Oregon Tech Curricular Changes - Effective for Academic Year 2016-2017

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Effective Term	New (N) Modified (M) Deleted (D)	Prefix	Course#	Course Title	Credits	Term Offered	Course Description	Type of Change (for modified classes only)	Comments
201501	N	PHED	189	Varsity Golf	0-3-1		Competitive golf techniques are covered including training, conditioning, team organization and advanced technique analysis. Competition at the intercollegiate level. Varsity athletes only or coach's approval		F, W, S
2010601	N	ALH	505	Introduction to Information Technology for Healthcare Professionals	1-0-1		Uses of information technology (IT) in order to conduct library research; use all the functions of Black Board; prepare multimedia presentations; and to increase awareness of how IT is used in health care.	Prerequisite: Admissions to MSAH program.	Students will get an introduction to information technology (IT) as it applies to health care and in learning IT tools for success in online education.
201601	N	ALH	509	Master's Capstone Project Presentation and Defense	6-0-6		The capstone project is designed as a culminating clinical experience and provides an alternative to the thesis option. The student must present a formal capstone project plan prior to beginning the project to his/her graduate committee. Upon completion of the experience, the student will provide a written evaluation of the project. The student will also perform an oral presentation and oral defense to his/her committee.	Prerequisite: Admissions to MSAH program.	
201601	N	ALH	510	Science Review Healthcare Professionals	3-0-3		This course is designed to allow practicing healthcare professionals to develop a better understanding of the molecular pathophysiology that occurs in three of the major diseases afflicting western health; diabetes, obesity and atherosclerosis. This course will provide information from primary and secondary professional sources about these diseases and the mechanisms by which the major drugs and lifestyle changes work.	Prerequisites: CHE 101; ALH 515 and admission to the MS MAH program.	
201601	N	ALH	515	Scientific Writing and Healthcare Leadership Literature Review	3-0-3		This course focuses on reading and interpreting scholarly literature related to healthcare leadership. Students will learn to write using instructor lead professional and scientific methods.	Prerequisite: Acceptance into the MS MAH program.	
201601	N	ALH	525	Effective Healthcare Leadership Teams	3-0-3		This course focuses on team leadership in a healthcare setting. Course will include a study of team theories and safety concerns in the healthcare workplace. Utilizing real-life examples, students will practice team leadership skills to learn to effectively manage healthcare teams.	Prerequisite: Admissions into the MSAH program.	
201601	N	ALH	535	Assessment, Planning, Implementation and Evaluation	3-0-3		This course will focus on assessments. Focus will be on assessing needs, planning effectively, implementing changes, and evaluating success in a healthcare setting.	Prerequisite: Admissions to the MS MAH program.	
201601	N	ALH	545	Pertinent Ethical and Legal Considerations for Healthcare Leaders	3-0-3		This course will explore real-life healthcare ethical cases for study and discussion and include an introduction to healthcare legal information. The focus will be on the role of a healthcare leader in handling difficult ethical situations. Students will explore legal issues relating to liability and malpractice, etc.	Prerequisite: Admissions to the MS MAH Program.	
201601	N	ALH	555	Leadership Theory for Healthcare Leaders	3-0-3		This course will cover a spectrum of scholarly leadership theories ranging from military leadership models to Gardiner's Servant Leadership Model. Students will complete self-assessments to evaluate their own leadership and communication styles along with their own power and influence styles. These research based leadership theories will be applied to healthcare leadership and best practices.	Prerequisite: Admissions to the MS MAH program.	
201601	N	ALH	565	Population Health Issues for the Allied Health Professionals	3-0-3		This course will discuss population health issues and needs as it applies to healthcare leadership.	Prerequisites: ALH 515 and Admissions to MSMAH program.	
201601	N	ALH	575	Methods of Research for Allied Health Professionals	3-0-3		This course covers the variety of healthcare research methods including qualitative, quantitative, and mixed methods. Students will design their own research projects that will include data collection and analysis, with particular attention given to the planning process of the research and choosing appropriate methodology.	Prerequisites: ALH 515 and Admissions to the MS MAH program.	
201601	N	ALH	585	Financial Considerations and Political Strategies for Healthcare Leaders	3-0-3		Students will be introduced to best practices in healthcare finances including health care policies and funding sources. The emphasis will be to teach students how to incorporate successful financial models into their own healthcare organizations. Discussions will take place to include the best practices in using political models and strategies related to demand and supply within healthcare settings.	Prerequisite: Admissions to MS MAH program.	

201601	N	ALH	595	Curriculum Design for Allied Healthcare Professionals	3-0-3		This course focuses on creating healthcare curriculum that utilizes best practices. Student outcomes will be emphasized. Students will learn to manage healthcare curriculum with consideration to needs assessment and program specific accreditation standards.	Prerequisite: Acceptance into the MS MAH Program.	
201601	N	ALH	599	Master's Thesis Presentation and Defense	6-0-6		This course focuses on researching, writing, and presenting the Master's Thesis. The student and Program Director will form a committee of three faculty members to serve in an advisory role. The thesis topic will be selected by the candidate with the advice and approval of the Program Director. The student must prepare a written document describing the research problem, purpose, data collection, data analysis, research methods, interpretation methods and any other concerns related to the research. When the thesis is completed, the student will give an oral presentation and oral defense to his/her committee.	Prerequisite: Admissions to the MS MAH Program.	
201601	M	BIO	102	Diversity of Life	3-3-4	W	Evolution and phylogenetics among all major groups of living organisms, including bacteria, protists, fungi, plants and animals.		Revised title and description better describes actual course content as taught over the past 5-10 years. Change will make it simpler to align appropriate transfer credit with other colleges and Advance Credit Program courses with high-schools, and will help students choose the course that is right for them as non-science majors.
201601	N	BIO	375	Cross Sectional Anatomy II	1-0-1 or 3-0-3	F, W, S, Su	Continuation of cross section anatomy not included in BIO 335. This course covers MR images of the joints of the wrist, elbow, shoulder, ankle, knee, hip, thorax, spine and arterial system from the arch of the aorta to the circle of Willis, as demonstrated by MRA.	Prerequisite: BIO 233	This online course is designed for inclusion in a proposed specialization for Magnetic Resonance Imaging (MRI). It will be offered to on-campus students (1 credit) who choose MRI as their focus for the senior year of clinical externship as well as distance education students pursuing the specialization online (3 credits). The 1 credit course (as assigned by the Registrar) is for on-campus students to complete the units in the course that are not covered in the lab for the introductory MRI course. Note the designation of those credits in the course description format.
