

COLLEGE OF EDUCATION
**DEPARTMENT OF
EDUCATION**



HANYANG UNIVERSITY

Classification : Core Major

Psychological Testing

Course Code: EDU2010		
Credits	Class Hr	Lab Hr
3	3	0

This course is primarily intended to deal with important principles and skills for measuring, diagnosing, and assessing psychological characteristics of an individual, such as intelligence, aptitude, personality, attitudes, and interests. This course provides a survey of basic concepts of measurement theory and of the applications of psychological tests. A strong emphasis will be placed on measurement and testing theory, basic psychometrics, reliability and validity, scale construction and item analysis. Students also have a chance to learn how to use SPSS. This course covers various topics; such as 1) basic concepts in measurement and statistics, 2) scales, transformations, and norms, 3) frequency, mean, and percentile score, 4) reliability: the consistency of test scores, 5) using & interpreting information about test reliability, 6) validity of measurement: content and construct-oriented validation strategies, 7) validity for decisions: criterion-related validity, item analysis, 8) the process of test development, and 9) ability testing: individual and group tests.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Core Major

Educational Statistics

Course Code: EDU2015		
Credits	Class Hr	Lab Hr
3	3	0

This course deals with the basic knowledge and skills of descriptive and inferential statistics and their application to educational research. Topics regarding descriptive statistics include basic concepts of statistics (such as variables, measurement, scales, population and samples, and statistical notation), frequency distributions, central tendency (such as mean, mode, and median), variability (such as range, standard deviation, and variance), standardized scores (z-scores) and standardized distributions. Also, inferential statistics aims at exploring a wide range of topics including probability, sampling distributions, the distribution of sample means and the central limit theorem, introduction to hypothesis testing, introduction to the t-statistic, the t-test for two independent samples and the t-test for two related samples, introduction to analysis of variance, and correlation analysis. In this course, students are encouraged to have opportunities to practice analyzing data using statistical programs (such as SPSS) or the MS Excel program, and interpreting the statistical results.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

Psychological Theories of Personality

Course Code: EDU4013		
Credits	Class Hr	Lab Hr
3	3	0

Personality course is designed and structured to help students understand all aspects of personality and its development and change, especially those aspects of personality that apply to educational settings. The course covers the full range of major personality theories, including the trait, social-cognitive, humanistic, and psychodynamic approaches. It also covers core topics, including personality assessment, classroom applications, therapy and psychopathology, adaptive, and maladaptive functioning. Finally, the course covers the full range of personality constructs, such as extraversion, the self, and psychological well-being. To become acquainted with the knowledge base of personality study, the course pursues three themes—mastery of course content, development of a specialized area of interest, and development of a sense of the personal and professional relevance of personality study. A rich, sophisticated representation of the theories, perspectives, participants, and empirical literature associated with each of the four major domains of personality study, which are traits, social-cognitive, behavioral, humanistic, and psychodynamic, will be developed.

Frequency of Course Offering: Every Spring
Prerequisite: None

Classification :

Course Code:		
Credits	Class Hr	Lab Hr

COLLEGE OF EDUCATION
**DEPARTMENT OF
EDUCATIONAL TECHNOLOGY**



HANYANG UNIVERSITY

Classification : Extended Major

Global HRD Trends

Course Code: DET2025		
Credits	Class Hr	Lab Hr
3	3	0

One of the major HRD trends in Korean large enterprises will be globalization, and thus HRD professionals should recognize global HRD issues and trends of worldwide leading companies. In the course, especially, major themes of international conferences will be introduced such as ASTD (American Society for Training & Development) and ISPI (International Society for Performance & Improvement). Major themes are as follows: 1) learning business strategy, 2) leadership and management development, 3) facilitating organizational change, 4) career planning & talent management, 5) designing & delivering learning, 6) E-learning & blended learning, and 7) performance improvement & evaluation. Students in this course are expected and encouraged to recognize and build up knowledge of global HRD issues.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Extended Major

Statistics for Educational Technology

Course Code: EDU4037		
Credits	Class Hr	Lab Hr
3	3	0

This course is designed to cultivate the basic capability to become an educational expert who is expected to interpret and understand statistical information, and appropriately analyze their own raw data; by learning fundamental knowledge of descriptive statistics, which describes, synthesizes and summarizes quantitative data/information and inferential statistics, which infers characteristics of the population from samples. Primarily, students in this course are encouraged to understand how to use SPSS for t-test, ANOVA, MANOVA, and regression analyses based on the understanding frequency distributions and graphs; measures of central tendency; normal probability curve; elementary sampling and reliability; correlations; and simple regression equations in the areas of Educational Technology and Human Resource Development.

