

# Diversification Requirements

(19 credits)

*GEOG 101, 101L, 122 are now GEO 101, 101L, 122.*

*ZOOL 141, 141L, 142, 142L are now PHYL 141, 141L, 142, 142L.*

*Appropriate course substitutions for the AA degree may be made with the prior written approval of both the appropriate Division Chair and the Dean of Arts and Sciences.*

## Arts, Humanities, & Literature 6 cr.

Students must take 6 credits from two separate sub-categories (DA, DH, DL). Each course must be taken from a different discipline.

### Diversification Arts (DA)

#### ART 101: Introduction to the Visual Arts

This course is a general introduction to the visual arts including media, techniques, and history. It is designed to offer an appreciation of the creative processes involved in the visual arts. This course reviews two- and three-dimensional art forms, methods and media; examines the visual elements and principal of design; and surveys art styles from the prehistoric to the 20th Century. It is oriented to students who have not been exposed to the formal study of these disciplines.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of CR or Placement in ENG 100 or higher or Equivalent

#### ART 104D: Introduction to Printmaking: Screenprinting

Basic screen printing techniques for fabric and paper. Artistic composition, screen processing, stencil making using photographic and hand-manipulated imagery, and printing will be covered in lectures and demonstrations. Supplies are to be provided by the student.

Credits: 3

Recommended Prep: ART 101

#### ART 105B: Introduction to Ceramics (Handbuilding)

Studio experience in ceramic hand building techniques. Course includes both lectures and projects.

Credits: 3

#### ART 105C: Introduction to Ceramics (Wheel Throwing)

Studio experience in ceramic wheel throwing techniques. Course includes both lectures and projects.

Credits: 3

Recommended Prep: ART 105B

#### ART 107D: Introduction to Digital Photography

This course is an introduction to digital photography. Students will learn basic camera techniques and how to process their

images in digital format. This course will provide the student with basic aesthetic principles of visual art as well as an extensive range of practical photographic techniques needed for entry into the photographic workplace and/or for personal artistic expression. It provides experience in traditional and contemporary photographic techniques for art, multimedia, and television.

Prerequisites: Placement in ENG 100 or Instructor approval

Recommended Prep: ART 112 and BUS 101, BUSN 121, or ICS 100

## ART 112: Intro to Digital Arts

Introduction to digital technology and its applications to the production of visual art. Emphasis is on the relationship between art, design, and technology. Students develop the capacity for critical thinking and problem solving through project based learning.

Credits: 3

Recommended Prep: BUS 101, ICS 101

## ART 113: Introduction to Drawing

This beginning drawing course introduces general drawing and compositional principles. Elements of design will be addressed in depth and a variety of materials and techniques will be used. No prior experience required.

Credits: 3

Recommended Prep: ART 101

## ART 113D: Introduction to Digital Drawing

Art 113D is an introductory course for students who are interested in developing communication skills in the area of two-dimensional, vector drawing as it relates to computer based imaging. Fundamental drawing concepts, creative problem solving techniques and basic design principles will be covered. Material covered in this course may be useful to any area of study where visual enhancement may apply. This includes ICS and business.

Credits: 3

Recommended Prep: ART 113, ICS 100

## ART 115D: Introduction to 2D Digital Design

A foundation course for students who are interested in developing communication skills in the area of two-dimensional design as it relates to digital imaging. Fundamental design concepts, creative problem solving techniques and design principles and elements will be covered.

Credits: 3

Recommended Prep: ART 112, ART 113D

## ART 116: Introduction to Three-Dimensional Composition

A beginning sculpture course which covers techniques, materials and concepts of form/space relation and 3-dimensional design through a variety of projects such as clay modeling, carving, construction and metal casting. Supplies provided by students.

Credits: 3

## ART 123: Introduction to Painting

Introduction to the theory and practice of painting. Instruction on the use of painting materials and techniques. This course will cover art historical movements and show parallels in contemporary art practices as well. Designed to serve art majors and non-art majors.

Credits: 3

Prerequisites: ART 113 with a grade of C or better or Instructor consent

Recommended Prep: ART 101

## ART 202: Digital Imaging

Studio experience in intermediate-level digital imaging concepts and techniques including image capture, manipulation, image creation, and output in various media using industry standard imaging editing software.

Credits: 3

Prerequisites: ART 112 and ART 107D with a grade of C or better or Instructor approval

Recommended Prep: Basic computer, Internet and keyboarding skills.

## ART 213: Intermediate Drawing

A continuation and development of skills and ideas introduced in ART 113. Contemporary concepts and techniques will be explored and applied. Students will engage in art historical disco

Credits: 3

Prerequisites: ART 113 with a grade of C or better or Instructor consent

Recommended Prep: ART 101

## ART 243: Intermediate Ceramics, Hand Building

Sculptural and vessel concepts in clay using hand-building techniques, emphasizing the development of constructive skills and an understanding of form, surface, and firing possibilities. Repeatable

Credits: 3

Prerequisites: ART 105B or equivalent experience and instructor consent

## ART 244: Intermediate Ceramics, Wheel Throwing II

Vessel and sculptural concepts in clay using wheel-throwing techniques, emphasizing the development of construction skills and an understanding of form, surface, and firing possibilities. Repeatable

Credits: 3

Prerequisites: ART 105C or equivalent and instructor consent

## DMED 150: Film Analysis & Storytelling

Students will discover the techniques of effective storytelling in film and video through analysis of film transitions, shot types and angles, montage, mise-en-scène, blocking, and camera movement. Story structure, character construction and development, will be examined. A history of film will also be explored.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent or Instructor consent

Program: [Digital Media Production](#)

## DNCE 108: Hatha Yoga: Beginning

Practice, theory, and history of the yoga tradition with the emphasis on the practice of hatha yoga postures. Sanskrit terminology is incorporated throughout the course. Students must supply their own exercise clothes. May be repeated once for additional credit.

Credits: 3

## DNCE 121: Beginning Ballet I

Students will be introduced to basic vocabulary and movement techniques that identify ballet as a unique performance art. Each class period, students will engage in physical practice to gain mastery in the fundamentals of ballet technique. Students will be required to purchase appropriate footwear. Formerly DNCE 197B

Credits: 3

## DNCE 122: Beginning Ballet II

This course provides a continuing course in the art and performance of Ballet at a beginning level. Students will develop their understanding of ballet vocabulary and mastery of ballet techniques through continued physical practice in combinations of increasing complexity.

Credits: 3

Prerequisites: DNCE 121 with a grade of C or better or instructor consent

Recommended Prep: Dance experience, Ballet experience

## DNCE 131: Modern Dance I

An introduction to modern dance technical skills and creative processes for the beginner. No dance experience is necessary. Students learn body alignment, physical conditioning, dance actions, exercises, and combinations. A variety of music is used. Dance clothes are to be provided by the student. May be repeated once for additional credit.

Credits: 3

## DNCE 132: Modern Dance II

Continuation of the study of Modern Dance I. Technical skills and processes, with an emphasis on developing personal responsibility and discipline. Students further develop body alignment, physical conditioning, dance steps, actions, exercises, and combinations. A variety of music is used. Dance clothes are to be provided by the student. May be repeated once for additional credit.

Credits: 3

Prerequisites: DNCE 131 with a grade of C or better or equivalent or the consent of instructor or prior dance training in any technical dance form.

## DNCE 180: Dance Production

The creation of a dance, choreographed by faculty and rehearsed and performed by the students at the Leeward Dance Festival Concert on mainstage in the Leeward Theatre. This concert brings together dancers and choreographers from various Dance Programs in high schools, UH Mānoa and independent dance companies.

Credits: 3

Prerequisites: Consent of instructor.

Co-Requisites: Depending on the instructor's evaluation of the student's technical skills, the student may be required to concurrently enroll in DNCE 131.

Recommended Prep: Previous dance experience preferred.

## HWST 128: Introduction to Hula Kahiko

An introduction to hula and oli (chant) covering the fundamentals of traditional dance and practices, language, and regional traditions.

Credits: 3

Prerequisites: Placement in ENG 100 or Instructor consent

Program: [Hawaiian Studies](#)

## MUS 103: Guitar Ensemble 1

This course offers an opportunity to study and play guitar ensemble literature from the Renaissance to the present: duets, trios, quartets and larger groups. May be repeated for additional credits.

Credits: 2

Recommended Prep: MUS 121D

## MUS 104: Jazz Ensemble I

Performance of music for large Jazz Ensemble. Jazz Ensemble 1 offers students an opportunity to study and play both standard and experimental selections from the genre. Emphasis is placed on originality with regard to compositions and arrangements. Students are expected to be proficient performers on their instrument. Students should have some reading skills. Acceptance into the ensemble is by audition. May be repeated for additional credit. (45 lecture/lab hours)

Credits: 2

Prerequisites: Acceptance into the ensemble is by audition or consent of the instructor.

## MUS 108: Music Fundamentals

Covers basic concepts of reading, notating and aurally recognizing music in Western culture. Notation of rhythms, pitch, diatonic scales, key and time signatures, the recognition of intervals and use of chords shall be presented. Emphasis will be on music reading, notation, and aural dictation.

Credits: 3

## MUS 112: Hawaiian Ensemble 1

Hawaiian Ensemble 1 focuses on basic vocal and instrumental collaboration, offering students an opportunity to study a wide range of Hawaiian repertoire. The group focus is on creating vocal and instrumental arrangements from both contemporary and traditional Hawaiian folk literature, with an emphasis on originality with regard to arranging. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Recommended Prep: MUS 108, MUS 121B, MUS 121D, MUS 121Z

## MUS 113: Hawaiian Ensemble 2

Hawaiian Ensemble 2 offers students an opportunity to study and play increasingly difficult Hawaiian repertoire. The group focuses on creating vocal and instrumental arrangements from both contemporary and traditional Hawaiian literature, with an emphasis on originality with regard to compositions and arrangements. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 112 with a grade of C or better or consent of instructor.

## MUS 114: College Chorus

Students will cultivate ensemble singing skills by learning and singing choral works. May be repeated for additional credit(s). Concurrent enrollment in Music 121B, 122B or 221B is strongly recommended.

Credits: 2

Recommended Prep: MUS 108, MUS 121B

## MUS 121B: Voice 1

MUS 121B is the first of a three-semester sequence in learning solo singing skills. This course will provide the student with the opportunity to explore their natural singing voice and find their vocal identity. Concepts and skills introduced in the class include

basic techniques in vocal production: alignment, breathing, vowels, resonance, and energy. Concurrent enrollment in MUS 108 is strongly recommended.

## MUS 121C: Piano 1

An introduction to keyboard skills to include exploring and developing finger technique and elementary note reading skills as it relates to the piano keyboard. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

## MUS 121D: Guitar 1

Introductory classroom instruction in the art of classical guitar playing: solos and ensembles, song accompaniment, technique, music reading, interpretation, stage deportment and music literature.

Credits: 2

## MUS 121E: Pop/Folk Guitar 1

Introductory classroom instruction in folk and popular styles of guitar playing: technique, music reading, chord symbols, song accompaniment patterns, stage deportment, and ensemble arranging.

Credits: 2

## MUS 121F: Slack Key Guitar 1

This course is intended for students with little or no background in slack key guitar and provides a basic introduction to Hawaiian style slack key guitar playing. Taro Patch (open G) and C tunings are introduced, with an emphasis on slack key technique, standard reading of tablature and an understanding of basic rhythm structure. Ability to read music is not required. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

## MUS 121Z: 'Ukulele 1

Introductory classroom instruction in Hawaiian 'ukulele playing: technique, music reading, chord symbols, song accompaniment, stage deportment and ensembles.

Credits: 2

## MUS 122B: Voice 2

Continuation of MUS 121B to develop vocal technique by learning to improve and control the coordination of the singing mechanism. Listening skills will be stressed and supplemented by the study of the International Phonetic Alphabet. Basic musicianship skills will be actively applied in the learning of songs. This class provides students an opportunity to investigate and integrate motion and emotion in a song. Concurrent enrollment in MUS 108 is strongly recommended.

Credits: 2

Prerequisites: MUS 121B with a grade of C or better or consent of instructor.

## MUS 122C: Piano 2

MUS 122C is a continuation of MUS 121C. This course emphasizes the art of piano playing in a solo and an ensemble setting, technique and music literature for piano. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 121C with a grade of C or better or consent of instructor.