201601	M	BUS	495	Senior Project Proposal	1-0-1	F, W	Examination of senior internship and/or project process and requirements. Definitions of a suitable senior internship or project topic and preparation of a formal proposal. Topics dealing with client contact, task definition, privacy and confidentiality, initial research, presentation of results.	Pre or Corequisites: MGT 335 and BUS 456	With the additional class to the senior project sequence (was BUS 496 & 497 - now BUS 495, 496, 497) it makes more sense for students to start and end the project in one academic year, rather than with the interruption of a summer gap. Students can take/or retake courses on line as necessary. All senior project classes will be offered on line as needed each term.
201601	M	BUS	496	Senior Project	1-3-2	W	Students finalize project plan and complete data gathering analysis portion of a project for a client or an independent research project. Topics include completing research, data gathering and analysis. Interim project report is written.	Prerequisite: BUS 495	With the additional class to the senior project sequence (was BUS 496 & 497 - now BUS 495, 496, 497) it makes more sense for students to start and end the project in one academic year, rather than with the interruption of a summer gap. Students can take/or retake courses online as necessary. All senior project classes will be offered on line as needed each term.
201601	M	BUS	497	Senior Project	1-6-3	S	Students complete project started in BUS 496 including preparing a detailed project report and delivering a final PowerPoint presentation. Periodic progress reports required. Instructor functions as a consultant	Prerequisite: BUS 420 or BUS 496 with a grade of "C" or better. Pre or Corequisite: BUS 356	With the additional class to the senior project sequence (was BUS 496 & 497 - now BUS 495, 496, 497) it makes more sense for students to start and end the project in one academic year, rather than with the interruption of a summer gap. Students can take/or retake courses online as necessary. All senior project classes will be offered on line as needed each term.
201601	M	CE	205	Computational Methods	2-0-2	S	Solve applied problems involving formulas, functions, summation and iteration using Excel and VBA. Use built-in functions and graphing capabilities.	Prerequisite: MATH 112 with grade "C" or better.	Accommodates a change in term offered of GIS 134.
201601	M	CE	308	Principles of Professional Practice	4-0-4	W	Civil engineering professional practice topics including project acquisition, development, management and delivery. Business in civil engineering including ethics, economics, leadership, communication and legal matters. Current and emerging trends in practice.	Prerequisites: ENGR 102 and MATH 111, each with grade "C" or better.	Ensuring that our structural analysis and design sequence can be taught entirely in the junior year requires moving a few courses in the curriculum map, all of which are contained in this package of CPC submissions. After discussion with the faculty in the department, it was also determined that the content of CE 208 would be more appropriate at the junior level.. CE 308 should be made an equivalent to CE 208, which it is replacing.

201601	M	CE	311	Introduction to Geotechnical Engineering	4-3-5	F, W	Soil permeability, seepage, filters, effective stress, consolidation, settlement, shear strength, slope stability, stresses in soils, and stresses under loaded areas. Includes laboratory testing.	Prerequisites: CE 212, ENGR 213, each with a grade "C" or better.	MATH 254N and PHY 222 courses listed as prerequisites for maturity, rather than content, reasons. However this is better managed through advising, rather than as unrelenting prerequisites.
201601	M	CE	331	Structural Analysis	3-3-4	F	Structural loads according to ASCE 7. Analysis of statically determinate trusses and frames. Shear and moment diagrams, deflections, and influence lines for statically determinate structures. Analysis of statically indeterminate structures by force and displacement methods. Software applications emphasized in labs.	Prerequisite: ENGR 213 with grade "C" or better.	MATH 254N and PHY 222 courses listed as prerequisites for maturity, rather than content, reasons. However this is better managed through advising, rather than as unrelenting prerequisites.
201601	M	CE	351	Introduction to Transportation Engineering	3-3-4	W	Introduction to the design, planning, operation, management and maintenance of transportation systems with a focus on the highway and railway modes. Principles for planning multi-modal transportation systems, layout of roadways, traffic flow modeling and capacity analyses.	Prerequisites: ENGR 211 and GME 161, each with grade "C or better.	CE 203, MATH 254N and PHY 222 courses had been listed as prerequisites for maturity, rather than content, reasons. However this is better managed through advising, rather than as unrelenting prerequisites
201601	M	CE	354	Traffic Engineering	2-3-3	F, S	Principles of traffic engineering and operation, traffic engineering studies, signalized intersection design, traffic analysis software.	Prerequisite: CE 351 with grade "C" or better.	The content of MATH 361 is no longer required as a prerequisite for this course.
201601	M	CE	371	Closed Conduit Design	3-3-4	W	Population and factors influencing water supply demands, fire flows, peaking factors and storage requirements. Flows in pressure pipe systems, pipe networks analysis and design techniques. Estimation of wastewater flows including I/I considerations. Gravity-fed collection system design, construction and maintenance.	Prerequisite: ENGR 318, with grade "C" or better.	MATH 254N and PHY 222 courses listed as prerequisites for maturity, rather than content, reasons. However this is better managed through advising, rather than as unrelenting prerequisites. The CE 205 prerequisite has proven unenforceable due to transfer student and graduation progress timing, although remains strongly encouraged before commencement of this course.
201601	M	CE	374	Hydrology	3-3-4	S	Study of the hydrologic cycle, measurement of rainfall, runoff and streamflow. Curve fitting, hydrographic analysis, statistical analyses of extreme flows, flood routing and storage capacity. Runoff modeling and design of hydrologic structures and systems.	Prerequisite: CE 371, with grade "C" or better. Corequisite: MATH 361	For transfer students and graduate progress timing, introductory content of MATH 361 may be sufficient to meet course needs.
201601	M	CE	433	Structural Matrix Analysis	3-0-3	S	Static analysis of determinate and indeterminate structures using the direct stiffness method with heavy emphasis on computer models and solutions. Students will design and develop their own structural analysis program.	Prerequisite: CE 331 with grade "C" or better.	Prerequisite of MATH 341 limits enrollment for this course and matrix methods are reviewed sufficiently for students without this preparation to be successful. A lab session is critical to the software design portion of the course.
201601	M	CE	442	Advanced Reinforced Concrete Design	4-0-4	S	Design, analysis, and detailing of reinforced concrete elements, including: T-beams, doubly-reinforced beams, continuous beams, shear walls, slender columns, slabs, footings, and moment frames. Seismic resistance and the development, anchorage, and splicing of steel reinforcement are introduced.	Prerequisite: CE 341	Ensures that the structural analysis/design sequence can be completed entirely in the junior year.
201601	M	CE	444	Intermediate Steel Design	3-3-4	S	Design of structural steel tension members, frameworks, composite beams, and bolted and welded connections. Application of the AISC Steel Construction Manual structural stability provisions and software applications.	Prerequisite: CE 341 with grade "C' or better.	I have considered an experimental/computational laboratory for this course and students confirmed the potential benefit of this change in format.