Frequency of Course Offering: Every Spring

Prerequisite: None

COLLEGE OF EDUCATION
**DEPARTMENT OF
ENGLISH EDUCATION**



HANYANG UNIVERSITY

Classification : Basic Major

Foundations of English Communication

Course Code: DEE1007		
Credits	Class Hr	Lab Hr
3	3	0

This course aims to provide students with foundations for building up oral and ultimately balanced English communication skills. Students in this course are expected and encouraged to understand the basic principles of English communication, overcome the fear that may arise in communicating with native speakers in English, accept English as a communication tool, and recognize themselves as English users. In order to improve students' English communication skills, the course will provide them with a variety of in-class activities and assignments. This course is particularly designed to help students practice speaking various types of speeches such as informative speech, persuasive speech, in-group discussions, interpersonal communication, and intercultural communication. After taking this course, students will be able to 1) understand the basic structure and key elements of various types of speeches, 2) build a strong foundation for professional public speaking in English, and 3) learn useful expressions, communication styles, and gestures for each speech type.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Basic Major

Basics of English Writing

Course Code: DEE1015		
Credits	Class Hr	Lab Hr
2	2	0

This course is designed to take a reading and writing integration approach and train students to write various types of paragraphs such as narrative, process, definition, cause and effect, and compare & contrast paragraphs. This course is aimed at helping students to be prepared for sophisticated academic writing. In order to take part in the class, students are expected to become familiar with basic grammar knowledge and able to make up correct sentences. Upon completion of this course, students will be able to write topic sentences and supporting details, and understand the structure of various paragraphs. Also, students will learn how to organize different paragraph types, including narrative, process, and definition paragraphs.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Basic Major

School Grammar

Course Code: DEE1016		
Credits	Class Hr	Lab Hr
3	3	0

The main goal of this course is twofold: 1) to familiar students with basic syntactic knowledge, such as phrase structural rules (e.g., $S \rightarrow NP VP$, $NP \rightarrow (D) (Adj) N (PP)$, and $P \rightarrow P NP$), 2) to help students learn basic English grammar with syntactic and semantic motivation. The course will start with the basic lexical categories, such as nouns, verbs, adjective, adverbs and prepositions, and move onto the functional structures, such as tense, aspect, modality, articles and agreement. We will also scrutinize left-peripheral structures, such as interrogatives and information structures (e.g., focus/emphasis). Also, language use in discourse will be dealt with. Students will be lectured on each topic and they are encouraged to have time to fully discuss questions and exercises from the textbook.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : (Compulsory) Requirement in Fundamental Studies

Basics of English Reading

Course Code: DEE2011		
Credits	Class Hr	Lab Hr
3	3	0

The main goal of this course is to help students learn basic reading skills and strategies such as scanning, skimming, using vocabulary knowledge, making inferences, identifying patterns of organization, summarizing, and intensive reading. Students will read and understand paragraphs and deal with exercises in class. In addition, students will not only develop reading skills and strategies but also expand academic writing skills, vocabulary, and grammar knowledge. Homework will be regularly assigned, and it will be checked via irregular quizzes during the semester. Although this course focuses on academic reading, it is not limited to academic reading materials. In order to successfully complete the course, students are expected to attend each class, take an active role in the class discussion, and review materials covered in class.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Basic Major

English Pronunciation Practice

Course Code: DEE2015		
Credits	Class Hr	Lab Hr
3	3	0

The main goal of this course is twofold: 1) to familiarize students with English sounds; 2) to provide students with minimal phonetic/phonological knowledge, which is required to understand the mechanism of sounds in English. Students will extensively cover individual sounds in isolation (e.g., manner of articulation, place of articulation, voicing, height, position, lip rounding, and tenseness) and also focus on phonological and supra-segmental features (e.g., linking, syllable, and stress). Basic phonological exercises might be provided to facilitate the understanding of interactions among sounds in English. Students will be lectured on theoretical descriptions about vowels and consonants in English first and the course will move onto practical exercises in the textbook. Students are expected to use the required textbook; ppt slides based on the recommended textbook will be given.