## MUS 122D: Guitar 2

A continuation of the skills and concepts in MUS 121D, Guitar 1: solo and ensembles, technique, interpretation, stage deportment and music literature for guitar.

Credits: 2

Prerequisites: MUS 121D with a grade of C or better or Instructor approval

## MUS 122Z: 'Ukulele 2

A continuation of MUS 121Z, 'Ukulele 1, with classroom instruction in Hawaiian and popular styles of 'ukulele playing: technique, music reading, chord symbols, song accompaniment patterns, improvisation, stage deportment and ensembles.

Credits: 2

Prerequisites: MUS 121Z with a grade of C or better or Instructor approval

## MUS 201: Vocal Ensemble

This course offers an opportunity to study and sing advanced choir literature from the Renaissance to the present. Audition or consent of instructor required. May be repeated for additional credit(s). See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: Audition or consent of instructor required.

Recommended Prep: Previous choral experience and MUS 121B.

## MUS 203G: Guitar Ensemble 2

This course offers an opportunity to study and play advanced guitar ensemble literature from the Renaissance to the present: duets, trios, quartets and larger groups. May be repeated for additional credits. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed.

Credits: 2

Prerequisites: MUS 103 with a grade of C or better or Instructor approval

## MUS 221B: Voice 3

Advanced voice class is a continuation of MUS 122B. This course is designed for experienced voice students. Class work includes master-class and lectures to aid students in their development and understanding of the art and science of singing. Students are encouraged to refine their vocal technique and to identify the elements that contribute to developing as an effective artist. May be repeated for additional credit. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 122B with a grade of C or better

Recommended Prep: MUS 108

## MUS 221H: Guitar 3

A continuation of MUS 122D, Guitar 2. Intermediate and advanced skills and concepts involving solo and ensemble literature, technique, interpretation and stage deportment are addressed. May be repeated for additional credits. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 122D with a grade of C or better or consent of instructor.

## MUS 232G: Applied Music: Classical Guitar

Private instruction in the art of classical guitar playing for intended music majors. May be repeated for additional credits. See the catalog section on repetition of courses in order to determine number of repeat allowed.

Credits: 1

Prerequisites: Audition and instructor approval

Co-Requisites: MUS 203G

Recommended Prep: MUS 122D

## MUS 253: Elementary Music in Action

This course examines the fundamental elements of music: time, pitch, performance media, musical expression and form, and how these elements interact within the musical experience. These elements are explored and applied through singing and the playing of percussion instruments, ukulele, autoharp, piano, and other classroom instruments; listening; movement; notation of music; performing from notation; and analysis of music both aurally and from musical scores. The creative uses of musical elements as a means of understanding music is an integral component of this course. (Required of UH Mānoa elementary education majors.)

Credits: 3

## MUS 281: Music Theory I

A survey of elementary concepts in music theory: melodic, rhythmic, and harmonic materials; musical structure and form; composition and analysis. To be taken concurrently with MUS 283. (45 lecture hours)

Credits: 3

Prerequisites: MUS 108 with a grade of C or better or consent of instructor

Co-Requisites: MUS 283.

## MUS 282: Music Theory II

A continuation of Music 281. Fundamental concepts in music theory are examined in detail: melodic, rhythmic, and harmonic materials; musical structure and form; composition and analysis. To be taken concurrently with MUS 284. (45 lecture hours)

Credits: 3

Prerequisites: MUS 281 with C or better or consent of instructor

Co-Requisites: MUS 284.

## MUS 283: Aural Training 1

A course in the development of aural perception through the techniques of music dictation, sight singing, and rhythm exercises. (45 lecture/lab hours)

Credits: 1

Prerequisites: MUS 108 with a grade of C or better or consent of instructor.

## MUS 284: Aural Training 2

A continuation of MUS 283. A course in the development of aural perception through the techniques of music dictation, sight singing, and rhythm exercises. (45 lecture/lab hours)

Credits: 1

Prerequisites: MUS 283 with a grade of C or better or consent of instructor.

## THEA 101: Introduction to Drama and Theatre



Performance traditions of Africa, Asia, Australia, Europe, North America, and the Pacific from the 5th century B.C. to the present. Analysis of political, religious, and technological conditions of theatre.

Credits: 3

## THEA 170: Introduction to Children's Theatre

This course examines the dramatic structure, audience needs, directing, and acting techniques that are employed in the production of theatre for children. Students will use movement, vocal exercises, improvisation, script writing, scripted material, and puppet and shadow theatre to increase knowledge of and comfort with theatre for children. Students will perform a short children's theatre piece for a young audience as part of their final for the class.

Credits: 3

## THEA 220: Beginning Voice and Movement

This course is an introduction to the basic fundamentals of voice and movement for the actor. Students will concentrate on breathing and relaxation exercises, neutral mask and other approaches to increase self-awareness and potential for self-expression. The work in this class is intended as preparatory for a wide range of acting/movement/vocal techniques.

Credits: 3

Recommended Prep: There is no academic preparation necessary. For the class, students should wear appropriate clothing. Students will be lying down, stretching, rolling, and jumping to the best of their ability.

## THEA 221: Acting I

An introduction to acting with individual and group exercises in movement for the stage, improvisation, monologue preparation and performance.

Credits: 3

## THEA 222: Beginning Acting II

Advanced work in improvisation and character development. Vocal and physical training is emphasized, particularly on scene work. Actors are expected to work together to present scenes to the class. This course is repeatable once for credit.

Credits: 3

Prerequisites: THEA 221 with a grade of C or better or equivalent

## THEA 230: Storytelling and Solo Performance

THEA 230 is a practical performance-oriented course emphasizing the history, forms and art of storytelling and solo performance. Students create and rehearse individual and group stories/monologues, as well as perform in a solo piece. The course examines the dramatic structure, audience needs, directing, and acting techniques that are unique to the craft of a solo performer or storyteller.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor consent

Recommended Prep: THEA 101, THEA 221

## THEA 240: Introduction to Stagecraft

An introduction to stagecraft and the technical aspects of theatre, including basic theory and fundamentals of lighting, set construction, sound, costuming, makeup and stage management. Class time will be divided between lectures and laboratory work in the theatre.

Credits: 3

## THEA 260: Dramatic Production

Practical introduction to the process of converting a script into a performance. Students are required to participate in at least two aspects of a public performance. This course may be repeated twice for credit (three times maximum).

Credits: 3

Prerequisites: THEA 221 with a grade of C or better, or consent of the instructor.

## THEA 262: Local Style Theatre

A practical performance-oriented theatre course that presents the local experience in a theatrical production. The actual production activities the student undertakes will vary with the production requirements of the play being produced. This course may be repeated for credit twice (three times maximum.)

Credits: 3

Prerequisites: THEA 221 with a grade of C or better, or equivalent; or instructor approval.

## THEA 280: Beginning Playwriting

The course introduces structure, guidelines, and format of the monologue and short play; beginning with the conception of an idea, followed by effective outlining techniques, subsequent drafts, and the final product in a polished monologue and short play.

Credits: 3

Prerequisites: ENG 100 or equivalent with a grade of C or higher; or approval from instructor.

## DA (Primarily Theory)

### ART 101: Introduction to the Visual Arts

This course is a general introduction to the visual arts including media, techniques, and history. It is designed to offer an appreciation of the creative processes involved in the visual arts. This course reviews two- and three-dimensional art forms, methods and media; examines the visual elements and principal of design; and surveys art styles from the prehistoric to the 20th Century. It is oriented to students who have not been exposed to the formal study of these disciplines.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of CR or Placement in ENG 100 or higher or Equivalent

### MUS 108: Music Fundamentals

Covers basic concepts of reading, notating and aurally recognizing music in Western culture. Notation of rhythms, pitch, diatonic scales, key and time signatures, the recognition of intervals and use of chords shall be presented. Emphasis will be on music reading, notation, and aural dictation.

Credits: 3

### MUS 253: Elementary Music in Action

This course examines the fundamental elements of music: time, pitch, performance media, musical expression and form, and how these elements interact within the musical experience. These elements are explored and applied through singing and the playing of percussion instruments, ukulele, autoharp, piano, and other classroom instruments; listening; movement; notation of music; performing from notation; and analysis of music both aurally and from musical scores. The creative uses of musical elements as a means of understanding music is an integral component of this course. (Required of UH Mānoa elementary education majors.)

Credits: 3

## MUS 281: Music Theory I

A survey of elementary concepts in music theory: melodic, rhythmic, and harmonic materials; musical structure and form; composition and analysis. To be taken concurrently with MUS 283. (45 lecture hours)

Credits: 3

Prerequisites: MUS 108 with a grade of C or better or consent of instructor

Co-Requisites: MUS 283.

## MUS 282: Music Theory II

A continuation of Music 281. Fundamental concepts in music theory are examined in detail: melodic, rhythmic, and harmonic materials; musical structure and form; composition and analysis. To be taken concurrently with MUS 284. (45 lecture hours)

Credits: 3

Prerequisites: MUS 281 with C or better or consent of instructor

Co-Requisites: MUS 284.

## MUS 283: Aural Training 1

A course in the development of aural perception through the techniques of music dictation, sight singing, and rhythm exercises. (45 lecture/lab hours)

Credits: 1

Prerequisites: MUS 108 with a grade of C or better or consent of instructor.

## MUS 284: Aural Training 2

A continuation of MUS 283. A course in the development of aural perception through the techniques of music dictation, sight singing, and rhythm exercises. (45 lecture/lab hours)

Credits: 1

Prerequisites: MUS 283 with a grade of C or better or consent of instructor.

## THEA 101: Introduction to Drama and Theatre

Performance traditions of Africa, Asia, Australia, Europe, North America, and the Pacific from the 5th century B.C. to the present. Analysis of political, religious, and technological conditions of theatre.

Credits: 3

## DA (Primarily Practice)

### ART 104D: Introduction to Printmaking: Screenprinting

Basic screen printing techniques for fabric and paper. Artistic composition, screen processing, stencil making using photographic and hand-manipulated imagery, and printing will be covered in lectures and demonstrations. Supplies are to be provided by the student.

Credits: 3

Recommended Prep: ART 101

### ART 105B: Introduction to Ceramics (Handbuilding)

Studio experience in ceramic hand building techniques. Course includes both lectures and projects.

Credits: 3

## ART 105C: Introduction to Ceramics (Wheel Throwing)

Studio experience in ceramic wheel throwing techniques. Course includes both lectures and projects.

Credits: 3

Recommended Prep: ART 105B

## ART 107D: Introduction to Digital Photography

This course is an introduction to digital photography. Students will learn basic camera techniques and how to process their images in digital format. This course will provide the student with basic aesthetic principles of visual art as well as an extensive range of practical photographic techniques needed for entry into the photographic workplace and/or for personal artistic expression. It provides experience in traditional and contemporary photographic techniques for art, multimedia, and television.

Credits: 3

Prerequisites: Placement in ENG 100 or Instructor approval

Recommended Prep: ART 112 and BUS 101, BUSN 121, or ICS 100

## ART 112: Intro to Digital Arts

Introduction to digital technology and its applications to the production of visual art. Emphasis is on the relationship between art, design, and technology. Students develop the capacity for critical thinking and problem solving through project based learning.

Credits: 3

Recommended Prep: BUS 101, ICS 101

## ART 113: Introduction to Drawing

This beginning drawing course introduces general drawing and compositional principles. Elements of design will be addressed in depth and a variety of materials and techniques will be used. No prior experience required.

Credits: 3

Recommended Prep: ART 101

## ART 113D: Introduction to Digital Drawing

Art 113D is an introductory course for students who are interested in developing communication skills in the area of two-dimensional, vector drawing as it relates to computer based imaging. Fundamental drawing concepts, creative problem solving techniques and basic design principles will be covered. Material covered in this course may be useful to any area of study where visual enhancement may apply. This includes ICS and business.

Credits: 3

Recommended Prep: ART 113, ICS 100

## ART 115D: Introduction to 2D Digital Design

A foundation course for students who are interested in developing communication skills in the area of two-dimensional design as it relates to digital imaging. Fundamental design concepts, creative problem solving techniques and design principles and elements will be covered.