201601	M	CE	533	Structural Matrix Analysis	2-3-3		Static analysis of determinate and indeterminate structures using the direct stiffness method with heavy emphasis on computer models and solutions. Students will design and develop their own structural analysis program.	Prerequisite: CE 331 with grade "C" or better.	Prerequisite of MATH 341 limits enrollment for this course and matrix methods are reviewed sufficiently for students without this preparation to be successful. A lab session is critical to the software design portion of the course.
201601	M	CE	549	Bridge Design	3-3-4		Design and analysis of short and medium-span highway bridge superstructures including reinforced concrete slab bridges, steel deck girder bridges, and prestressed concrete girder bridges. Software applications.	Prerequisite: CE 341 with grade "C' or better.	Prerequisites between CE 449 and CE 549 should be consistent. The 500-level prerequisite was not updated when the 400-level offering was created last year. The course has been designed to be independent of CE 439/CE 539 Highway Bridge Rating.
201601	M	CE	550	Transportation Structures	2-3-3		Design and analysis of common transportation structures including culverts, sign structures, light poles, and railings according to current AASHTO provisions and ODOT procedures. Software applications.	Prerequisite: CE 341 with grade "C' or better.	Prerequisites between CE 450 and CE 550 should be consistent. The 500-level prerequisite was not updated when the 400-level offering was created last year. The course has been designed to be independent of other courses in the bridge and transportation structures sequence.
201601	M	CLS	422	Molecular Diagnostic Methods	2-3-3	Su	Molecular techniques used in the clinical laboratory to diagnose disease. Topics covered include principles of molecular biology, nucleic acid isolation, purification, amplification, quantitation, discrimination, specimen collection/handling, ethical issues and molecular lab operations.	Prerequisites: CLS 415, CLS 416, CLS 420	We have hired a new CLS faculty member that will be teaching this course and CLS 449 Principles of Urinalysis. She feels that urinalysis course would benefit from being in a 10 week term due to the degree of microscopic work/learning that is involved. She feels that Molecular Diagnostics can be adequately covered in a summer term (8 weeks). Clean up (shorten) the course description.

201601	D	CLS	446	Microbiology III					This course was removed from the CLS curriculum last year with the creation of CLS 464 Medical Mycology and Virology and CLS 474 Medical Parasitology. It is a course that is no longer offered within the CLS curriculum.
201601	D	CLS	447	Clinical Chemistry Laboratory					This course is no longer taught as part of the CLS curriculum. It was removed from the curriculum map as part of the changes made last year.
201601	D	CLS	448	Infectious Serology					This course is no longer taught as part of the CLS curriculum. The course material was incorporated into CLS 420 Clinical Immunology and Infectious Serology. It was removed from the curriculum map as part of the changes made last year.
201601	M	CLS	449	Principles of Urinalysis	2-3-3	S	Lecture and laboratory coverage of renal function, urine formation, and methods used to analyze urine in the medical laboratory. Students perform physical, chemical, and microscopic analyses on clinical samples and correlate results with states of health and disease in man.		We have hired a new CLS faculty member that will be teaching this course and CLS 422 Molecular Diagnostic Methods. She feels that urinalysis course would benefit from being in a 10 wee term due to the degree of microscopic work/learning that is involved. She feels that Molecular Diagnostics can be adequately covered in a summer term (8 weeks).
201601	M	CLS	453	Immunohematology II	2-3-3		Continued study of immunohematology emphasizing clinical decision-making and problem-solving related to blood banking and transfusion therapy practices.	Prerequisite: CLS 443	The CLS faculty have found that there is not enough time in the current course to adequately cover the expanding amount of material that needs to be covered in the area of immunohematology. Increasing the amount of lecture time will also allow for the incorporation of different teaching/learning methodologies.
201601	M	CLS	457	Research Seminar	1-0-1	Su	Introduction to the process of formal inquiry. Development of skills needed to evaluate research. Develop structured questions to guide inquiry. Examine ethical issues, regulations, research design and the selection of research methods. Identify research career opportunities for medical laboratory scientists.	Prerequisites: CLS 415, CLS 416, CLS 420	The material covered in this seminar course is covered in CLS 457. Our accrediting agency (NAACLS) requires a research component be included in part of the curriculum. This can best be accomplished as part of a separate seminar course that focuses strictly on current research methods. The clinical assay methodology part of the CLS 457 course will be incorporated into the CLS 417 Clinical Chemistry III course.
201601	M	COM	336	Nonverbal Communication	3-0-3	W	Nonlinguistic aspects of human communication. Examines the relationships between nonverbal and verbal communication behavior and nonverbal communication skill. Topics include space, distance, environment, touch, gesture, facial expression and gaze as communication.	Prerequisites: COM 225, SPE 111	Given the demands of the course and its place in the curriculum, we think that this course is being taught with expectations appropriate for a 300 level course. Currently, the course is taken by students in their junior and senior years and has a 200 level course as a prerequisite (COM 225). This change would align the course with current practice.
201601	M	COM	336	Nonverbal Communication	3-0-3	W	Nonlinguistic aspects of human communication. Examines the relationships between nonverbal and verbal communication behavior and nonverbal communication skill. Topics include space, distance, environment, touch, gesture, facial expression and gaze as communication.	Prerequisites: COM 225, SPE 111	Given the demands of the course and its place in the curriculum, we think that this course is being taught with expectations appropriate for a 300 level course. Currently, the course is taken by students in their junior and senior years and has a 200 level course as a prerequisite (COM 225). This change would align the course with current practice.
201601	M	DH	225	Head and Neck Anatomy, Histology and Embryology	2-3-3	F	Lecture and lab course that provides an in-depth study of head and neck anatomy, histology, and embryology for the dental professional. Emphasis on human development, anatomy in relation to facial and oral structures, and histology of hard and soft dental tissues.		More accurate description of the current topics taught in the course.
201601	M	DH	240	Prevention I	3-3-3	F	Beginning discussions about healthcare for the provider as a part of holistic healthcare, and foundations for preventing oral disease. Focus on strategies for improving oral heath.	Prerequisite: Admission to the Dental Hygiene Program. Corequisite: DH 221	To align course description with current concepts being taught in the course.
201601	M	DH	241	Prevention II	3-3-3	W	Second of a five-term series emphasizing prevention and management of caries; oral health education for individual patients and groups; and wellness for the healthcare provider.	Prerequisite: DH 240	More accurate description of the course based on what is currently being taught in the course. The previous description was too specific and limiting.
201601	M	DH	242	Prevention III	3-0-3	S	Third of a five-term series emphasizing dental management and oral health education for a variety of age demographics including pregnancy, infants, children, and special needs children.	Prerequisite: DH 241	More accurate description of course and less restrictive.