Frequency of Course Offering: Every Fall
Prerequisite: None

Classification : Core Major

English Writing Practice

Course Code: DEE 2020		
Credits	Class Hr	Lab Hr
3	3	0

This course takes a reading and writing integration approach and teaches rhetoric and sentence structure in a straightforward manner, using a step-by-step approach, high-interest models, and varied practice types. The course integrates instruction in essay organization and sentence structure with the writing process. Students will be guided through the steps of the writing process to produce the well-organized, clearly developed essays that are essential to academic writing in English. Students will do a quick review of paragraph writing and summarize as well. This course is designed to help students to be prepared for sophisticated academic writing. In order to take part in the class, students are expected to be familiar with grammar knowledge and able to make up correct sentences. Upon completion of this course, students will be able to write various essays, such as process, cause and effect, comparison and contrast, and argumentation.

Frequency of Course Offering: Every Fall
Prerequisite: None

Classification : Basic Major

English Linguistics & Education

Course Code: DEE2030		
Credits	Class Hr	Lab Hr
3	3	0

This course will review the major branches of the modern English linguistics: phonetics, phonology, morphology, syntax, semantics, and pragmatics. A foundational concept of this course is that it takes the English language as an object of scientific study. Through this course, students will obtain a basic body of linguistic knowledge, internalize ways to produce such knowledge, that is, academic methods and argumentation, and sharpen critical thinking skills, a crucial component of the so-called 21st-century competencies. After the successful completion of this course, students will understand basic concepts, generalizations, rules, and research methods pertinent to the linguistic subfields of phonetics, phonology, morphology, syntax, semantics, and pragmatics. Students will also have a higher level of critical thinking skills, dispositions, and strategies to utilize in better reading words and the world.

Frequency of Course Offering: Every Fall
Prerequisite: None

Classification : Core Major

History & Development of The English Language

Course Code: DEE3035		
Credits	Class Hr	Lab Hr
3	3	0

'History and Development of the English Language' is the course which is specifically designed to help students to learn how the English language originated and developed since the beginning of old English period (AD 450). Through this course, students are expected to understand languages are necessarily subject to change and to realize that the changing process has its own motivation and marvelous systematicity. Students will explore early English such as old-English and middle-English from the aspects of sounds, words, phrases, and meaning. The course also aims to investigate Modern English in depth from the viewpoint of contemporary linguistic theories, including the semantic and morphological structure of the English language. By looking through the reason and direction of language changes, students will deepen their understanding of the modern English language, and be able to get a solution to various linguistic problems related to English from the historical point of view.

Frequency of Course Offering: Every Spring
Prerequisite: None

Classification : Basic Major

Presentation Skills in English

Course Code: DEE2036		
Credits	Class Hr	Lab Hr
3	3	0

This course is intended to equip students with basic presentation skills and provides students with opportunities to expose themselves to public speaking. Students will prepare their own presentations based on various topics from the textbook; a self-introduction, a person you admire, a vacation you recommend, a survey you conducted, how something works or happened, a persuasive presentation about an issue, news story and several practical presentation skills (e.g., listing, brainstorming, hooks, transitions, and visual aids). The course will further cover 'dos and don'ts' for presentations. Basic lectures about how to write presentation scripts will be given first. Students are expected to write their own scripts for the topics during class, and also, they will be given time to practice their presentations with friends based on the scripts.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Basic Major