Credits: 3

Recommended Prep: ART 112, ART 113D

## ART 116: Introduction to Three-Dimensional Composition

A beginning sculpture course which covers techniques, materials and concepts of form/space relation and 3-dimensional design through a variety of projects such as clay modeling, carving, construction and metal casting. Supplies provided by students.

Credits: 3

## ART 123: Introduction to Painting

Introduction to the theory and practice of painting. Instruction on the use of painting materials and techniques. This course will cover art historical movements and show parallels in contemporary art practices as well. Designed to serve art majors and non-art majors.

Credits: 3

Prerequisites: ART 113 with a grade of C or better or Instructor consent

Recommended Prep: ART 101

## ART 202: Digital Imaging

Studio experience in intermediate-level digital imaging concepts and techniques including image capture, manipulation, image creation, and output in various media using industry standard imaging editing software.

Credits: 3

Prerequisites: ART 112 and ART 107D with a grade of C or better or Instructor approval

Recommended Prep: Basic computer, Internet and keyboarding skills.

## ART 213: Intermediate Drawing

A continuation and development of skills and ideas introduced in ART 113. Contemporary concepts and techniques will be explored and applied. Students will engage in art historical disco

Credits: 3

Prerequisites: ART 113 with a grade of C or better or Instructor consent

Recommended Prep: ART 101

## ART 243: Intermediate Ceramics, Hand Building

Sculptural and vessel concepts in clay using hand-building techniques, emphasizing the development of constructive skills and an understanding of form, surface, and firing possibilities. Repeatable

Credits: 3

Prerequisites: ART 105B or equivalent experience and instructor consent

## ART 244: Intermediate Ceramics, Wheel Throwing II

Vessel and sculptural concepts in clay using wheel-throwing techniques, emphasizing the development of construction skills and an understanding of form, surface, and firing possibilities. Repeatable

Credits: 3

Prerequisites: ART 105C or equivalent and instructor consent

## DMED 150: Film Analysis & Storytelling

Students will discover the techniques of effective storytelling in film and video through analysis of film transitions, shot types and angles, montage, mise-en-scène, blocking, and camera movement. Story structure, character construction and development,

will be examined. A history of film will also be explored.

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent or Instructor consent

Program: [Digital Media Production](#)

## DNCE 108: Hatha Yoga: Beginning

Practice, theory, and history of the yoga tradition with the emphasis on the practice of hatha yoga postures. Sanskrit terminology is incorporated throughout the course. Students must supply their own exercise clothes. May be repeated once for additional credit.

Credits: 3

## DNCE 121: Beginning Ballet I

Students will be introduced to basic vocabulary and movement techniques that identify ballet as a unique performance art. Each class period, students will engage in physical practice to gain mastery in the fundamentals of ballet technique. Students will be required to purchase appropriate footwear. Formerly DNCE 197B

Credits: 3

## DNCE 122: Beginning Ballet II

This course provides a continuing course in the art and performance of Ballet at a beginning level. Students will develop their understanding of ballet vocabulary and mastery of ballet techniques through continued physical practice in combinations of increasing complexity.

Credits: 3

Prerequisites: DNCE 121 with a grade of C or better or instructor consent

Recommended Prep: Dance experience, Ballet experience

## DNCE 131: Modern Dance I

An introduction to modern dance technical skills and creative processes for the beginner. No dance experience is necessary. Students learn body alignment, physical conditioning, dance actions, exercises, and combinations. A variety of music is used. Dance clothes are to be provided by the student. May be repeated once for additional credit.

Credits: 3

## DNCE 132: Modern Dance II

Continuation of the study of Modern Dance I. Technical skills and processes, with an emphasis on developing personal responsibility and discipline. Students further develop body alignment, physical conditioning, dance steps, actions, exercises, and combinations. A variety of music is used. Dance clothes are to be provided by the student. May be repeated once for additional credit.

Credits: 3

Prerequisites: DNCE 131 with a grade of C or better or equivalent or the consent of instructor or prior dance training in any technical dance form.

## DNCE 180: Dance Production

The creation of a dance, choreographed by faculty and rehearsed and performed by the students at the Leeward Dance Festival Concert on mainstage in the Leeward Theatre. This concert brings together dancers and choreographers from various Dance Programs in high schools, UH Mānoa and independent dance companies.

Credits: 3

Prerequisites: Consent of instructor.

Co-Requisites: Depending on the instructor's evaluation of the student's technical skills, the student may be required to concurrently enroll in DNCE 131.

Recommended Prep: Previous dance experience preferred.

## HWST 128: Introduction to Hula Kahiko

An introduction to hula and oli (chant) covering the fundamentals of traditional dance and practices, language, and regional traditions.

Credits: 3

Prerequisites: Placement in ENG 100 or Instructor consent

Program: [Hawaiian Studies](#)

## MUS 103: Guitar Ensemble 1

This course offers an opportunity to study and play guitar ensemble literature from the Renaissance to the present: duets, trios, quartets and larger groups. May be repeated for additional credits.

Credits: 2

Recommended Prep: MUS 121D

## MUS 104: Jazz Ensemble I

Performance of music for large Jazz Ensemble. Jazz Ensemble 1 offers students an opportunity to study and play both standard and experimental selections from the genre. Emphasis is placed on originality with regard to compositions and arrangements. Students are expected to be proficient performers on their instrument. Students should have some reading skills. Acceptance into the ensemble is by audition. May be repeated for additional credit. (45 lecture/lab hours)

Credits: 2

Prerequisites: Acceptance into the ensemble is by audition or consent of the instructor.

## MUS 112: Hawaiian Ensemble 1

Hawaiian Ensemble 1 focuses on basic vocal and instrumental collaboration, offering students an opportunity to study a wide range of Hawaiian repertoire. The group focus is on creating vocal and instrumental arrangements from both contemporary and traditional Hawaiian folk literature, with an emphasis on originality with regard to arranging. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Recommended Prep: MUS 108, MUS 121B, MUS 121D, MUS 121Z

## MUS 113: Hawaiian Ensemble 2

Hawaiian Ensemble 2 offers students an opportunity to study and play increasingly difficult Hawaiian repertoire. The group focuses on creating vocal and instrumental arrangements from both contemporary and traditional Hawaiian literature, with an emphasis on originality with regard to compositions and arrangements. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 112 with a grade of C or better or consent of instructor.

## MUS 114: College Chorus

Students will cultivate ensemble singing skills by learning and singing choral works. May be repeated for additional credit(s). Concurrent enrollment in Music 121B, 122B or 221B is strongly recommended.

Credits: 2

Recommended Prep: MUS 108, MUS 121B

## MUS 121B: Voice 1

MUS 121B is the first of a three-semester sequence in learning solo singing skills. This course will provide the student with the opportunity to explore their natural singing voice and find their vocal identity. Concepts and skills introduced in the class include basic techniques in vocal production: alignment, breathing, vowels, resonance, and energy. Concurrent enrollment in MUS 108 is strongly recommended.

Credits: 2

## MUS 121C: Piano 1

An introduction to keyboard skills to include exploring and developing finger technique and elementary note reading skills as it relates to the piano keyboard. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

## MUS 121D: Guitar 1

Introductory classroom instruction in the art of classical guitar playing: solos and ensembles, song accompaniment, technique, music reading, interpretation, stage deportment and music literature.

Credits: 2

## MUS 121E: Pop/Folk Guitar 1

Introductory classroom instruction in folk and popular styles of guitar playing: technique, music reading, chord symbols, song accompaniment patterns, stage deportment, and ensemble arranging.

Credits: 2

## MUS 121F: Slack Key Guitar 1

This course is intended for students with little or no background in slack key guitar and provides a basic introduction to Hawaiian style slack key guitar playing. Taro Patch (open G) and C tunings are introduced, with an emphasis on slack key technique, standard reading of tablature and an understanding of basic rhythm structure. Ability to read music is not required. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

## MUS 121Z: 'Ukulele 1

Introductory classroom instruction in Hawaiian 'ukulele playing: technique, music reading, chord symbols, song accompaniment, stage deportment and ensembles.

Credits: 2

## MUS 122B: Voice 2

Continuation of MUS 121B to develop vocal technique by learning to improve and control the coordination of the singing mechanism. Listening skills will be stressed and supplemented by the study of the International Phonetic Alphabet. Basic musicianship skills will be actively applied in the learning of songs. This class provides students an opportunity to investigate and integrate motion and emotion in a song. Concurrent enrollment in MUS 108 is strongly recommended.

Credits: 2

Prerequisites: MUS 121B with a grade of C or better or consent of instructor.



## MUS 122C: Piano 2

MUS 122C is a continuation of MUS 121C. This course emphasizes the art of piano playing in a solo and an ensemble setting, technique and music literature for piano. May be repeated for additional credits. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 121C with a grade of C or better or consent of instructor.

## MUS 122D: Guitar 2

A continuation of the skills and concepts in MUS 121D, Guitar 1: solo and ensembles, technique, interpretation, stage deportment and music literature for guitar.

Credits: 2

Prerequisites: MUS 121D with a grade of C or better or Instructor approval

## MUS 122Z: 'Ukulele 2

A continuation of MUS 121Z, 'Ukulele 1, with classroom instruction in Hawaiian and popular styles of 'ukulele playing: technique, music reading, chord symbols, song accompaniment patterns, improvisation, stage deportment and ensembles.

Credits: 2

Prerequisites: MUS 121Z with a grade of C or better or Instructor approval

## MUS 201: Vocal Ensemble

This course offers an opportunity to study and sing advanced choir literature from the Renaissance to the present. Audition or consent of instructor required. May be repeated for additional credit(s). See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: Audition or consent of instructor required.

Recommended Prep: Previous choral experience and MUS 121B.

## MUS 203G: Guitar Ensemble 2

This course offers an opportunity to study and play advanced guitar ensemble literature from the Renaissance to the present: duets, trios, quartets and larger groups. May be repeated for additional credits. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed.

Credits: 2

Prerequisites: MUS 103 with a grade of C or better or Instructor approval

## MUS 221B: Voice 3

Advanced voice class is a continuation of MUS 122B. This course is designed for experienced voice students. Class work includes master-class and lectures to aid students in their development and understanding of the art and science of singing. Students are encouraged to refine their vocal technique and to identify the elements that contribute to developing as an effective artist. May be repeated for additional credit. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 122B with a grade of C or better

Recommended Prep: MUS 108

## MUS 221H: Guitar 3

A continuation of MUS 122D, Guitar 2. Intermediate and advanced skills and concepts involving solo and ensemble literature, technique, interpretation and stage deportment are addressed. May be repeated for additional credits. See the section on repetition of courses in the course catalog in order to determine the number of repeats allowed. (45 lecture/lab hours)

Credits: 2

Prerequisites: MUS 122D with a grade of C or better or consent of instructor.

## MUS 232G: Applied Music: Classical Guitar

Private instruction in the art of classical guitar playing for intended music majors. May be repeated for additional credits. See the catalog section on repetition of courses in order to determine number of repeat allowed.

Credits: 1

Prerequisites: Audition and instructor approval

Co-Requisites: MUS 203G

Recommended Prep: MUS 122D

## THEA 170: Introduction to Children's Theatre

This course examines the dramatic structure, audience needs, directing, and acting techniques that are employed in the production of theatre for children. Students will use movement, vocal exercises, improvisation, script writing, scripted material, and puppet and shadow theatre to increase knowledge of and comfort with theatre for children. Students will perform a short children's theatre piece for a young audience as part of their final for the class.

Credits: 3

## THEA 220: Beginning Voice and Movement

This course is an introduction to the basic fundamentals of voice and movement for the actor. Students will concentrate on breathing and relaxation exercises, neutral mask and other approaches to increase self-awareness and potential for self-expression. The work in this class is intended as preparatory for a wide range of acting/movement/vocal techniques.

Credits: 3

Recommended Prep: There is no academic preparation necessary. For the class, students should wear appropriate clothing.

Students will be lying down, stretching, rolling, and jumping to the best of their ability.

## THEA 221: Acting I

An introduction to acting with individual and group exercises in movement for the stage, improvisation, monologue preparation and performance.

Credits: 3

## THEA 222: Beginning Acting II

Advanced work in improvisation and character development. Vocal and physical training is emphasized, particularly on scene work. Actors are expected to work together to present scenes to the class. This course is repeatable once for credit.