201601	M	DH	252	Oral Radiology I	2-3-3	W	The first of a two course series that includes didactic and pre-clinical instruction in the principles and techniques of dental radiography.		More accurate description of course.
201601	M	DH	253	Oral Radiology II	2-0-2	S	The second of a two course series that includes didactic instruction in the principles and techniques of dental radiography with emphasis on image interpretation.	Prerequisites: DH 244 and DH 252	More accurate description of course.

201601	M	DH	340	Prevention IV	3-0-3	F	Fourth of a five term series emphasizing oral health education and dental management of common conditions found in the adolescent through geriatric population	Prerequisite: DH 242	Previous description was too specific and restrictive.
201601	M	DH	341	Prevention V	3-0-3	W	The last of a five term series emphasizing oral health education and dental management of patients with medically compromised status. A variety of systemic conditions are discussed in depth in regards to the unique needs and prevention strategies for each individual.	Prerequisite: DH 340	Previous description was too specific and restrictive.
201601	M	DH	351	Pain Management I	2-3-3	W	The first of a two course series. Lecture: Study of pharmacology, solutions, dosages, vasoconstrictors, drug interactions, medical history evaluation and contraindications. Laboratory practice in techniques of local anesthesia include basic injection technique including block and infiltration.	Prerequisites: CHE 360 and DH 267	This provides a more accurate description of the course. This two term series currently has one lecture hour during winter, and two lecture hours in spring. The proposed change will better suit the heavier content in the first ter. The total credit hours for the series would not change. It would add one credit for the term, and reduce one credit for the spring term.
201601	M	DH	352	Pain Management II	1-3-2	S	A continuation course of the pain management series. Coordinated lecture and laboratory practice in the recognition of dental anxiety; behavioral management; complications with anesthesia; nitrous oxide sedation techniques are practiced; advanced techniques in the administration of local anesthetics.	Prerequisite: DH 351	This provides a more accurate description of the course. This is a two term series, currently one lecture hour during winter term, and two lecture hours in the spring term. We would like to swap those lecture hours to better suit the heavier introductory content in the first ter. The total number of credit hours for the tow course series would not change. It would add one credit for the first term, and reduce one credit for the spring term.
201601	M	DH	380	Community Dental Health I	1-3-2	S	First in a four course sequence using a service learning approach. Students work in teams, identify target groups and conduct a needs assessment. Introduction to public health agencies and their functions; and to the role of the dental hygienist in public health.	Prerequisite: DH 241 Corequisite: DH 242	New description reflects actual course content.
201601	M	DH	381	Community Dental Health II	1-3-2	F	Service learning and systematic approach to developing community oral health programs continues. Teams complete a program plan based on the needs assessment. Community health education and health literacy are emphasized. Grant writing for program funding is practiced.	Prerequisite: DH 380	New description reflects actual course content.
201601	M	DH	382	Community Dental Health III	1-3-2	W	Service learning and systematic approach for implementing community oral health programs continues. Teams implement programs they designed. Health education occurs in the community. A broad view of public health including advocacy, epidemiology, biostatistics, research; controversy of water fluoridation.	Prerequisite: DH 381	New description reflects actual course content.
201601	M	DH	383	Community Dental Health IV	0-3-1	S	Service learning and systematic approach for community oral health programs is continued. Teams complete implementation and evaluation of programs. Team share results of programs and recommendations for future in public presentations and written documentation in a portfolio and year-end report.	Prerequisite: DH 382	New description reflects actual course content.
201601	M	DH	453	Research and Evidence Based Dentistry I	3-0-3	F, W, S	First in a two-course sequence exploring evidence-based decision making in dentistry and secondary research. Current issues affecting dental hygiene practice are explored. The process of evidence-based decision making is introduced with emphasis on writing questions and accessing quality research.	Prerequisite: Admission to BDHO program.	Title change and course description makes it more apparent that DH 452 and DH 455 are connected. Course description reflects actual course content. Course is now offered three times per year.
201601	M	DH	455	Research and Evidence Based Dentistry II	3-0-3	F, W, S	Second in a two-course sequence. Emphasis is on critical appraisal of research and application of research findings. Students write critical summaries and apply findings to clinical practice.	Prerequisites: DH 453, MATH 243 and admission to BDHO program.	Title change and course description makes it more apparent that DH 452 and DH 455 are connected. Course description reflects actual course content. Course is now offered every quarter.
201601	M	DH	475	EBDM in Healthcare I	3-0-3	F	First in a two-course sequence. Course emphasizes evidence-based decision making, identifying clinical treatment questions, describing types of research designs and sources of evidence, discussing importance of statistics, and conducting computerized searches. Critical appraisal of research introduced.	Prerequisite: DH 323	Title change will reflect a more accurate description of course goal and contents. The previous title - "Research Methods I" is only one component of evidence-based decision making.
201601	M	DH	476	EBDM in Healthcare II	3-0-3	W	Second in a two-course sequence. Emphasis on analysis of research studies for validity, reliability, statistical and clinical significance, and bias. Given clinical questions, students will conduct searches, critically analyze, and write summaries/reflections using EBDM guidelines.	Prerequisite: DH 475	Title change will reflect a more accurate description of course goal and contents. The previous title - "Research Methods II" is only one component of evidence-based decision making.
201601	M	DH	221 222 223	Dental Hygiene Clinical Practice and Seminar I, II, III	2-6-4 2-6-4 1-6-3	F W S	Sequential courses designed to provide clinical skills essential for the practice of dental hygiene. Skill development of patient assessment, basic instrumentation, and individualized preventive care emphasized.	Prerequisite (DH 221): Admission to Dental Hygiene Program Prerequisite (DH 222): DH 221 Prerequisites (DH 223): DH 222, CHE 360 and DH 252	To align course description with current concepts being taught in the course.

201601	M	DH	321 322 323	Dental Hygiene Clinical Practice and Seminar IV, V, VI	2-6-4 1-6-3 1-12-5	F W S	Sequential courses designed for the continued development of dental hygiene skills necessary for entry into professional clinical practice. Ultrasonic, advanced instrumentation, and expanded dental hygiene functions are practiced, in addition to observations in dental practice settings.	Prerequisite (DH 321): DH 223 Prerequisite (DH 322): DH 321 Prerequisite (DH 323): DH 322	Provides a more complete and accurate description of the course.