Introduction to English Language Teaching

Course Code: DEE2043		
Credits	Class Hr	Lab Hr
3	3	0

This course is an introductory class for pre-service English teachers with a focus on theoretical approaches and current issues in the area of second language teaching and learning. The course considers linguistic, social, and cultural aspects of language teaching and learning with chapters, such as "Age and Acquisition," "Personality Factors," "Sociocultural Factors," and "Communicative Competence." The course lays equal emphasis on three aspects of inquiry: the substantive topics that are addressed, the range of institutional, national, and educational contexts in which English language education has been conducted, and the theoretical lenses that have been employed to frame teaching and learning. After taking this course, students are expected to become familiar with principles of English language education, and further be able to apply those principles to their future classrooms.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

English Syntax

Course Code: DEE3011		
Credits	Class Hr	Lab Hr
3	3	3

English Syntax is offered for students who want to prepare themselves for careers as English teachers and/or experts. This course approaches the English language with a theoretical lens of modern linguistics, particularly of the generative grammar, which basically adopts a scientific method in generating grammatical knowledge. Through this course, students are expected to gain a deeper insight into the syntactic aspect or structure of the globalizing language, internalizing relevant basic concepts, hypotheses, and/or theories from the field of transformational generative grammar. Its particular focus is laid on how to think syntactically, which crucially includes acquaintance to the methods of research and ways of theorizing. It deals with data from varieties of English and Korean so that students are able to gain basic expertise in comparative syntax, which is beneficial for undertaking comparative syntactic analysis across the two languages.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

Principles of English Education

Course Code: DEE3018		
Credits	Class Hr	Lab Hr
3	3	0

This course aims to help pre-service teachers understand theories of language learning and teaching and apply them to their classroom teaching. Course topics include first language acquisition theories, second language acquisition theories, affective factors, styles and strategies, socio-cultural factors, communicative competence, cross-linguistic influence, language teaching approaches and methods. The primary textbook for the course is Principles of Language Learning and Teaching by H.D. Brown. Students will be asked to complete assigned readings before class and carry out classroom learning tasks, such as gap-filling tasks, short writing, and discussion. Students are also expected to give presentations on a teaching method of their choice. Students will be evaluated according to their scores on the midterm and final exams as well as their performance in the classroom tasks.

Frequency of Course Offering: Every Fall

Prerequisite: Introduction to English Language Teaching

Classification : Extended Major

Multimedia Education of The English Education

Course Code: DEE3021		
Credits	Class Hr	Lab Hr
3	3	0

As prospective English teachers, students study how to use multimedia for English Education. Students approach English language teaching theoretically and practically using multiple media including audio, video, and CD ROM titles: use of computer and internet programs is to be examined to enhance English communicative competence.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

Studies in Cultures of English-speaking Countries and Multi-cultural Society

Course Code: DEE2035		
Credits	Class Hr	Lab Hr
3	3	0

This course aims to help students to explore and to expand their understanding of various cultures of English-speaking countries including British and American cultures. It also explores the characteristics of multi-culturalism and multi-lingual community, acquisition and use of multilingualism, inter-ethnic and inter-cultural communication, attitudes toward languages, language ideology in institutional encounters, English education in multilingual community, and finally the meaning of English as a global language. Through their explorations, students will attain the cultural competency for their target cultures and be able to behave and use English in a way more appropriate to them. In addition, this course will help students understand basic sociolinguistic concepts and principles related to multilingualism and multiculturalism. It will equip them with a desirable qualification on this important educational aspect as pre-service English teachers.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Extended Major

Second Language Acquisition

Course Code: DEE3042		
Credits	Class Hr	Lab Hr
3	3	0

This course aims to survey principles of language learning and teaching, focusing on first and second language acquisition. The course offers a survey of major empirical research areas, theoretical approaches, and current issues in the area of second language acquisition. More specifically, the course considers linguistic, social, and cultural aspects of language teaching and learning, setting the language classroom in the broader context of the social and institutional structures in which it is always located. Other topics covered include human learning, styles and strategies, personality factors, sociocultural factors, cross-linguistic influence, learner language, communicative competence, and language teaching methodology. After taking this course, students will become familiar with theoretical and methodological issues in SLA and be able to conduct a mini research regarding SLA-related topics.