Credits: 3

Prerequisites: THEA 221 with a grade of C or better or equivalent

## THEA 230: Storytelling and Solo Performance

THEA 230 is a practical performance-oriented course emphasizing the history, forms and art of storytelling and solo performance. Students create and rehearse individual and group stories/monologues, as well as perform in a solo piece. The course examines the dramatic structure, audience needs, directing, and acting techniques that are unique to the craft of a solo

Credits: 3 or storyteller.

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor consent

Recommended Prep: THEA 101, THEA 221

## THEA 240: Introduction to Stagecraft

An introduction to stagecraft and the technical aspects of theatre, including basic theory and fundamentals of lighting, set construction, sound, costuming, makeup and stage management. Class time will be divided between lectures and laboratory work in the theatre.

Credits: 3

## THEA 260: Dramatic Production

Practical introduction to the process of converting a script into a performance. Students are required to participate in at least two aspects of a public performance. This course may be repeated twice for credit (three times maximum).

Credits: 3

Prerequisites: THEA 221 with a grade of C or better, or consent of the instructor.

## THEA 262: Local Style Theatre

A practical performance-oriented theatre course that presents the local experience in a theatrical production. The actual production activities the student undertakes will vary with the production requirements of the play being produced. This course may be repeated for credit twice (three times maximum.)

Credits: 3

Prerequisites: THEA 221 with a grade of C or better, or equivalent; or instructor approval.

## THEA 280: Beginning Playwriting

The course introduces structure, guidelines, and format of the monologue and short play; beginning with the conception of an idea, followed by effective outlining techniques, subsequent drafts, and the final product in a polished monologue and short play.

Credits: 3

Prerequisites: ENG 100 or equivalent with a grade of C or higher; or approval from instructor.

## Diversification Literatures (DL)

### ENG 270: Introduction to Literature: Literary History

Study of significant works of selected historical periods.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or Instructor consent

Recommended Prep: Experience in using computers for writing.

### ENG 271: Introduction to Literature: Genre

Study of significant works of selected genres.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or Instructor consent

Recommended Prep: Experience in using computers for writing.

## ENG 272: Introduction to Literature: Culture and Literature

Study of significant works of selected cultures and cultural formations.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or Instructor consent

Recommended Prep: Experience in using computers for writing.

## ENG 272H: Introduction to Literature: Culture and Literature

Study of significant works of selected cultures and cultural formations. Fulfills the colloquium requirement for the Leeward CC Honors Program.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or Instructor consent

Recommended Prep: Experience in using computers for writing. Acceptance into the Leeward CC Honors Program.

## HWST 270: Hawaiian Mythology

An introduction to Hawaiian mythology and mo'olelo as a basis of understanding (or a reflection) of Hawaiian culture, values, metaphor and Worldviews. This course will investigate and analyze oral and written Hawaiian literary sources and the roles of akua, 'aumakua, kupua and kânaka.

Credits: 3

Prerequisites: HWST 107 with a grade of C or better.

Program: [Hawaiian Studies](#)

## HWST 276: Introduction to Hawaiian Literature in English

A survey of Hawaiian literature in English translation is studied in the context of the Hawaiian culture. Its characteristics, forms, relation to other Hawaiian arts, history and society are examined. Hawaiian literature can include but is not limited to prose narration, poetry, and orature. (Formerly HWST 261)

Credits: 3

Prerequisites: ENG 100 with a grade of C or better

Program: [Hawaiian Studies](#)

Recommended Prep: HWST 107

## Diversification Humanities (DH)

### AMST 201: American Experience: Institutions and Movements

Interdisciplinary course that examines diversity and changes in American values and institutions -- political, economic, legal, and social.

Credits: 3

Recommended Prep: ENG 22, ENG 24

### AMST 202: American Experience: Culture and the Arts

Interdisciplinary course that examines diversity and changes in American values and institutions - literature, film, visual arts, and architecture.

Credits: 3

Recommended Prep: ENG 22, ENG 24

## ASAN 203: Philippine Culture: a Survey of Philippine Cultural History

A study of the history, politics, society, culture and art forms of the Philippines from pre-history to the present. Selected topics are approached through the integrated use of the art forms, e.g., music, literature, theater arts, etc., as ways of experiencing and understanding cultural and political issues.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent.

## ASAN 204: Filipinos in the United States: The History and Culture of Filipinos in the U.S.

A study of the history of the Filipino as traveller and immigrant; historical and contemporary experiences in the U.S.; ethnic identity as expressed and represented in their cultural practices and art forms.

Credits: 3

Prerequisites: ENG 24 with a grade of C or better or equivalent

Recommended Prep: ENG 22

## HIST 231: Modern European Civilizations I

Political evolution and major economic, social, and cultural development of European states, 1500-1800 CE.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor approval

Recommended Prep: HIST 152, Basic computer and internet skills

## HIST 232: Modern European Civilizations II

Continuation of HIST 231; Major political, social, and economic, and cultural trends in Europe from the 1800s to the present.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor approval

Recommended Prep: HIST 152

## HIST 241: Civilizations of Asia I

A survey of Asian history with emphasis upon Japan, China, Korea, South Asia, and Southeast Asia from their earliest development to approximately 1500 CE.

Credits: 3

Recommended Prep: HIST 151

## HIST 242: Civilizations of Asia II

HIST 242 is a continuation of HIST 241. Survey of East, South, and Southeast Asian history from 1500 CE to the present.

Credits: 3

Recommended Prep: HIST 152

## HIST 251: Islamic Civilization

History 251 focuses on the history and culture of the Muslim World from the rise of Islam in the seventh century to about 1500.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor approval  
Recommended Prep: HIST 151, REL 150

## HIST 260: Twentieth Century World History

This course covers the major individuals and political, economic, social, and cultural events of the world during the twentieth century. Emphasis will be placed on global relationships, conflict, and changing patterns of interaction among cultures and peoples in an era of near-constant change.

Credits: 3

Prerequisites: ENG 22, ESL 22 or ENG 24 with a grade of CR or higher or consent of instructor.  
Recommended Prep: HIST 152

## HIST 281: Introduction to American History I

A survey of the development of the American continent beginning with the arrival of Europeans and proceeding through the periods of exploration, colonization, revolution and expansion up to the Civil War and Reconstruction. Emphasis is placed on the social and political evolution of the United States.

Credits: 3

Prerequisites: ENG 24 with a grade of CR or better or equivalent or consent of the instructor.  
Recommended Prep: HIST 152.

## HIST 282: Introduction to American History II

A survey of the continuing development of the United States from the end of Reconstruction to the present time. Emphasizes the social and political structure and analyzes the major historical forces, movements and cultural developments which have brought the United States to its present position.

Credits: 3

Prerequisites: ENG 24 with a grade of CR or better or equivalent or consent of the instructor.  
Recommended Prep: HIST 152.

## HIST 284: History of the Hawaiian Islands

This course is a survey of the history of the Hawaiian Islands from Polynesian origins to contemporary multi-cultural society. The course focuses on social, economic, and political developments through history, further examining the Hawaiian responses to these developments.

Credits: 3

Prerequisites: ENG 100 or equivalent with a grade of C or better or Instructor approval  
Recommended Prep: Basic computer, internet, and keyboarding skills.

## HIST 288: History of the Pacific Islands

HIST 288 is an introduction to the history of Oceania from early settlement of the region to modern times.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent or Instructor approval  
Recommended Prep: HIST 151, HIST 152, PACS 108

## HWST 107: Hawai'i: Center of the Pacific

An introduction to the unique aspects of the native point of view in Hawai'i and the larger Pacific with regards to origins, language, religion, land, art, history and modern issues.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or placement in ENG 100 or instructor consent.

Program: [Hawaiian Studies](#)

## ICS 170: Ethics for the Digital World

An overview of ethical issues and regulations in the digital world related to networked communications, intellectual property, privacy, computer and network security, computer reliability, and workplace issues.

Credits: 3

Program: [Information & Computer Science](#)

## IS 250H: Leadership Development

Focus is on developing a personal leadership style and philosophy through study of basic leadership and group dynamics theory, and through analysis of the moral and ethical responsibilities of leadership. Course integrates readings and discussions of traditional leadership theories with readings from the humanities (classic works of literature and contemporary multi-cultural writings), media presentations (especially film), and experiential learning exercises. Students accepted in the Honors Program may meet their Colloquium requirement with this course.

Credits: 3

Prerequisites: Acceptance in the Honors Program. Prerequisite: ENG 100 or equivalent with a grade of C or better.

## LING 102: Introduction to the Study of Language

An investigation of the nature and workings of language: its composition (sound system, grammatical structure, and lexicon); representation (oral and written); and divergence (relationships between languages of the world). General linguistic principles applicable to all languages will be covered.

Credits: 3

Prerequisites: Placement in ENG 100

Recommended Prep: Experience in using computers for writing.

## MUS 106: Introduction to Music Literature

Covers the history and development of classical music. Emphasis is on the music of the western hemisphere from the listener's point of view.

Credits: 3

Recommended Prep: Basic computer, internet, and keyboarding skills.

## PHIL 100: Introduction to Philosophy

An investigation of major problems and concepts of philosophy including, the relationships between appearance and reality, mind and body, matter and mind, the conflict between freedom and determinism, the nature, sources and conditions of knowledge, the nature of morality and the existence of God.

Credits: 3

## PHIL 101: Introduction to Philosophy: Morals and Society

Philosophical attempts to evaluate conduct, character, and social practices. This course examines ethical views and practice through the lens of reason. Philosophy has a long history of proposing, examining, discussing and criticizing moral action on both the individual and social level. This course will also explore what pathways have been explicated and explored to guide us in the endeavor to live good lives. The course looks at the ethical theories and ethical frameworks that have been proposed by some of the greatest thinkers and founders of religions to answer our basic moral questions. The breadth of moral theory over time and culture and geography is enormous. Many of the topics are controversial, ongoing and unresolved. This makes the course current and challenging.

Credits: 3

## PHIL 102: Introduction to Philosophy: Asian Traditions

Problems, methods and concepts of Asian philosophical traditions including Hinduism, Buddhism, Taoism, Confucianism and Zen.

Credits: 3

## PHIL 211: Ancient Philosophy

An introduction to the history of philosophy based on translations of texts originally written in classical Greek or Latin. The ancient philosophers embraced rational discourse over religious and political authority as the correct method to freedom, happiness, knowledge and justice. Their early endeavor continues to light the way for those more interested in truth than money or fame.

Credits: 3

Prerequisites: ENG 100 or equivalent with a grade of C or better.

Recommended Prep: PHIL 100 or PHIL 101 or any other 100-level philosophy course.

## REL 151: Religion & the Meaning of Existence

An investigation of basic concepts running through the world's major religious traditions that bear on the issue of what constitutes and enhances the meaningfulness of human existence.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or consent of instructor.

## REL 200: Understanding the Old Testament

Examination of the Old Testament (Hebrew Bible) as an expression of the religious life, history, and thought of ancient Israel and as a sacred text within later Judaism and Christianity.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

## REL 201: Understanding the New Testament

Intellectual analysis of the origin and development of the early Christian message as set forth in the New Testament. Special attention will be given to the messages of Jesus and Paul and their relevance to the modern world.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

## REL 202: Understanding Indian Religions

Teachings and practices of major religious traditions of India, to include Hindu traditions, Buddhism, Jainism, and Sikhism. Some attention will be given to the influences of Islam and Christianity on these traditions.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Recommended Prep: REL 150.

## REL 204: Understanding Japanese Religions

Broad survey, with primary focus on Shinto, Buddhist, and modern sectarian movements, analyzed in relation to social and cultural themes of major historical periods.



Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or Instructor approval

## REL 205: Understanding Hawaiian Religion

A general introductory survey of Hawaiian religious teaching and practice from ancient times to the present.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent or consent of instructor.

## REL 207: Understanding Buddhism

An investigation of the major forms, practices and concepts of the Buddhist tradition.

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent or consent of instructor.

## REL 210: Understanding Christianity

History of ideas concentrating on events, persons, and issues with the greatest impact on the development of Christianity.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Recommended Prep: REL 150.

## Diversification Social Sciences (DS) 6 cr.

6 total credits required from two different disciplines.

*(PSY 202 and WS 202 are cross-listed. Students cannot earn credit for both courses toward a degree.)*

## AMST 211: Contemporary American Domestic Issues

Interdisciplinary exploration of such current American domestic issues topics as politics, economics, civil rights, family life, the justice system, and the environment.