201601	M	DH	421 422 423	Dental Hygiene Clinical Practice and Seminar VII, VIII, IX	2-6-4 1-12-5 1-12-5	Su F W	Further refinement of clinical instrumentation and assessment skills. Emphasis on individualized care for patients with diverse oral health needs. Variety of off campus practice settings experienced.	Prerequisite (DH 421): DH 323 Prerequisite (DH 422): DH 421 Prerequisite (DH 423): DH 422	Current terminology is too specific, as students individualize care for a variety of patient types. New description is a more accurate description of course and university focus.
201601	M	DH	461 462 463	Restorative Dentistry I, II, III	1-3-2 1-3-2 0-6-2	Su F W	Emphasis on restoration placement techniques. Practical experience using restorative dental materials. Placement and finishing of amalgam and composite restoration on typodonts in Restorative Dentistry I and on patients in Restorative Dentistry II and III	Prerequisite (DH 461): DH 363 Prerequisite (DH 462): DH 461 Prerequisite (DH 463): DH 462	Additional 6 hours per week is not necessary for restorative endorsement. Also, the number of lab hours and credits make an extremely heavy load for students. Students already have 204 required hours in their curriculum. This reduction will make it 202 hours.
201601	M	EE	221	Circuits I	3-3-4		Introductory course in linear circuit analysis. Topics include: Ohm's law, Kirchhoff's laws, nodal analysis, mesh analysis, source transformations, Thévenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance, and first-order transient circuit response. Students must also register for a laboratory section.	Corequisite: MATH 252	Reordering topics within the sequence will achieve alignment with standard textbooks and curriculum at other universities and community colleges. This re-alignment will resolve issues impacting mid-sequence transfer students. Adding MATH 252 co-requisite will insure that students have exposure to integrals before they are used to solve circuits problems.
201601	M	EE	223	Circuits II	3-3-4		Introductory course in linear circuit analysis. Second-order transient circuit analysis, phasors, sinusoidal steady-state analysis, phasor-domain nodal, mesh analysis; phasor Thévenin and Norton equivalent circuits, AC power, three-phase circuits, magnetically coupled circuits and transformers. Students must register for a laboratory section.	Prerequisites: EE 221 and MATH 252, both with a grade of "C" or better.	Reordering topics within the sequence will achieve alignment with standard textbooks and curriculum at other universities and community colleges. This re-alignment will resolve issues impacting mid-sequence transfer students. Adding MATH 252 prerequisite will insure that students have exposure to integrals before they are used to solve circuits problems.
201601	M	EE	432	Advanced Digital System Design	3-3-4		Advanced digital system design with Field Programmable Gate Arrays (FPGAs). Students implement designs with pre-generated and custom digital logic functions using VHDL and/or Verilog hardware description languages. Projects include digital system design, simulation, and hardware implementation.	Prerequisites: EE 331 and CST 116, both with a grade of "C" or better.	The description has been updated to more accurately describe curriculum and learning objective. Prerequisites updated to required C++ programming background required for programming assignments. Class may be offered in different terms in each campus. Please remove terms offered.
201601	M	EE	471	Machine Learning I	4-0-4		Theory and practice of Genetic Algorithms, Evolution Strategies, Backprop, Kernel Methods, Naïve Bayes, Bayesian Belief Nets, Fuzz Inference; brief discussion of Genetic Programming, Swarm Intelligence, Reinforcement Learning, Bayes Optimal.	Prerequisite: EE 430 or (MATH 341 and CST 116) or (MATH 341 and ENGR 267).	The two changes are: MATH 327 to MATH 341, and the addition of another type of programming or scripting experience (ENGR 267). The reason for making EE 430 the prereq was to ensure sufficient math background for the course (along with MATLAB scripting experience). This works for EE majors, but students in other majors (SET, MATH, ME, etc.) would also be able to take this course (with this change) if they have the sufficient math background. The necessary math background is primarily integral calculus and linear algebra. (The MATH 327 requirement covered integral calculus through its prerequisite, but left out linear algebra. While discrete math is helpful, it has turned out to be less critical to the course than linear algebra). Term offered not
201601	M	EE	225	Circuits III	3-3-4		Introductory course in linear circuit analysis, Transfer functions, frequency response, Bode plots, passive and active filters, Laplace transforms, Fourier series, Fourier transforms, and two-port networks. Students must also register for a laboratory section.	Prerequisite: EE 223 with a grade "C" or better. Co-requisite: MATH 321	Reordering topics within the sequence will achieve alignment with standard textbooks and curriculum at other universities and community colleges. This re-alignment will resolve issues impacting mid-sequence transfer students. Class may be offered in different terms in each campus. Please remove terms offered.
201601	M	EE	331	Digital System Design with HDL	3-3-4		Introduces the student to a Hardware Descriptive Language and describes its role in digital design. Dataflow, Behavioral and Structural Modeling, Logic Partitioning, Hierarchical Design, CPLDs and FPGAs. DC Parameters and CPLD Timing Models. Design examples including keyboard scanner, counters, ALUs, multipliers and controllers.	Prerequisite: CST 133 or EE 133 or EE 347	Dual EE/RE majors have the choice to take EE 347 instead of the EE 131 & EE 133 sequence (see page 71 of the current catalog). Consequently, students in this program who take EE 347 need to have a prerequisite override from signed in order to sign up for EE 331 under the current catalog description. Class may be offered in different terms in each campus. Please remove terms offered.

201601	M	EE	333	Introduction to Microcontrollers	3-3-4		Introductory course in microcontroller design. Topics include interrupt controllers, timer/counters, A/D converters, PWM channels, USARTs, SPI, two-wire interfaces, LEDs, LCDs, motors, and various sensors. Hands-on projects or lab assignments require D and/or assembly language programming to develop applications.	Prerequisites: CST 116 and (CST 133 or EE 133 or EET 216)	The description has been updated to more accurately describe curriculum and learning objectives. Prerequisites updated to required C++ programming background required for programming assignments. Class may be offered in different terms in each campus. Please remove terms offered.
201601	M	EE	335	Advanced Microcontrollers	3-3-4		Advanced course in design and development of microcontroller-based systems. Topics include internal peripheral devices, external interfacing, and microcontroller systems design. Learning objectives are accomplished through design of fully integrated projects or lab assignments using C and/or assembly language programming.	Prerequisite: EE 333 with grade "C" or better.	The description has been updated to more accurately describe curriculum and learning objectives. Class may be offered in different terms in each campus. Please remove terms offered.
201601	M	ENGR	213	Engineering Mechanics: Strength of Materials	3-3-4	F, W, S	Internal stresses and deformations of structural members and machines when subjected to external forces.	Prerequisites: ENGR 211, MATH 252	Adding MATH 252 as a prerequisite, which will catch students who fail MATH 252 (currently listed as a co-requisite with ENGR 211) but pass ENGR 211.