Frequency of Course Offering: Every Spring
Prerequisite: None

Classification : Core Major

Teaching English Writing skills

Course Code: DEE3046		
Credits	Class Hr	Lab Hr
3	3	0

This course deals with the basic principles and various techniques of teaching English writing to secondary school students. Basic principles and logics of English writing and mechanicals such as punctuation rules will be explored also. The class starts with the basic principles and logics of English writing, mechanical aspects, techniques of writing, with intensive practicing. After this stage, students will explore principles, theories, and techniques of teaching English writing. The focus is on teaching secondary school students. In reality, Korean secondary schools do not teach real writing skills. Instead, translation skills are only practiced and developed. Based on the reality, this course will mostly deal with the actual classroom environment, using current writing textbooks that are currently used in the secondary schools. Practicing writing and exams for theories and principles will be administered.

Frequency of Course Offering: Every Fall
Prerequisite: None

Classification : Core Major

Multi-Cultural Society and English

Course Code: DEE3047		
Credits	Class Hr	Lab Hr
3	3	0

This course deals with the meaning and practicalities of using English in a multi-cultural society we are living in. More specifically, it explores characteristics of multi-culturalism and multi-lingual community, acquisition and use of multilingualism, inter-ethnic and inter-cultural communication, attitudes toward languages, language ideology in institutional encounters, English education in multilingual community, and finally the meaning of English as a global language. This course will help students have a decent understanding of basic sociolinguistic concepts and principles related to multilingualism and multi-cultural society, of Korea's multi-culturalization. Equipped with this knowledge, students in this course are expected to obtain a desirable qualification on this important educational aspect as pre-service English teachers or experts.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Extended Major

Topics on English Education

Course Code: DEE4007		
Credits	Class Hr	Lab Hr
3	3	0

This course is designed to help students enhance their potentials as future prospective English teachers with intensively discussing several major issues on English education. Students will be guided to learn relevant approaches, major facts and theories, and more diverse analysis methodologies. However, this course is specially designed for students who are preparing for National Teachers' Bar Exam: Written Test. For this purpose, students will review what they have studied for the last four years. Also, students will be asked to make several question items each week and make an oral presentation for the answer and key concepts that they have made. Therefore, this course is strongly recommended for those who are planning the Teachers Exam every year. Regular attendance and regular test item development are required.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Core Major

English Curriculum & Materials Development

Course Code: DEE4031		
Credits	Class Hr	Lab Hr
3	3	0

This course offers opportunities to explore the current principles of materials evaluation and development. There is coverage of the concepts of the curriculum, different types of syllabi, and the evaluation criteria for National Textbook Authorization. The course connects principle and practice by analyzing and evaluating secondary school textbooks and authentic English teaching materials. As a learning task, students will be asked to evaluate a textbook or a commercial ESL/EFL coursebook. Students will also be able to extend their understanding of course materials by creating a unit of a coursebook for their future target learners. Some parts of the course will be run by flipped learning and most classroom time will be devoted to discussion, problem-solving, project-based learning, and one-on-one interactions. In the end, this course aims to train pre-service teachers to become more autonomous, flexible and creative in the way they teach their future students.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Core Major

Techniques for Testing English Proficiency

Course Code: DEE4032		
Credits	Class Hr	Lab Hr

The course is designed to help pre-service teachers learn theories and practices of language testing. Students will not only learn theories of language testing but also have hands-on experience in test review and test construction. Course topics include washback, kinds of tests and testing, validity, reliability, how to develop tests, common test techniques, testing oral ability, testing reading, testing listening, and testing writing. The primary textbook is Testing for Language Teachers by A. Hughes. Students will be able to: 1) understand important principles and concepts in language testing such as validity, reliability, test bias, scoring and interpretation, 2) understand the relation between assessment and teaching practices, 3) use assessment results to diagnose, modify instruction, as well as design teaching strategies to meet the learning needs of Korean students of English, and 4) design and use a variety of formal and informal assessments to evaluate the progress and performance of the individual student and the class as a whole.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Extended Major