Credits: 3

Recommended Prep: ENG 22, ENG 24

## AMST 212: Contemporary American Global Issues

Interdisciplinary exploration of such current global issues as international diplomacy, economic development, national security, demographic change, and the environmental protection.

Credits: 3

Recommended Prep: ENG 22, ENG 24

## ANTH 150: Human Adaptations

ANTH 150 is a survey course of general anthropology with a focus on biological anthropology and cultural anthropology. Major topics include human evolution, prehistoric development of culture, recent and contemporary human cultures, common features and principal variations in cultural behavior.

Credits: 3

Prerequisites: ENG 24 with a grade of C or better or equivalent

## ANTH 200: Cultural Anthropology

ANTH 200 is a survey course of cultural anthropology designed to provide the student with an understanding of the concept of culture, the principles of field methodology, cultural diversity, some of the factors underlying this diversity and the universal aspects of culture. ANTH 200 aims at assisting the student to view objectively his/her own as well as other cultures. Additional topics include: history and theory of cultural anthropology, culture and personality, processes of cultural change, and applied anthropology.

Credits: 3

Prerequisites: ENG 24 with a grade of C or better or equivalent

## ECON 120: Introduction to Economics

One semester survey of the principles of microeconomics and macroeconomics to enable students in all disciplines to understand current economic events.

Credits: 3

## ECON 130: Principles of Microeconomics

Examination of the decision-making process of both households and firms. Analysis of the functioning of a competitive market system, using supply and demand models and the role of government in cases where the market system fails. Additional topics include the effects of international rate on the welfare of a nation and the effects of different competitive market structures on society.

Credits: 3

## ECON 131: Principles of Macroeconomics

An introduction to macroeconomics—the study of the overall economy. Topics include the determination of national income, causes and effects of inflation, unemployment, and income inequality; causes and consequences of international differences in economic growth; sources of business cycle expansions and contractions; role of government policy in stabilizing the economy and promoting long-term growth; financial markets and monetary policy; taxes, spending, consequences of budget deficits, determination of trade imbalances, exchange rate fluctuations, and balance of payment crises.

Credits: 3

## GEO 122: Geography of Hawai'i

This course examines the physical, biotic, cultural, and socio-economic elements of Hawai'i. These include the study of volcanism, climatic diversity, water features, vegetation, population and land use patterns, and cultural expression, with a focus on understanding the interrelation and inseparability of physical processes and human activities. (Formerly GEOG 122)

Credits: 3

Recommended Prep: Placement in ENG 100

## HDFS 230: Human Development

This course is a survey of human development from birth to death with emphasis on biological, cognitive and psychosocial development.

Credits: 3

Prerequisites: MATH 22 with a grade of CR or higher or equivalent

## HSER 100: Self Exploration

This group process course provides an opportunity for learners to explore self within society, their values, and attitudes, functional and dysfunctional patterns of behavior. The learners are encouraged to assess personal characteristics that may be hampering growth and be able to establish goals and action plans for change. Learners critically self-reflect through a biopsychosocial life-stage model of development that spans our lives from birth through death. The course supports the adoption of knowledge and skills for developing healthy interpersonal relationships and for working with a diversity of issues and people. The course is particularly applicable for those entering the field of human service and/or the helping professions as well as education, health sciences, or justice, etc.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Program: [Human Services](#)

## HSER 140: Individual Counseling

This course provides an introduction to counseling skills and theory. Learners will practice interviewing and micro-skills through role-plays and will be exposed to theories of counseling, assessment, treatment interventions, and ethical guidelines for work in the field of human services and the helping professions.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Program: [Human Services](#)

Recommended Prep: HSER 100, Basic computer and Internet navigation skills needed

## HSER 160: Effective Parenting

The course explores various approaches and styles of successful parenting. It exposes learners to important developmental issues surrounding children and families and reviews functional and dysfunctional communication and parenting styles. Research on healthy parenting attitudes and behaviors are introduced within the framework of a family systems model. The course intends to upgrade the attitudes and skills of individual parents, those who may become parents, as well as service providers who work with children and families. Another goal is to instill the importance of a child's need to receive respect and love.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent or consent of instructor.

Program: [Human Services](#)

Recommended Prep: HSER 100.

## HSER 245: Group Counseling

The course includes theoretical and experiential training in facilitating groups. The course is designed to encourage understanding and skill development in selecting group members, establishing group norms and goals, and attending to ethical codes of conduct. Skill development includes setting group climate, developing group activities, promoting group and individual growth, and making appropriate group interventions with attention to special populations. Learners will be members of an in-class group and will be co-facilitating a group.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Program: [Human Services](#)

Recommended Prep: HSER 100, Basic computer and Internet navigation skills needed

## HWST 105: Mea Kanu Hawai'i: Hawaiian Ethnobotany

This class is an introductory survey course of Hawaiian ethnobotany. Students will learn about basic plant classification, cultivation/gathering, preparation and use in food, medicine, ritual/ceremonies, cosmetics, dyeing, construction, tools, clothing, social-life and/or health care.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or placement in ENG 100 or instructor consent.

Program: [Hawaiian Studies](#)

## PACS 108: Pacific Worlds: an Introduction to Pacific Islands Studies

Introduces students to the geography, societies, histories, cultures, contemporary issues, and arts of Oceania, including Hawai'i. Combines lecture and discussion that emphasize Pacific Islander perspectives and experiences.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of CR or placement in ENG 100 or consent of instructor.

## POLS 110: Introduction to Political Science

This course is an introduction to the discussion of politics as an activity and of political problems, systems, ideologies, and processes.

Credits: 3

Recommended Prep: ENG 22, ENG 24

## POLS 180: Introduction to Politics in Hawai'i

A study of Hawai'i political history, institutions, processes, and issues; Hawai'i's place in the national and international political arenas; and the future of politics in Hawai'i.

Credits: 3

Recommended Prep: ENG 22, ENG 24

## PSY 100: Survey of Psychology

The basic principles of human behavior, motivation, learning, perception, and emotion, as they relate to the individual.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent.

## PSY 202: Psychology of Gender

Survey of topics relevant to gender and its impact on the lives of women and men: socialization of gender, mental health, racial identity, majority-minority status, sexual orientation, life-span issues and violence. Cross-listed as WS 202. (A student cannot earn credit for both WS 202 and PSY 202.)

Credits: 3

Prerequisites: PSY 100 or WS 151 with a grade of C or better.

## PSY 212: Survey of Research Methods

Survey of standard methods and related conceptual issues employed in psychological research. Both experimental and non-experimental methods will be reviewed.

Credits: 3

Prerequisites: PSY 100 with a grade of C or better.

## PSY 240: Developmental Psychology

Emotional, mental, physical, social development from infancy to adulthood; interest and abilities at different age levels.

Credits: 3

Prerequisites: PSY 100 with a grade of C or better, or consent of instructor.

## PSY 260: Psychology of Personality

Scientific study of personality, its theories, assessment, development and relationships to cultural-social determinants.

Credits: 3

Prerequisites: PSY 100 with a grade of C or better or consent of instructor.

## SOC 100: Survey of General Sociology

Introduction to basic sociological concepts, theories and findings with emphasis on the sociological perspective to gain insight into basic social relationships, social structures and processes.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent.

## SOC 151: Introduction to Sociology of Food

Introduction to the sociological analysis of food by challenging students to think critically about issues involving food production, food consumption behaviors, and the controversies surrounding food production and practices and its impact to people, community, and the environment. Students will also evaluate social justice issues related to current social movements that have emerged to address these issues. (Formerly GEOG 197)

Credits: 3

Prerequisites: Placement in ENG 100

Recommended Prep: SOC 100

## SOC 214: Introduction to Race & Ethnic Relations

This course examines the historical and current social constructions of race and ethnicity in shaping social relations in Hawai'i, the United States, and other countries. The primary focus of this course is to explore racial and ethnic experiences and inequalities by applying sociological theoretical perspectives.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

## SOC 218: Introduction to Social Problems

Introduction to the sociological analysis of social problems. Examines cultural and societal responses to social problems such as poverty, inequality and crime. Topics vary by semester.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor consent

## SOC 231: Introduction to Juvenile Delinquency

This course focuses on juvenile delinquency in the U.S. and examines: the nature of and trends in juvenile delinquency; explanations for and theories of juvenile delinquency; and institutional responses to and treatment of juvenile delinquency including discussion of the U.S. juvenile justice system.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor consent

## SOC 250: Community Forces in Hawai'i

This course is designed to acquaint the student with sociological principles and the application of these principles to aid in the

awareness, understanding, and appreciation of the unique social environment of the State of Hawai`i. Fundamental concepts of sociology in the area of race relations are presented with emphasis on Hawai`i's unique potential "melting pot" social environment and the development of an "unorthodox race doctrine" for Hawai`i. Sociological aspects of the various cultural contributions by the ethnic groups to Hawai`i including values, concepts, practices, history, and language are also investigated.

## **SOC 250H: Community Forces in Hawai'i: Honors Course**

This is an honors course. It is always offered with a writing intensive focus and entails a research assignment. It is designed to acquaint the student with sociological principles and the application of these principles to aid in the awareness, understanding, and appreciation of the unique social environment of the State of Hawai`i. Fundamental concepts of sociology in the area of race relations are presented with emphasis on Hawai`i's unique potential "melting pot" social environment and the development of an "unorthodox race doctrine" for Hawai`i. Sociological aspects of the various cultural contributions by the ethnic groups to Hawai`i including values, concepts, practices, history, and language are also investigated.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor consent

Recommended Prep: Acceptance into the Leeward CC Honors Program.

## **SOC 251: Introduction to Sociology of the Family**

This course is a survey of contemporary family life. Using a cross-cultural perspective, this course examines variations in relationships and family patterns focusing on choices in relationships; current patterns, trends, and changes in these choices and family life. Love, sex roles, sexual attitudes and their relationship within the institution of the family are discussed along with partner selection, dating, marriage, single-hood, divorce, separation or widowhood. Examines current issues in family such as career and family conflicts, alternative family forms, cultural differences, family planning and parenthood, and family violence.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor consent

## **WS 151: Introduction to Women's Studies**

An interdisciplinary introductory course which looks at the gender roles and relationships between women and men and among women, historically and in contemporary societies. Examines the social, cultural, historical and political influences on the status of women. Present women's experiences from diverse backgrounds, social structures, and cultures.

Credits: 3

Recommended Prep: Qualification for ENG 100.

## **WS 200: Culture, Gender and Appearance**

This course explores the social construction of gender within culture and its visual expression through appearance. An analysis of role, identity, conformity, and deviance in human appearance is emphasized.

Credits: 3

Prerequisites: Placement in ENG 100 or Instructor approval

## **WS 202: Psychology of Gender**

Survey of topics relevant to gender and its impact on the lives of women and men: socialization of gender, mental health, racial identity, majority-minority status, sexual orientation, life-span issues and violence. Cross-listed as PSY 202. (A student cannot earn credit for both PSY 202 and WS 202.)

Credits: 3

Prerequisites: PSY 100 or WS 151 with a grade of C or better.

## **WS 290V: Topics in Women's Studies**

A selection of various topics in Women's Studies utilizing perspectives and data from many disciplines. Each topic examines the issues involved in sexism and sex role differentiation by focusing on women's positions, contributions, concerns and problems. This course may be repeated for a maximum of 6 credits.

Credits: 1 - 3

Prerequisites: Complete at least one course from AMST, ANTH, ECON, ED, GEOG, HDFS, HSER, POLS, PSY, SOC, SW or WS with a grade of C or better

Recommended Prep: WS 151 Introductory-level course in a contributing discipline area for the selected 290V topic courses.

## Natural Sciences 7 cr.

Two courses and a lab required for a total of 7 credits. The 2 courses must include a biological science (DB for 3 cr.) and a physical science (DP for 3 cr.). One of the 2 courses must include a lab (DY for 1 cr.).