201601	M	ENGR	213	Engineering Mechanics: Strength of Materials	3-3-4	F, W, S	Internal stresses and deformations of structural members and machines when subjected to external forces.	Prerequisites: ENGR 211 and MATH 252	The addition of MATH 252 as a prerequisite will better prepare students and promote their success in ENGR 213. Concepts and principles from integral calculus are utilized in this course. MATH 252 is already a requirement for these programs.
201601	M	ENGR	236	Fundamentals of Electric Circuits	3-0-3	F, S	Resistive circuits, operational amplifiers, capacitors, inductors, transient analysis, sine waves, AC circuit analysis, resonance, transformers. Not for Electronics Engineering Technology and Computer Engineering Technology students.	Prerequisites: MATH 252, and PHY 202 or PHY 222	Change in the prerequisite from MATH 251 to MATH 252 in order to better prepare students and to promote their success in this course. Concepts and principles from integral calculus are utilized in this course. MATH 252 is already a requirement for these programs.
201601	M	ENGR	266	Engineering Computation	2-3-3	F, W, S	Programming and problem solving using current computer software. General programming techniques using conditional statements, looping, subroutines, and data input/output will be stressed. Consideration of features specific to the software being used will also be presented.	Prerequisite: MATH 112	Change the prerequisite from MATH 111 to MATH 112 in order to better prepare students and to promote their success in this course. Trigonometric concepts and principles are routinely considered in programming exercises. MATH 112 is already a requirement for these programs.
201601	D	ENGT	230	Statics	3-0-3	F			ENGT 230 is being removed and replaced by MECH 221.
201601	D	ENGT	231	Strength of Materials	3-0-3	F, W, S			ENGT 231 is being removed and replaced by MECH 222.
201601	D	ENGT	232	Advanced Strength of Materials	2-3-3	F, W, S			ENGT 232 is being removed and replaced by MECH 223.
201601	M	ENGT	415	Occupational Safety	2-3-3	S	Topics include current occupational safety and health issues. Practical application of regulations in the industrial setting. Compliance to Industrial Hygiene and General Safety Standards. Common safety violations and implementation of safety programs.	Prerequisite: Junior standing in any MMET program.	This a required course in the BSMFG program. The course content will be strengthened and the course offed as an elective for the BSMET and BSME programs.
201601	M	GIS	205	GIS Data Integration	1-3-2	S	Construction and use of a data dictionary. Principles of Differential Correction. Importing feature and nonfeature data into a GIS Data Conversion. Theory and operation of GPS. Use of GPS and other tools for field data collection. Extensive use and creation of web-based GIS applications and services.	Prerequisite: GIS 134	With the restructuring of the freshman year GIS sequence, the GIS 103 prerequisite is no longer appropriate
201601	M	LIS	305	Research Strategies	3-0-3	W, S	Designed to guide students in senior projects, professional and graduate research. Understand information access, use, and synthesis, literature reviews, inquiry development, and research design. Recognize and practice ethical information use across professions. Articulate applications and limitations of researched topics.	Prerequisite: WRI 123 or WRI 227	Students usually take either WRI 123 or WRI 227, not both.
201601	N	MECH	221	Statics	3-0-3		Fundamental principles of mechanics of rigid bodies and the application of these principles to engineering problems.	Prerequisite: PHY 221 Pre or Corequisite: MATH 252	This course is designed to replace ENGT 230. The current ENGT sequence and prerequisites are insufficient to meet the ABET accreditation requirements of the BSME program.
201601	N	MECH	222	Strength of Materials I	3-0-3		Internal stresses and deformations of structural members and machines when subjected to external forces.	Prerequisite ENGR 211 or MECH 221	This course is designed to replace ENGT 231. The current ENGT sequence and prerequisites are insufficient to meet the ABET accreditation requirements of the BSME program.
201601	N	MECH	223	Strength of Materials II	2-3-3		Internal stresses and deformations of structural members and machines when subjected to external forces. Analysis of stress in pressure vessels and column buckling.	Prerequisite: MECH 222	This course is designed to replace ENGT 232. The current ENGT sequence and prerequisites are insufficient to meet the ABET accreditation requirements of the BSME program.
201601	M	MECH	313	Applied Thermodynamics	3-0-3	W, S	Application of laws and principles of thermodynamics to real thermodynamic cycles. Teaches analysis of performance and design of internal and external combustion engines, steam generators, heat pumps, compressors, and refrigeration machinery.	Prerequisite: ENGR 355	MET 232 is not needed as a prerequisite for this course.

201601	M	MECH	315	Machine Design I	3-0-3	F, W	Study of stress and fatigue analysis as applied to machine elements.	Prerequisite: MET 160, and ENGR 213 or MECH 223	The addition of MET 160 as a prerequisite will better prepare students and promote their success in MECH 315. Engineering materials and their applications are an integral component of this course. MET 160 is already a requirement for this program. Change in terms offered. MECH 223 and ENGR 213 are substantially equivalent courses
201601	M	MECH	315	Machine Design I	3-0-3	F, W	Study of stress and fatigue analysis as applied to machine elements.	Prerequisites: ENGR 213, MET 160	The addition of MET 160 as a prerequisite will better prepare students and promote their success in MECH 315. Engineering materials and their applications are an integral component of this course. MET 160 is already a requirement for this program. Change in terms offered.
201601	M	MECH	316	Machine Design II	3-0-3	W, S	Application of stress and fatigue analysis in the design and selection of machine elements.	Prerequisite: MECH 315	Change in terms offered.
201601	M	MECH	318	Fluid Mechanics I	3-3-4	F, W	Covers fluid properties, fluid statics, conservation laws of pipe flow, drag, lift fluid dynamics, measurement of flow, viscous flow, laminar, and turbulent flow, and forces due tot fluid motion.	Prerequisites: ENGR 211, MATH 252	PHY 221 is not needed as a prerequisite for this course. The addition of MATH 252 as a prerequisite will better prepare students and promote their success in MECH 318. Concepts and principles from integral calculus are utilized in this course. MATH 252 is already a requirement for this program. Change in terms offered.
201601	M	MECH	323	Heat Transfer I	3-0-3	F, S	An introduction to the three modes of heat transfer, conduction, convection, and radiation. Teaches the analytical and empirical techniques used for solving problems in heat transfer, including those for which computer application is most suited	Prerequisites: ENGR 355 and MATH 321 and MECH 318 or ENGR 318	The addition of ENGR 355 as a prerequisite will better prepare students and promote their success in MECH 323. Concepts and principles from thermodynamics are utilized in this course. ENGR 355 is already a requirement for this program. MECH 318 and ENGR 318 are substantially equivalent courses. ENGR 318 was added as an alternative prerequisite for REE students, for which MECH 323 is a program requirement.