Teaching English Through English

Course Code: DEE4033		
Credits	Class Hr	Lab Hr
3	3	0

This course is designed to develop and enhance the presentation skills for those who are planning to take National Bar Exam for Secondary School Teachers. Each student is required to make several individual presentations for 15-20 minutes each time. Students have to show their presentation skills to the level that the instructor has set. Regular attendance, intensive practice at home, and regular written feedback reports are required for this course. Students are required to do micro-teaching sessions using a current English textbook for secondary school English education. The course aims at offering students an opportunity to practice English language teaching by preparing a teaching plan along with supplementary teaching materials. Student' teaching performances are evaluated by the instructor and fellow students for discussion.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

Teaching English Communication

Course Code: DEE4039		
Credits	Class Hr	Lab Hr
3	3	0

The course aims to train pre-service teachers on the techniques for improving target learners' communication skills. This course will cover the usage of communicative activities, practical skills and techniques for planning lessons, and teaching the subcomponents of language. The integrated approach to teaching language with listening, speaking, reading, and writing will also be practiced. In line with the trend of language learning, there will be the utilization of computer-assisted language learning (CALL), such as, online corpora and machine translation-assisted writing that can help increase student autonomy. Students will be asked to share, collaborate and discuss the recent technological tools that can be used to help language learners heighten motivation towards learning a second language. By the end of the course, learners are expected to become more sensitive towards the type of skills that should be taught to language learners of the 21st century.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Core Major

Logic and English Essay Writing

Course Code: DEE4040		
Credits	Class Hr	Lab Hr
3	3	0

This course deals with the logic of persuasion and English essay writing. Students in this course are expected to learn about the structure and errors in argumentation, and also practice writing persuasive and argumentative essays. Students will read argumentative essays or editorials written in English, and they will analyze and discuss the flow and the structure of their arguments in order to further train their critical thinking skills. This course seeks to help students recognize flaws in their thinking, understand the skills associated critical thinking, and strengthen those skills through practical exercises. By gathering data on current social issues or academic topics and by arguing their own positions or point of view in written English, students will strengthen their skills for argumentative writing and develop capabilities as teachers-to-be or experts.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Extended Major

English Conversation Practice

Course Code: ENG4013		
Credits	Class Hr	Lab Hr
3	3	0

This course aims at enhancing students' conversational skills in English through intensive and systematic practice in the language laboratory. Students are guided step by step to develop conversational skills to reach the stage where they can converse accurately and fluently. The class is operated using various practice activities, such as individual presentation, pair work, and group work. Developing conversational skills will begin with guided conversation, controlled conversation, group discussion, and finally free conversation and individual presentation. Various topics for presentation and discussion will be covered throughout this course, including weather, sports, personal preference, food, future jobs, dreams, hobbies, family, friends, schooling, and social issues. Also, various techniques, such as problem-finding and solution, explain things, comparing and contrasting, analyzing discourse styles will be developed. At its final stage, topics related to the major will be employed as topics.

Frequency of Course Offering: Every Fall

Prerequisite: None

COLLEGE OF EDUCATION
DEPARTMENT OF
MATHEMATICS EDUCATION



HANYANG UNIVERSITY

Classification : Core Major

Modern Algebra2

Course Code: MAT3002		
Credits	Class Hr	Lab Hr
3	3	0

This undergraduate course focuses on fundamentals of ring and field extension theory. Topics in ring theory include general property of rings including integral domains, theory of polynomials rings including unique factorization of polynomials, factor rings and ideals emphasizing on the connection between maximal ideals and prime ideals with fields and integral domains, and unique factorization domain including principal ideal domain and Euclidean domain (Gaussian integers and multiplicative norms). Also, in field theory, students are expected to deal with extension field theory, including splitting field, separable extension field and finite fields, field automorphisms, emphasizing Galois group. This course will be the starting point for students to develop the Galois Theory.

Frequency of Course Offering: Every Fall

Prerequisite: Number theory, Linear Algebra 1,2, Modern Algebra 1

Classification : Basic Major

Topology1

Course Code: MAT3004		
Credits	Class Hr	Lab Hr
3	3	0

A topology can be considered as the simplest structure on an abstract set, which enables us to define a continuous function on the set. A topological space is then a set structured by a topology, which is a natural generalization of the Euclidean space studied in the previous calculus and analysis courses. The contents do not only generalize many of key parts in analysis but provides essential tools to study further mathematical spaces beyond the Euclidean space. Students learn various theories and tools for topological spaces and learn how to apply them to actual problems. Students are also encouraged to exercise themselves in rigorous logical thinking and in mathematical writing with many "proving theorems" and "solving problems".