## Diversification Biological Sciences (DB)

### AG 110: Hawaii Horticulture and Nutrition

The course provides opportunities for hands-on learning on campus using the shade house and gardens for plant maintenance and propagation. It explores uses of native, introduced and other culturally important plants found in Hawaii. Botanical concepts of plant structure and function are examined in light of horticultural application. Proper nutritional principles are applied to plant uses including food preparation. Field trips and student projects provide additional active learning opportunities. (Formerly HORT 110)

Credits: 3

Prerequisites: AG 110L with a grade of C or better or concurrent enrollment and Placement in ENG 100

### AG 112: Introduction to Organic Agriculture

This course is an introduction to natural resource sustainability in agriculture. Basic principles of soil science, plant culture, and pest management are explained and organic farming techniques are practiced. The societal, and environmental, reasons for engaging in organic agriculture are explored. The goal of this course is to increase understanding of organic farming and to introduce sustainable agriculture practices that can be applied in Hawai'i.

Credits: 4

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent and MATH 22 or higher with a grade of CR

Program: [Sustainable Agriculture](#)

### AG 141: Integrated Pest Management

This course includes an introduction to the principles involved in the control of plant pests including diseases, insects, mites, nematodes, and weeds. Various methods of controlling pests, including the correct method of selecting and applying pesticides will be covered. Integrated Pest Management will be incorporated into the course. (Formerly PBT 141)

Credits: 3

Program: [Sustainable Agriculture](#)

### AG 170: Introduction to Commercial Aquaponics

Companion course to AG 170L Introduction to Commercial Aquaponics Laboratory. The course will provide students with an understanding of the major biological concepts using an aquaponics system as a model ecosystem. Additionally, the course will provide an overview of standard operating procedures of large scale aquaponics systems in relation to food safety and production. (Formerly AG197)

Credits: 3

Co-Requisites: AG 170L

Program: [Sustainable Agriculture](#)

Recommended Prep: ENG 22, ENG 24, ENG 24C

## AG 200: Principles of Horticulture

Introduces plant anatomy and physiology. Discusses plant nutrients, moisture, environmental requirements and plant propagation. Studies culture and production techniques for selected ornamental crops. (formerly PBT 200)

Credits: 3

Prerequisites: AG 200L with a grade of C or better or concurrent enrollment and CHEM 151 and 151L or CHEM 161 and 161L or GEO 101 and 101L with a grade of C or better or concurrent enrollment and AG 110, AG 112, BIOL 171, BOT 101, or BOT 130 with a grade of C or better or Instructor consent

Program: [Sustainable Agriculture](#)

## AG 269: Ornamental Plant Materials

Identify major ornamental plants used in Hawai'i's landscapes, including trees, shrubs, vines, ground covers, flowers, house plants and natives. Properly select ornamental plants for landscape according to their habits and growing requirements. (Formerly PBT 269)

Credits: 3

Program: [Sustainable Agriculture](#)

Recommended Prep: AG 200

## ANTH 215: Biological Anthropology

An introduction to the methodology and principles of biological anthropology. Topics covered include human evolution, primatology, human genetics, biological variation, human adaptability, growth and development. Offered only in the Fall semester. Must be taken concurrently with ANTH 215L.

Credits: 3

Prerequisites: ANTH 215L with a grade of C or better or concurrent enrollment and Placement in ENG 100

## BIOL 100: Human Biology

Biology 100 is designed for the non-biologist who wishes to learn more about fundamental biological concepts, with emphasis on humans and the human body. Topics covered will include the structure and functions of cells, tissues, organs, and organ systems of the human body, which will be related to physical fitness, nutrition, health, disease and genetics. Evolution of humans and their role in the biosphere will also be covered. Not intended for science majors.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with grade of C or better or equivalent.

## BIOL 101: Biology and Society

Companion course to BIOL 101L Biology for Non-Majors Laboratory. The course will provide students not majoring in any of the natural sciences with an understanding of the major concepts in the following biological disciplines: cell structure and function, genetics, evolutionary theory, plant and animal structure and function, ecology and animal behavior. Additionally, it provides non-science majors with an understanding of the scientific approach to problem solving and the increasing role biology has in daily life.

Credits: 3

Prerequisites: ENG 24 with a grade of C or better or equivalent and BIOL 101L with a grade of C or better or concurrent enrollment or equivalent

## BIOL 124: Environment and Ecology



This course examines the many interrelationships among organisms and their environment with an emphasis on the impact which our species has had (and may yet have) on the total planet. Problems of pollution, overpopulation, depletion of resources, etc. are considered. Causes of ecological problems and alternatives to current actions by people are suggested and evaluated, stressing the ecological action of the individual. Emphasis is placed on problems relating to island ecology and Hawai'i in particular.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent

## **BIOL 130: Anatomy and Physiology**

BIOL 130 focuses on the structure and function of the human body which includes a study of its gross anatomy, microanatomy, physiology, pathology, and pathophysiology.

Credits: 4

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

Recommended Prep: CHEM 100 or higher or biochemistry course; or college level biology or zoology course.

## **BIOL 171: Introduction to Biology I**

Introductory biology for all life science majors. Cell structure and chemistry, growth, reproduction, genetics, evolution, viruses, bacteria, and simple eukaryotes.

Credits: 3

Prerequisites: CHEM 151 or 151B (or concurrent); or CHEM 161 or CHEM 161 and CHEM 161L (or concurrent); or equivalent or instructor consent

Co-Requisites: BIOL 171L

Recommended Prep: High school level biology course

## **BIOL 172: Introduction to Biology II**

Continuation of BIOL 171. Topics covered include: anatomy and physiology of plants and animals; systematics of plants and animals; and ecology of populations and communities.

Credits: 3

Prerequisites: BIOL 171 and BIOL 171L with a grade of C or better and BIOL 172L with a grade of C or better or concurrent enrollment

## **BIOL 200: Coral Reefs**

The course is an introduction to the biology, ecology and geology of coral reefs. Topics include the physical and chemical properties of coral reef habitats, reef geology, the physiology, anatomy, ecology, evolution, and cultural significance of coral reef organisms. Topics are discussed in the context of sustainability, global climate change, and the management of human impacts on coral reefs. Emphasis is on Hawaii's coral reefs, but comparisons are made among reefs from other areas. Companion course to BIOL 200L Coral Reefs Laboratory. Class meets for 3 hours of lecture per week.

Credits: 3

Prerequisites: BIOL 200L with a grade of C or better or concurrent enrollment and Placement in ENG 100

## **BIOL 265: Ecology and Evolutionary Biology**

Principles of ecology and evolution for the life science majors stressing integrated approach and recent advances.

Credits: 3

Prerequisites: BIOL 171, BIOL 171L, BIOL 172 and BIOL 172L with a grade of C or better

Co-Requisites: BIOL 265L

## **BIOL 275: Cell and Molecular Biology**

BIOL 275 is an integrated cell and molecular biology course for life science majors. This course is designed to give the student a fundamental understanding of the structure and biochemistry of eukaryotic and prokaryotic cells. The recombinant DNA technology and bioinformatics.

Credits: 3

Prerequisites: BIOL 171, BIOL 171L, CHEM 272 and CHEM 272L or instructor consent

## **BOT 101: Botany**

An introductory course in plant biology. Topics to be covered are the structure and function of plant cells, tissues, and organs such as roots, stems, leaves, and flowers; concepts of biological evolution and classification; the diversity of plants and plant-like organisms; genetics; and ecology. Concurrent registration in BOT 101L highly recommended.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent and completion of BOT 101L or concurrent enrollment

## **BOT 130: Plants in the Hawaiian Environment**

Companion course to BOT 130L Plants in the Hawaiian Environment Lab. The course will provide students with an understanding of the major concepts in the following plant biology disciplines: structures, functions and propagation of vascular plants, biotic and abiotic forces that have shaped the Hawaiian Islands and their impact on evolution, distribution and endangerment of Hawaiian flora. Additionally, it provides students with an understanding of Hawaiian flora by origin, development, composition, cultural and economic uses.

Credits: 3

Prerequisites: BOT 130L with a grade of C or better or concurrent enrollment and Placement in ENG 100

## **FSHN 185: The Science of Human Nutrition**

Integration of natural science concepts basic to the study of human nutrition. Emphasis placed on nutrient requirements of healthy individuals and the function of nutrients and their food sources.

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or Instructor approval

## **MICR 130: General Microbiology**

This course covers the fundamentals of microbiology and the role of microorganisms in the environment and in human affairs. Bacteria, viruses, fungi, algae, and protozoa are described and their importance is discussed. Other topics include cell structure and metabolism; microbial genetics; pathology and epidemiology; principles of immunology. Emphasis is given to medical aspects of bacterial and viral diseases, immunology and chemotherapy.

Credits: 3

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent

## **PHYL 141: Human Anatomy and Physiology I**

PHYL 141 is the first semester of a comprehensive two-semester course which provides a thorough introduction to the structure and function of the human body. PHYL 141 covers the gross anatomy, histology, and physiology of the integumentary, skeletal, muscular, and nervous systems. Students will be expected to learn details of anatomy and physiology as well as applying those details in the broader context of whole body function and homeostasis. The covered topics include body orientation, chemical level, cellular level, tissue level, integumentary system, bone tissue, skeletal system, joints, muscular tissue, muscular system, nervous tissue, spinal cord and spinal nerves, brain and cranial nerves, autonomic nervous system, and special

Credits: 3

Prerequisites: ENG 100 with a grade of C or better or equivalent and CHEM 151, CHEM 161 or BIOC 141 with a grade of C or better or 1 yr high school college-prep chemistry with a grade of B or better within the last 5 years and HLTH 125 with a grade of C or better or concurrent enrollment and PHYL 141L with a grade of C or better or concurrent enrollment

Recommended Prep: Strongly recommended, MICR 130, or BIOL 101 with a grade of B or better

## PHYL 142: Human Anatomy and Physiology II

PHYL 142 is the second semester of a comprehensive two-semester course which provides a thorough introduction to the structure and function of the human body. PHYL 142 covers the gross anatomy, histology, and physiology of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, reproduction systems as well as basic concepts of inheritance and development. Students will be expected to learn details of anatomy and physiology as well as applying those details in the broader context of whole body function and homeostasis. This course is the companion course to PHYL 142L.

Credits: 3

Prerequisites: PHYL 141 and PHYL 141L with a grade of C or better or equivalent and PHYL 142L with a grade of C or better or concurrent enrollment

Recommended Prep: MICR 130, BIOL 101

## ZOOL 101: Principles of Zoology

An introduction to the study of animal life. Basic principles of biology are covered including the role of plants as primary producers of chemical energy. The mechanisms of digestion, circulation, osmoregulation, excretion, locomotion, nerve action and reproduction in representative animals are discussed. The chemical and cellular mechanisms involved in the transmission of inheritance are studied. The evolution of plant and animal life, the interaction of organisms in their environment, food chains and trophic levels, and ecological distributions are introduced. Representative animal phyla including both invertebrates and vertebrates are studied from the viewpoint of systematics and structural characters. This course is designed to provide the student with basic information and vocabulary in preparation for advanced courses in zoology and biology.

Credits: 3

Prerequisites: Placement in ENG 100

## ZOOL 200: Marine Biology

An introduction to marine animals and plants; their ecological relationships, structures and systematics; physical and chemical characteristics of the marine ecosystems; survey of marine environments; and utilization, exploitation, pollution, and conservation of marine resources; with special emphasis on the Hawaiian marine environment.

Credits: 3

Prerequisites: ZOOL 200L with a grade of C or better or concurrent enrollment and Placement in ENG 100

Recommended Prep: ZOOL 101, ZOOL 101L

## Diversification Biological Sciences + Lab (DB+DY)

### AG 112: Introduction to Organic Agriculture

This course is an introduction to natural resource sustainability in agriculture. Basic principles of soil science, plant culture, and pest management are explained and organic farming techniques are practiced. The societal, and environmental, reasons for engaging in organic agriculture are explored. The goal of this course is to increase understanding of organic farming and to introduce sustainable agriculture practices that can be applied in Hawai'i.