201601	M	MECH	363	Engineering Instrumentation	2-3-3		Study of measurement techniques and equipment used in mechanical engineering. Instrumentation for measurements in mechanics, thermodynamics, fluid dynamics, and electrical systems are considered.	Prerequisite ENGR 236 Pre or Corequisite: ENGR 213 or MECH 223	PHY 222 is not needed as a prerequisite for this course. The addition of ENGR 236 as a prerequisite will better prepare students and promote their success in MECH 363. The concepts and principles of ENGR 236 are an integral component of MECH 363. ENGR 213 as a Pre- or Co-requisite will allow students to correlate "Strength of Materials" concepts with instrumentation principles. ENGR 236 and ENGR 213 are already requirements for this program. MECH 223 and ENGR 213 are substantially equivalent courses.
201601	M	MECH	363	Engineering Instrumentation	2-3-3	F	Study of measurement techniques and equipment used in mechanical engineering. Instrumentation for measurements in mechanics, thermodynamics, fluid dynamics, and electrical systems are considered. Methods of calibration, correction, and data reduction are presented.	Prerequisite: ENGR 236 Pre or Corequisite: ENGR 213	PHY 222 is not needed as a prerequisite for this course. The addition of ENGR 236 as a prerequisite will better prepare students and promote their success in MECH 363. The concepts and principles of ENGR 236 are an integral component of MECH 363. ENGR 213 as a Pre- or Co-requisite will allow students to correlate "Strength of Materials" concepts with instrumentation principles. ENGR 236 and ENGR 213 are already requirements for this program.
201601	M	MECH	436	Classical Control Systems	2-3-3		An introduction to control systems. Both classical control theory		
201601	M	MECH	437	Heat Transfer II	1-3-2	W	A study of experimental heat transfer. Methods and instrumentation used for investigating heat transfer systems will be considered. Laboratory investigations include studies of heat exchangers, forced and free convection experiments, and determination of radiation and convection coefficients.	Prerequisite: MECH 323	MECH 363 is not needed as a prerequisite for this course.
201601	M	MECH	480	Mechanical Vibrations	2-3-3	W	An introduction to mechanical vibration. Topics include the equations of motion, resonant frequencies, mode shapes, damping and applications. The laboratory will introduce vibration instrumentation.	Prerequisites: ENGR 212, ENGR 266, MATH 321, MATH 341, MECH 315, MECH 363	The addition of MATH 341 as a prerequisite will better prepare students and promote their success in MECH 480. Concepts and principles from linear algebra are utilized in this course. MATH 341 is already a requirement for this program.
201601	M	MECH	490	Senior Projects I	2-3-3	F	The first of a three-term comprehensive group design project, focusing on the design proposal. This sequence applies material from prior coursework, along with concepts of project management, design optimization, and other material related to a group engineering project.	Prerequisites: Senior standing in the BSME program and instructor consent.	The change will ensure that students enrolled in MECH 490 Senior Projects I are of senior standing and will encourage the students to develop a rapport with their project advisor.

201601	M	MET	241	CAD for Mechanical Design I	1-3-2	F, W, S	Computer aided drafting (CAD) for mechanical design. The focus of this course is the construction of 2-D drawings using current industry software. Topics include construction principles, input schemes, command structures, and data management.	Prerequisite: ENGR 111 or instructor consent.	This change is to accommodate the increasing number of transfer students that would not benefit from ENGR 111.
201601	M	MET	315	Machine Design I	3-0-3	F, W	Knowledge and skills developed in preceding courses are extended and applied to design and selection of machine elements and machines. Attention is given to functional requirements, methods of manufacture, choice of materials, and economic factors.	Prerequisites: ENGR 213 or MECH 223; and MET 160	PHY 201 or PHY 221 is not needed as a prerequisite for this course. Effective AY 2016-17, ENTR 232 is being replaced by MECH 223
201601	M	MET	323	Heat Transfer I	3-0-3	F	An introduction to the three modes of heat transfer, conduction, convection, and radiation. Teaches the analytical and empirical techniques used for solving problems in heat transfer, including those for which computer application is most suited	Prerequisites: ENGR 355, MET 218	MET 232 is not needed as a prerequisite for this course.
201601	M	MET	326	Electric Power Systems	2-3-3	F, W, S	Study related to theory and application of industrial electric power systems. Topics covered include transformers, motors, generators, motor controls, and protective devices.	Prerequisite: ENGR 236	EE 223 is not needed as a prerequisite for this course.
201601	M	MET	363	Engineering Instrumentation	2-3-3	F	Study of measurement techniques and equipment used in mechanical engineering. Instrumentation for measurements in mechanics, thermodynamics, fluid dynamics, and electrical systems considered. Methods of calibration, correction, and data reduction presented.	Prerequisite: ENGR 236 Pre or Corequisite: ENGR 213	PHY 202 or PHY 222 is not needed as a prerequisite for this course. The addition of ENGR 236 as a prerequisite will better prepare students and promote their success in MET 363. The concepts and principles of ENGR 236 are an integral component of MET 363. ENGR 213 as a Pre- or Co-requisite will allow students to correlate "Strength of Materials" concepts with instrumentation principles. ENGR 236 and ENGR 213 are already requirements for this program.
201601	M	MET	426	Fluid Power Systems	2-3-3	W, S	A mechanical approach to industrial hydraulic applications with emphasis on selection and function of hardware and interfacing of hydraulic systems with mechanical, fluidic, and electrical/electronic controls.	Prerequisite: MET 218	MET 363 is not needed as a prerequisite for this course.
201601	M	MET	437	Heat Transfer II	1-3-2	F, W	A study of experimental heat transfer. Methods and instrumentation used for investigating heat transfer systems will be considered. Laboratory investigations include studies of heat exchangers, forced and free convection experiments, and determination of radiation and convection coefficients.	Prerequisite: MET 323	MET 363 is not needed as a prerequisite for this course.
201601	M	MET	490	Senior Projects I	2-3-3	F	The first of a three-term comprehensive group design project, focusing on the design proposal. This sequence applies material from prior coursework, along with concepts of project management, design optimization, and other material related to a group engineering project.	Prerequisites: Senior standing in the BSMET program and instructor consent.	This change will ensure that students enrolled in MET 490 Senior Projects I are of senior standing and will encourage the students to develop a rapport with their project advisor.
201601	M	MFG	103	Introductory Welding Processes	2-3-3	F, W, S	Applications of welding in modern industry. Topics include: Oxyacetylene welding and cutting, shielded met arc welding, gas, tungsten arc welding, gas metal arc welding, and robotic welding.	Prerequisite: Enrolled in any MMET program or instructor consent.	This prerequisite is added due to limited laboratory resources. The labs commonly experience an enrollment level at maximum capacity each term.