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Extended Major

Complex Variables1

Course Code: MAT3025		
Credits	Class Hr	Lab Hr
3	3	0

Complex analysis is the study of complex number system, students study derivatives, analytic functions, power series, Laurent series, linear fractional transformation and other elementary mappings, Cauchy-Goursat's theorem, Cauchy's integral formula, and residue theorem. Complex number system is the smallest algebraically closed field containing all the rational numbers, and most functions students studied in high school can be extended to analytic functions defined on the complex numbers. As a result, complex analysis is recognized as one of the core courses in mathematics which has lots of applications. Complex analysis is particularly concerned with analytic functions of complex variables. A key result of complex analysis is the Cauchy-Riemann equations, which gives the condition a function must satisfy in order for a complex generalization of the derivative to exist. Liouville's theorem can be used to provide a brief proof for the fundamental theorem of Algebra.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Extended Major

Complex Variables2

Course Code: MAT3026		
Credits	Class Hr	Lab Hr
3	3	0

As a continuation of complex analysis I, students explore some topics, such as harmonic functions, infinite products, entire and meromorphic functions power series, Laurent series, linear fractional transformation and other elementary mappings, Cauchy-Goursat's theorem, Cauchy's integral formula, and residue theorem. Contour integral, for example, provides a method of computing difficult real integrals by investigating the singular points of the function and the theory of residues is used to determine the path integral of complex valued functions. Complex analysis is particularly concerned with analytic functions of complex variables, Laurent series are the complex-valued equivalent to Taylor series but can be used to study the behavior of functions near singularities. Students are expected to acquire an in-depth understanding of Complex variables.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Extended Major

Multicultural Studies of Mathematics Education

Course Code: MAT3060		
Credits	Class Hr	Lab Hr
3	3	0

In the era of globalization, Korean society is culturally diversified. In this context, school is expected to work to equip future generation with the competence of social integration and collaborative innovation. For the purpose, school should be reformed to guarantee the equal accessibility to learning and to respect diversity and difference among students. This course is designed to help preservice teachers be ready for teaching mathematics in culturally diverse school and grow up as agents for reforming school as an equitable place for learning. For the purpose, this course introduces the theories of major areas in multicultural mathematics education, including ethnomathematics, multicultural mathematics curriculum, culturally responsive methods for teaching mathematics and assessment. In order to develop practical competence in teaching, this course provides activities, such as analyzing documents, designing instructional materials, planning to teach, conducting a mini-project, including reading critical literature in multicultural mathematics education. The course assessment also focuses on the practical competence of the course participants for multicultural mathematics teaching.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Core Major

Topology2

Course Code: MAT4004		
Credits	Class Hr	Lab Hr
3	3	0

This course is a continuation of Topology1, containing further theory in topological spaces and their continuous maps. The course starts with an important concept “compactness” for an arbitrary topological space. Next, students develop two natural ways to construct new topological spaces from old ones, namely “product” and “quotient”. Then this course aims at classifying various topological spaces according to a natural rule, called the separation axioms. From this work, students can reveal the hidden nature of many of nice mathematical properties of the Euclidean space, and then find appropriate conditions for any topological spaces to satisfy those properties. Finally, some of the fundamental theorems in point-set topology will be introduced, including the Uryshon’s Lemma and its applications. Each of them is already a significant cornerstone in mathematics, and also studying them in detail would be a nice exercise to apply and integrate almost everything what students have learned throughout the course.