Credits: 4

Prerequisites: ENG 22 or ENG 24 with a grade of C or better or equivalent and MATH 22 or higher with a grade of CR

Program: [Sustainable Agriculture](#)

### AG 264: Plant Propagation

Theoretical and applied aspects of sexual and asexual reproduction of plants. Propagation of selected plants by seed, cuttings, grafting, layering, and micropropagation/tissue culture. (Formerly PBT 264)

Credits: 3

Prerequisites: AG 200 and AG 200L with a grade of C or better or Instructor consent

Program: [Sustainable Agriculture](#)

Recommended Prep: CHEM 151, CHEM 151L

## Diversification Physical Sciences (DP)

### AG 122: Soil Technology

Studies identification, preparation, and fertilization of soils. Discusses soil formation, soil classification, soil reaction, soil and water relationships, soil protection and irrigation practices. Emphasizes sustainable management systems. (Formerly PBT 122)

Credits: 3

Program: [Sustainable Agriculture](#)

Recommended Prep: ENG 24, MATH 82X

### ASTR 110: Survey of Astronomy

This course is a description of the nature of the astronomical universe for science and non-science majors, with emphasis on scientific method and development of scientific thought. Course offers a descriptive treatment of planets, the solar system, stars, and galaxies and also discusses concepts of size, distance, and time in the observable universe.

Credits: 3

Prerequisites: Placement in MATH 100 or equivalent and Placement in ENG 100 or equivalent or Instructor Consent

Recommended Prep: PHYS 100, PHYS 100L

### BIOC 141: Fundamentals of Biochemistry

Biological chemistry focusing on the integration of concepts from general, inorganic, and biochemistry and their application to living systems. Satisfies the one-semester chemistry requirement for pre-nursing and pre-dental hygiene majors.

Credits: 3

Prerequisites: MATH 82X or higher with a grade of CR

### BIOC 142: Elements of Biochemistry

Second semester of a two semester course sequence covering the fundamentals of general, inorganic, organic and biochemistry. Biochemical principles and concepts as applied to living systems, including sufficient organic chemistry to understand the relationship between structure and properties. Topics include the structural theory of organic chemistry, nomenclature, and properties of the major bio-organic families; enzymology; and the metabolism of the major classes of biochemical compounds. Intended for students entering into a BSN program.

Credits: 3

Prerequisites: BIOC 141, CHEM 100, CHEM 151 or CHEM 161 with a grade of C or better

### CHEM 100: Chemistry and Society

Brief introduction to basic principles of chemistry and their relationship to the modern world. This course provides a general education core course for the non-science major. Emphasis will be placed on how science and technology affect the individual, society and the environment. Topics to be treated include: air and water pollution, energy resources, and basics of physical and biochemistry.

Credits: 3

Prerequisites: MATH 82X or higher with a grade of CR or better

Recommended Prep: Concurrent registration in CHEM 100L

## CHEM 151: Elementary Survey of Chemistry

An introductory course to the fundamental theories and experimental methods of chemistry intended for students preparing for careers in medical technology, nursing, life sciences, and other technical fields. The basic language and quantitative relationships of chemistry are studied, as well as the theories of atomic structure, chemical bonding, structure-property relationships, and chemical reactions.

Credits: 3

Prerequisites: MATH 82X with a grade of CR or Qualification for a STEM track mathematics course

Recommended Prep: Concurrent registration in CHEM 151L

## CHEM 161: General Chemistry I

CHEM 161 is the first course of a two-course sequence designed to meet the one-year requirement of general college chemistry. It covers the basic principles of inorganic chemistry including scientific measurement, one dimensional analysis, atomic structure, chemical bonding, both physical and chemical properties of matter, solution chemistry, thermochemistry, and gas laws.

Credits: 3

Prerequisites: MATH 103 with grade of C or better or higher MATH STEM course or Instructor approval

Recommended Prep: CHEM 151, High School Chemistry

## CHEM 162: General Chemistry II

The second course of a two-course sequence designed to meet the one-year requirement of general college chemistry. Concepts and topics include, thermochemistry, kinetics, acid-base equilibrium, solubility equilibrium and electrochemistry with an emphasis on problem solving.

Credits: 3

Prerequisites: CHEM 161 with a grade of C or better and MATH 135 or higher with a grade of C or better

## CHEM 272: Organic Chemistry I

CHEM 272 is the first semester of a comprehensive study of organic chemistry including: molecular structure, nomenclature, stereochemistry, spectroscopy, reactions, reaction mechanisms, and synthesis of organic compounds. (Formerly lecture part of CHEM 272B.)

Credits: 3

Prerequisites: CHEM 162 or CHEM 162B with grade of C or better or equivalent or Instructor approval

## CHEM 273: Organic Chemistry II

CHEM 273 is the second semester of a comprehensive study of organic chemistry including: molecular structure, nomenclature, stereochemistry, spectroscopy, reactions, reaction mechanisms, and synthesis of organic compounds. (Formerly lecture part of CHEM 273B.)

Credits: 3

Prerequisites: CHEM 272 or CHEM 272B with grade of C or better or equivalent or Instructor approval

## ERTH 101: Introduction to Geology

Lecture course in the fundamentals of physical geology covering rocks and minerals, volcanoes, earthquakes, external processes of weathering, mass wasting, erosion, the internal processes of magma movement, and the dynamics of plate tectonics. Field trips to nearby sites to study local geology are optional. An optional lab course, EARTH 101L, is offered and students could

Credits: 3 Concurrently in the lab course (Formerly GG 101).

Prerequisites: Placement in ENG 100 and placement in MATH 100 or equivalent or instructor consent

## ERTH 103: Geology of the Hawaiian Islands

Hawaiian geology and geologic processes: origin of Hawaiian Islands, volcanism, rocks and minerals, geomorphology, stream processes, coastal geology, landslides, earthquakes and tsunami, groundwater, and geological and environmental hazards. Field trips arranged (Formerly GG 103).

Credits: 3

Prerequisites: Placement in ENG 100 or equivalent or instructor consent

## GEO 101: The Natural Environment

This course explores Earth's natural systems including the atmosphere, lithosphere, biosphere, and hydrosphere. Basic elements of the natural environment are examined, especially climate, soils, landforms, water and natural vegetation. Global and local environmental processes are explored with an emphasis on Hawai'i and the Pacific. (Formerly GEOG 101)

Credits: 3

Recommended Prep: MATH 82X, Placement in ENG 100

## HWST 281: Ho'okele I: Hawaiian Astronomy and Weather

Introduction to the basic principles and techniques of contemporary Pacific voyaging and their basis in astronomical, atmospheric, and other natural phenomena. May be repeated once for additional credit.

Credits: 3

Prerequisites: HWST 107 or PACS 108 with a grade of C or better or Instructor Consent

Program: [Hawaiian Studies](#)

Recommended Prep: HAW 101

## OCN 201: Science of the Sea

Structure, formation, and features of ocean basins; seawater properties and distributions; currents; waves; tides; characteristics of marine organisms; marine ecological principles; man and the sea. Field trip required.

Credits: 3

Recommended Prep: Completion of MATH 22 with a grade of C or better or equivalent.

## OEST 101: Natural Hazards

Science of natural hazards: impact on human civilization of events in the lithosphere, atmosphere, biosphere, and hydrosphere (e.g., earthquakes, hurricanes, red tides, and floods), and impact of humans on their exposure to and mitigation of the hazards. This course is transdisciplinary in nature and will use real data to teach foundational principles in geological (earthquakes), oceanographic (tsunamis), and atmospheric science (hurricanes) and more importantly the close connections between these science disciplines. We will examine how people become vulnerable to natural hazards, how society is affected by them, how people contribute to causing them, and how societies cope-or fail to cope-with them.

Credits: 3

## PHYS 100: Survey of Physics

This is an introductory course in Physics with topics chosen from, but not limited to, mechanics, thermodynamics, electricity and magnetism, wave theory, optics, atomic and/or nuclear physics. Emphasis will be placed on understanding basic principles and concepts with application to "Real-Life" connections.

Credits: 3

Prerequisites: MATH 82X with a grade of CR or Qualification for a STEM track mathematics course  
Recommended Prep: Concurrent enrollment in PHYS 100L

## **PHYS 151: College Physics I**

The first course in a two-semester sequence in introductory physics intended for science majors. Emphasis is split between concepts and mathematical applications. Algebra, trigonometry and geometry are used; calculus is not. The course includes mechanics, kinetic theory and thermodynamics. Required: scientific calculator. Offered fall semester only.

Credits: 3

Prerequisites: C or better in MATH 140 or MATH 140X or by consent of instructor

## **PHYS 152: College Physics II**

The second course in a two-semester sequence in introductory physics intended for science majors. Emphasis is split between concepts and mathematical applications. Algebra, trigonometry and geometry are used; calculus is not. Course includes electricity and magnetism, wave motion, optics, and atomic and nuclear physics. Required: Pocket trig-type calculator. Offered spring semester only.

Credits: 3

Prerequisites: PHYS 151.

## **PHYS 170: General Physics I**

A rigorous introductory course in classical mechanics and thermodynamics for physical science and engineering majors, emphasizing the mathematical techniques used in the explanation of physical phenomena.

Credits: 4

Prerequisites: MATH 242 with a grade of C or better or concurrent registration.

Recommended Prep: PHYS 100

## **PHYS 272: General Physics II**

Electricity, magnetism, and geometric optics.

Credits: 3

Prerequisites: PHYS 170 and MATH 242 with a grade of C or better.

## **Diversification Laboratory (DY)**

### **AG 110L: Hawaii Horticulture and Nutrition Lab**

Companion course to AG 110 Hawaii Horticulture and Nutrition. This course will provide opportunities for hands-on learning on campus using the shade house and gardens for plant maintenance and propagation. It explores uses of native, introduced and other culturally important plants found in Hawaii. Botanical concepts of plant structure and function are examined in light of horticultural application. Proper nutritional principles are applied to plant uses including food preparation. Field trips and student projects provide additional active learning opportunities. (Formerly HORT 110L)

Credits: 1

Prerequisites: AG 110 with a grade of C or better or concurrent enrollment and Placement in ENG 100

### **AG 170L: Introduction to Commercial Aquaponics Laboratory**

Companion course to AG 170 Applied Aquaponics. The course will provide students with a hands-on application of the major biological concepts using an aquaponics system as a model ecosystem. Additionally, the course will follow standard operating

Credits: 1  
Description: Principles of large scale aquaponics systems in relation to food safety and production. (Formerly AG197L)

Co-Requisites: AG 170

Program: [Sustainable Agriculture](#)

Recommended Prep: ENG 22, ENG 24, ENG 24C

## AG 200L: Principles of Horticulture Lab

Cultivation of selected economic crops using seed to seed model in student gardens or greenhouse. Perform field and laboratory tests involving plant, soil and seeds. (Formerly PBT 200L)

Credits: 1

Prerequisites: AG 200 with a grade of C or better or concurrent enrollment or Instructor consent

Program: [Sustainable Agriculture](#)

Recommended Prep: BIOL 101, BIOL 101L, BOT 101, BOT 101L, BIOL 171, BIOL 171L

## ANTH 215L: Biological Anthropology Lab

This lab course is designed to accompany ANTH 215 Biological Anthropology. Concurrent registration is required. The course provides additional experience and laboratory exercises in human and population genetics, human osteology, human variability, forensic anthropology, primatology, and paleoanthropology. Offered only in the Fall semester.

Credits: 1

Prerequisites: ANTH 215 with a grade of C or better or concurrent enrollment and Placement in ENG 100

## BIOL 101L: Biology and Society Lab

Companion laboratory to BIOL 101 Biology for Non-Majors. The laboratory and field activities in BIOL 101L provide students not majoring in any of the natural sciences with an understanding of the major concepts in the following biological disciplines: cell structure and function, genetics, evolutionary theory, plant and animal structure and function, ecology and animal behavior. Additionally, it provides non-science majors with an understanding of the scientific approach to problem solving and the increasing role biology has in daily life. Laboratory attendance is required.

Credits: 1

Prerequisites: BIOL 101 with a grade of C or better or concurrent enrollment and Placement in ENG 100

## BIOL 124L: Environment and Ecology Lab

Laboratory to accompany BIOL 124

Credits: 1

Prerequisites: BIOL 124 or concurrent enrollment

## BIOL 130L: Anatomy and Physiology Lab

BIOL 130L focuses on gross and microscopic anatomy on the human body with special emphasis upon the skeleton, muscles, heart and blood vessels, and the nervous system.

