.andrews.edu/SOWK/

Faculty

Sharon W. Pittman, Chair, Graduate Program Director Curtis J. VanderWaal,

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Fred L. Washington Elizabeth D. Watson

Jan F. Wrenn Michael A. Wright

Academic Programs	Credits
BSW Bachelor of Social Work MSW Master of Social Work	118
Interpersonal Practice	
Administration and Developmen • Two-year regular program	86
 One-year advanced-placemen program 	<i>t</i> 56

The mission of the Department of Social Work is to prepare individuals for excellence during a lifetime of professional service and Christian compassion in action.

Undergraduate Program

Bachelor of Social Work—82

The Bachelor of Social Work (BSW) is a professional degree which allows the graduate to enter the field of social work at the first level of practice or to have the opportunity to be admitted to a Master of Social Work (MSW) program with advanced standing. The program is accredited by the Council on Social Work Education through the year 2003. The foundation curriculum consists of five areas of emphasis that are required in every BSW program: Human Behavior and the Social Environment, Social Welfare Policy, Research, Professional Practice, and Practicum. Throughout the curriculum, the program integrates concepts of professional ethics and values, critical thinking, and sensitivity to diversity, oppression, social and economic justice, and populations-at-risk.

Admission Criteria

Students qualify for entry into the BSW program when they

- Earn a minimum GPA of 2.00.
- Receive grades of C- or better in all required program prerequisite and cognate courses.
- Complete SOWK100, 225; PSYC101, 440; SOCI119; BIOL112; SOWK255. Maintain