Frequency of Course Offering: Every Fall

Prerequisite: None

Classification : Extended Major

Topics in Algebra

Course Code: MAT4063		
Credits	Class Hr	Lab Hr
3	3	0

In this course, students study some advanced topics in algebra, including Galois Theory and Sylow Theory. Galois Theory is one of the most important theories in an abstract algebra course. It says that there is a wonderful one to one correspondence between the set of intermediate fields of given two fields F and K and the set of subgroups of the Galois group $G(K/F)$. In general, it is not easy to find of intermediate fields of given two fields F and K , but by the aid of Galois Theory, it is enough to find subgroup lattice of the Galois group $G(K/F)$. On the other hand, this course focuses on the Sylow Theory, which has a lot of applications, for example, classification of simple groups. Also, some advanced topics based on former courses, such as number theory, linear Algebra, and algebra I, II can be included. A wide range of topics will be covered.

Frequency of Course Offering: Every Spring

Prerequisite: Number theory, Linear Algebra 1,2, Modern Algebra 1,2

Classification :

Course Code:		
Credits	Class Hr	Lab Hr

COLLEGE OF EDUCATION
DEPARTMENT OF
APPLIED ART EDUCATION



HANYANG UNIVERSITY

Classification : Core Major

Media Interaction Design

Course Code: APA3064		
Credits	Class Hr	Lab Hr
2	1	2

Students will propose and prototype their own directed media interaction design project, while also gaining design team experience. This course emphasizes practice-based research and design thinking across a variety of related subfields: media interaction design, human-computer interaction, socially engaged art and user experience design. Each seminar-studio is comprised of a combination of weekly lecture, case review, and practice where students will engage in design problem solving, case analysis, creative thinking, and project planning. Sample projects have included: physical computing, IoT, interactive advertisement campaigns using AR and VR, Web design, and mobile app development. This course is best suited for students who are interested in learning more about interactive design, interactive media, social media, and socially engaged art.

Frequency of Course Offering: Every spring

Prerequisite: None

Classification : Basic Major

Three Dimensional Composition

Course Code: FAE2007		
Credits	Class Hr	Lab Hr
2	1	1

The course aims for students to understand a wide variety of materials in art – clay, wood, metal, paper and others. During the semester, students are encouraged to look at many different genres in the art from ancient works to contemporary ones. Developing an understanding materials and making skills is the core of the subject. Students are expected to observe some experiments, initiate and attempt different tasks through research. Hidden potentials are cultivated for students to find their own paths in the field of art. The course requires students to build their own understanding in materials and making skills. It requires learning to conduct presentations, writing reports, making artwork and also delivering thoughts in an effective way. Learning basic tasks in education is the most important aspect of disciplining one's studies.

Frequency of Course Offering: Spring Semester

Prerequisite: None

Classification : Core Major

Film and Video Graphic Design 1

Course Code: I-D4025		
Credits	Class Hr	Lab Hr
2	1	2

The goal of the course is to provide a technical foundation for video making, as well as a creative, theoretical laboratory for exploring 4D /time-based arts. Every week, students will engage in hands-on practice in order to gain familiarity with pre-production, production, and post-production processes that include storyboarding, shooting, cinematography, editing, sound design, and motion graphics. This course requires embracing both an iterative design and an interactive design approach to video making that necessitates creative problem solving and a careful consideration of the audience or user experience. Students will turn in a final portfolio of learning and participate in a final screening of works in order to demonstrate the development of a distinct visual style as well as proficiency in various technical elements.

Frequency of Course Offering: Every Spring

Prerequisite: None

Classification : Extended Major

Film and Video Graphic Design 2

Course Code: I-D4026		
Credits	Class Hr	Lab Hr
2	1	2

This course builds on what was studied in Film and Video Graphic Design 1, and students must have taken that course before registering for this one. The goal of the course is for students to further develop a technical foundation for video making, as well as a creative, theoretical laboratory for exploring 4D /time-based arts. Every week, students will engage in hands-on practice in order to gain familiarity with pre-production, production, and post-production processes that include storyboarding, shooting, cinematography, editing, sound design, and motion graphics. This course requires embracing both an iterative design and an interactive design approach to video making that necessitates creative problem solving and a careful consideration of the audience or user experience. Students will turn in a final portfolio of learning and participate in a final screening of works in order to demonstrate the development of a distinct visual style as well as proficiency in various technical elements.

Frequency of Course Offering: Every Fall

Prerequisite: None