Credits: 1

Prerequisites: BIOL 130 with a grade of C or better or concurrent enrollment or Instructor approval

Recommended Prep: Basic Computer Skills Ability to use the Internet

## BIOL 171L: Introduction to Biology I Lab

Laboratory to accompany BIOL 171

Credits: 1

Prerequisites: CHEM 151 or 151B (or concurrent); or CHEM 161 (or concurrent); or equivalent or instructor consent



Co-Requisites: BIOL 171

Recommended Prep: High school level biology course

## **BIOL 172L: Introduction to Biology II Lab**

Laboratory to accompany BIOL 172. Topics covered include: anatomy and physiology of plants and animals; systematics of plants and animals; ecology of populations and communities; biosphere and ecosystem function.

Credits: 1

Prerequisites: BIOL 171 and BIOL 171L with a grade of C or better and BIOL 172 with a grade of C or better or concurrent enrollment and ENG 100

## **BIOL 200L: Coral Reefs Lab**

The laboratory and field activities in BIOL 200L provide an introduction to the biology, ecology, and geology of coral reefs. Topics include the physical and chemical properties of coral reef habitats, reef geology, the physiology, anatomy, ecology, evolution, and cultural significance of coral reef organisms. Topics are discussed in the context of sustainability, global climate change, and the management of human impacts on coral reefs. Emphasis is on Hawaii's coral reefs, but comparisons are made among reefs from other areas. Companion laboratory to BIOL 200 Coral Reefs. Class meets for 3 hours of laboratory and field activities per week.

Credits: 1

Prerequisites: BIOL 200 with a grade of C or better or concurrent enrollment and Placement in ENG 100

## **BIOL 265L: Ecology and Evolutionary Biology Lab**

Laboratory to accompany BIOL 265

Credits: 1

Prerequisites: BIOL 171, BIOL 171L, BIOL 172 and BIOL 172L with a grade of C or better

Co-Requisites: BIOL 265

## **BIOL 275L: Cell and Molecular Biology Lab**

BIOL 275L is a lecture/laboratory in cell and molecular biology for life science majors. This course is taken either concurrently or after BIOL 275. Through lectures and laboratory exercises, students will acquire a fundamental understanding of the biochemistry of the cell. Students will also acquire competence in modern advances in protein chemistry, recombinant DNA technology and biotechnology.

Credits: 2

Prerequisites: BIOL 171, BIOL 171L, CHEM 272 and CHEM 272L or instructor consent

Co-Requisites: Credit or concurrent registration in BIOL 275

## **BOT 101L: General Botany Laboratory**

Laboratory observations, experiments and field trips illustrating the basic principles of plant biology.

Credits: 1

Prerequisites: BOT 101 with a grade of C or better or concurrent enrollment or equivalent and Placement in ENG 100

## **BOT 130L: Plants in the Hawaiian Environment Laboratory**

Companion laboratory to BOT 130 Plants in the Hawaiian Environment. The laboratory and field activities in BOT 130L provide students with an understanding of the major concepts in structures, functions and propagation of vascular plants, biotic and abiotic forces that have shaped the Hawaiian Islands and their impact on evolution, distribution and endangerment of Hawaiian flora. Additionally, it provides students with an understanding of Hawaiian flora by origin, development, composition, cultural and economic uses.

Credits: 1

Prerequisites: BOT 130 with a grade of C or better or concurrent enrollment and Placement in ENG 100

## CHEM 100L: Chemistry and Society Lab

Introduction to laboratory techniques and experimental methods of chemistry intended for students preparing for careers in non-science fields.

Credits: 1

Prerequisites: CHEM 100 with a grade of C or better or concurrent enrollment.

## CHEM 151L: Elementary Survey of Chemistry Lab

Introduction to laboratory techniques and experimental methods of chemistry intended for students preparing for careers in medical technology, nursing, life sciences, and other technical fields.

Credits: 1

Prerequisites: CHEM 151 with a grade of C or better or concurrent enrollment.

## CHEM 161L: General Chemistry I Lab

CHEM 161L is a laboratory course, which accompanies CHEM 161. This course is open to students who have earned at least a C grade or concurrently enrolled in CHEM161. This course allows students to gain familiarity with laboratory techniques and apparatus, and to apply their knowledge of concepts from CHEM 161 in a laboratory situation. Prior to each lab, students read the lab manual and complete a pre-laboratory report if applied. All students must complete mandatory safety training to participate in the course, this training is provided at the first class meeting.

Credits: 1

Prerequisites: MATH 103 with a grade of C or better or higher MATH STEM course and CHEM 161 with a grade of C or better or concurrent enrollment

Recommended Prep: CHEM 151, High School Chemistry

## CHEM 162L: General Chemistry II Lab

CHEM 162L is a laboratory course which accompanies CHEM 162, the second course of a two-course sequence designed to meet the one-year requirement of general college chemistry. Experiments are performed which relate to the lecture material in CHEM 162. The student will develop competency in using laboratory equipment and laboratory report writing skills.

Credits: 1

Prerequisites: CHEM 161, 161L and MATH 135 with a grade of C or better.

Co-Requisites: Credit or concurrent registration in CHEM 162.

## CHEM 272L: Organic Chemistry I Lab

The first semester laboratory course in organic chemistry covering: molecular structure, stereochemistry, spectroscopy, mechanisms, reactions, and synthesis of organic compounds. (Formerly lab part of CHEM 272B.)

Credits: 2

Prerequisites: CHEM 162L with a grade of C or better and CHEM 272 with a grade of C or better or concurrent registration.

## CHEM 273L: Organic Chemistry II Lab

The second semester lab course in organic chemistry covering: molecular structure, stereochemistry, spectroscopy, mechanisms, reactions, and synthesis of organic compounds. (Formerly lab part of CHEM 273B.)

Credits: 2

Prerequisites: CHEM 272L with a grade of C or better and CHEM 273 with a grade of C or better or concurrent registration.

## ERTH 101L: Introduction to Geology Lab

Laboratory course offered as an optional part of the Dynamic Earth lecture course. The class will study structure and properties of the earth, rocks, and minerals; make topographic maps, interpret geologic maps; interpret seismic data, groundwater properties, and geological timescale. On-campus field trips conducted to learn about surface phenomena are optional. Class meets for 3 hours of lab per week (Formerly GG 101L).

Credits: 1

Prerequisites: ERTH 101 with a grade of C or better or concurrent enrollment or equivalent or instructor consent

## GEO 101L: The Natural Environment Lab

This course is a laboratory exploration of Earth's natural systems including the atmosphere, lithosphere, biosphere, and hydrosphere with an emphasis on Hawai'i and the Pacific. The course includes lab work, field data collection, analysis, and reporting. (Formerly GEOG 101L)

Credits: 1

Prerequisites: GEOG 101 with a grade of C or better or concurrent enrollment

Recommended Prep: MATH 82X, Placement in ENG 100

## HWST 281L: Ho'okele I: Hawaiian Astronomy and Weather Lab

Companion laboratory to HWST 281 (Ho'okele I: Hawaiian Astronomy & Weather). The laboratory and field activities in HWST 281L provide students with an introduction and opportunity to apply the basic principles, techniques, and experimental methods of contemporary Pacific wayfinding learned in HWST 281. May be repeated twice for additional credit.

Credits: 1

Prerequisites: HWST 281 with a grade of C or better or concurrent registration

Program: [Hawaiian Studies](#)

## MICR 140L: General Microbiology Lab

Experiments involve aseptic technique and manipulation of microorganisms under laboratory conditions to illustrate the basic principles of microbiology. Primarily for students majoring in the health sciences. Class meets for two 2-hour lab sessions per week.

Credits: 2

Prerequisites: MICR 130 with a grade of C or better or concurrent enrollment

## OCN 201L: Science of the Sea Laboratory

Experiments, exercises, and field trips demonstrating the geological, physical, chemical and biological principles of earth and ocean sciences.

Credits: 1

Prerequisites: Credit or concurrent registration in OCN 201.

Recommended Prep: Completion of MATH 22 with a grade of C or better or equivalent.

## PHYL 141L: Human Anatomy and Physiology I Lab

PHYL 141L is the laboratory course of Human Anatomy and Physiology I and it provides a thorough introduction to the structure and function of the human body. PHYL 141L covers the gross anatomy, histology, and physiology of the integumentary, skeletal, muscular, and nervous systems. Students will be expected to learn details of anatomy and physiology through models, dissections, and physiological experimentations. Students will also apply those details in the broader context of whole body function and homeostasis. The covered topics include body orientation, chemical level, cellular level, tissue level, integumentary system, bone tissue, skeletal system, joints, muscular tissue, muscular system, nervous tissue, spinal cord and

Credits: 1  
Prerequisites: PHYL 141 and PHYL 141L with a grade of C or better or equivalent and PHYL 142L with a grade of C or better or concurrent enrollment.

Prerequisites: ENG 100 with a grade of C or better or equivalent and CHEM 151, CHEM 161 or BIOC 141 with a grade of C or better or 1 year of high school college prep chemistry with a grade of B or better within the last 5 years and HLTH 125 with a grade of C or better or concurrent enrollment and PHYL 141 with a grade of C or better or concurrent enrollment.

Recommended Prep: MICR 130, BIOL 101

## PHYL 142L: Human Anatomy and Physiology II Lab

PHYL 142L is the laboratory course of PHYL 142 (Human Anatomy and Physiology II) and it provides a thorough introduction to the structure and function of the human body. PHYL 142L covers the gross anatomy, histology, and physiology of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, reproductive systems as well as basic concepts of inheritance and development. Students will be expected to learn details of anatomy and physiology through models, dissections, and physiological experimentations. Students will also apply those details in the broader context of whole body function and homeostasis.

Credits: 1

Prerequisites: PHYL 141 and PHYL 141L with a grade of C or better or equivalent and PHYL 142L with a grade of C or better or concurrent enrollment

Recommended Prep: MICR 130, BIOL 101

## PHYS 100L: Survey of Physics Laboratory

Introduction to laboratory techniques and experimental methods of physics with emphasis on linking the understanding of physics concepts with "Real-Life" situations.

Credits: 1

Prerequisites: C or better for or concurrent registration in PHYS 100.

## PHYS 151L: College Physics I Lab

PHYS 151L is a non-calculus-based physics laboratory course designed to provide the students a hands-on experience in experimental analysis, physical observation, and measurements. Topics include the kinematics and dynamics of motion, heat, and thermodynamics. Offered fall semester only.

Credits: 1

Prerequisites: PHYS 151 with a grade of C or better or concurrent enrollment.

## PHYS 152L: College Physics II Lab

PHYS 152L is a non-calculus-based physics laboratory course designed to provide the students a hands-on experience in experimental analysis, physical observation, and measurements. Topics include electricity, magnetism, and geometric optics. Offered in the spring semester only.

Credits: 1

Prerequisites: PHYS 152 with a grade of C or better or concurrent enrollment.

## PHYS 170L: General Physics I Lab

Experimental analysis in mechanics emphasizing error analysis, measurement techniques, and report writing.

Credits: 1

Prerequisites: PHYS 170 with a grade of C or better or concurrent enrollment.

## PHYS 272L: General Physics II Lab

Experimental analysis in electricity, magnetism and optics.

Credits: 1

Prerequisites: PHYS 272 with a grade of C or better or concurrent enrollment.

## ZOOL 101L: Principles of Zoology Lab

Companion laboratory to ZOOL 101 Principles of Zoology. The laboratory and field activities in ZOOL 101L provide an overview of an introduction to the study of animal life. Basic principles of biology are covered including the role of plants as primary producers of chemical energy. The mechanisms of digestion, circulation, osmoregulation, excretion, locomotion, nerve action and reproduction in representative animals are discussed. The chemical and cellular mechanisms involved in the transmission of inheritance are studied. The evolution of plant and animal life, the interaction of organisms in their environment, food chains and trophic levels, and ecological distributions are introduced. Representative animal phyla including both invertebrates and vertebrates are studied from the viewpoint of systematics and structural characters.

Credits: 1

Prerequisites: ZOOL 101 with a grade of C or better or concurrent enrollment and Placement in ENG 100

## ZOOL 200L: Marine Biology Lab

Companion laboratory to ZOOL 200 Marine Biology. The laboratory and field activities in ZOOL 200L provide an overview of marine life in Hawai`i inclusive of taxonomy, body structure and function, geographical distribution and ecological relationships. The physical and chemical features of Hawai`i's varied marine environments are also examined.

Credits: 1

Prerequisites: ZOOL 200 with a grade of C or better or concurrent enrollment and Placement in ENG 100