201601	M	MFG	313	Manufacturing Analysis and Planning	3-0-3	F, S	Analysis and planning of manufacturing methods, procedures and equipment. Includes designing for manufacturing efficiency, tolerance analysis, equipment and resource allocation and scheduling.	Corequisites: MFG 120 and MET 242	ACC 333, MGT 321, and MFG 120 are not needed as prerequisites for this course. MFG 120 and MET 242 as co-requisites will benefit students and promote their success in this course. MFG 120 and MET 242 are already requirements for this program.
201601	M	MFG	331	Industrial Controls	2-3-3	W, S	Fundamentals of control of manufacturing processes. Applications of relay logic, input and output devices, and programmable logic controllers (PLC). Design of complete control circuits, selection of components, and cost estimation. PLC programming for discrete event control and for analog applications.	Corequisite: MET 326	MET 326 is not essential as a prerequisite for this course. MET 326 as a co-requisite will benefit students and promote their success in this course.
201601	M	MFG	341	Numerical Control Programming	2-3-3	F	Introduction to manual numerical control programming. Includes interpreting part drawings, process planning, machining setup and sequence. Program debugging and introduction to tool path simulation and computer-aided programming tools.	Prerequisites: MATH 112, MFG 120, MET 242	Change the prerequisite from MET 241 to MET 242 in order to strengthen the student's knowledge of Engineering Graphics and to promote their success in this course. MET 242 is already a requirement for this program.
201601	M	MFG	343	Manufacturing Tool Design	3-0-3	W	Fundamentals of jig and fixture design. Locating and clamping methods for manufacturing production. Design of sheet-metal stamping, piercing, and forming tools. Study of the effect of manufacturing machines and production methods on tooling design.	Prerequisites: MET 242, MET 315, MFG 314, MFG 313, MFG 341; or instructor consent.	The prerequisite for MFG 314 used to be MET 241, but was changed to MET 242 last year. The addition of MFG 313 and MFG 341 as prerequisites will better prepare students and promote their success in MFG 343. Concepts and principles from manufacturing analysis & planning and from numerical control programming are utilized in this course. MFG 313 and MFG 341 are already requirements for this program.
201601	M	MFG	344	Design of Manufacturing Tooling	2-3-3	S	Using material from prior courses students work in individual and team design projects. Design and analyze a variety of manufacturing fixtures, jigs, molds, and stamping dies.	Prerequisite: MFG 343	MET 241 is not needed as a prerequisite for this class. It is already required for certain prerequisite courses that lead to MFG 344.

201601	M	MFG	447	Lean Manufacturing	2-3-3	W, S	Introduction of principles, techniques and skills of lean manufacturing. Process optimization and quality improvement for manufacturing. Plant layout, design and job scheduling. JIT skills, such as Kaizen, Kanban, value added analysis and one piece flow to reduce inventory and waste.	Prerequisite: MFG 333	MFG 313 is not needed as a prerequisite for this course
201601	M	MFG	461	Senior Project I	1-6-3	F	The first term of a three-term comprehensive capstone manufacturing project. This term concentrates on the development and presentation of a formal project proposal, followed by early stages of project development.	Prerequisites: Senior standing in the BSMFG program and constructor consent.	This change will ensure that students enrolled in MFG 461 Senior Projects I are of senior standing and will encourage the students to develop a rapport with their project advisor.
201601	N	MIS	145	Introduction to PC Hardware/Software	3-3-4	F, W			Replace MIS 256 Hardware/Software Integration (3-3-4), which is no longer offered (and has been deleted from the catalog) with MIS 145 (3-3-4) in the HI curriculum map. This corrects an oversight arising from an earlier change. The deletion and addition take place in the Winter term of the Freshman year in the HI map.
201601	D	MIS	256	Hardware/Software Integration	3-3-4	F, W			Replace MIS 256 Hardware/Software Integration (3-3-4), which is no longer offered (and has been deleted from the catalog) with MIS 145 (3-3-4) in the HI curriculum map. This corrects an oversight arising from an earlier change. The deletion and addition take place in the Winter term of the Freshman year in the HI map.
201601	N	MIT	205	Medical Imaging Technology Practicum	1-0-1		This course is a remedial section designed for imaging learners who plan to retake a sophomore year programmatic course or are returning to a program after brief hiatus. Curriculum for this course is customized to each learner's needs.	Prerequisite: Sophomore standing in a Medical Imaging program.	To be successful in Medical Imaging, it is necessary to review essential didactic information and clinical skills in preparation for advancing in that program. This course has been available as a seminar course for many years. Per the Provost's request, we are changing to an actual course number. Faculty will not receive loading for this course.
201601	N	MIT	305	Medical Imaging Technology Practicum	1-0-1		This course is a remedial section designed for imaging juniors who plan to retake a programmatic course or are returning to a program after brief hiatus. Curriculum for this course is customized to each learner's needs.	Prerequisite: Junior standing in a Medical Imaging program.	To be successful in Medical Imaging, it is necessary to review essential didactic information and clinical skills in preparation for advancing in that program. This course has been available as a seminar course for many years. Per the Provost's request, we are changing to an actual course number. Faculty will not receive loading for this course.
201601	N	MIT	342	Magnetic Resonance Imaging II	3-0-3	F, W, S, Su	Advanced principles used in the production of magnetic resonance images, MRI safety, coil function and selection, advanced pulse sequences, magnetic resonance angiography (MRA), motion control techniques, pathology, artifacts, functional magnetic resonance imaging (fMRI).	Prerequisite: MIT 341	This course is designed for inclusion in a proposed specialization for Magnetic Resonance Imaging (MRI). It will be offered on-campus for students who choose MRI as their focus for the senior year of clinical externship as well as to distance education students pursuing the specialization online.
201601	N	MIT	365	Magnetic Resonance Imaging Review	2-0-2	F, W, S, Su	Review of MR principles of image production for practicing and training MR technologists who intend to sit for the American Registry of Radiologic Technologists MRI examination.	Prerequisite: MIT 341 Corequisite: MIT 342 with instructor approval	This course is designed for inclusion in a proposed specialization for Magnetic Resonance Imaging (MRI). It will be offered on-campus for students who choose MRI as their focus for the senior year of clinical externship, as well as distance education students pursuing the MRI specialization online.
201601	N	MIT	405	Medical Imaging Technology Practicum	1-0-1		This course is a remedial section designed for imaging Seniors. The requirements for this course are largely clinical, but may include some instructional review. Curriculum for this course is customized to each learner's needs.	Prerequisite: Senior standing in a Medical Imaging program or working toward an advanced level certification.	To be successful in Medical Imaging, it is necessary to review essential didactic information and clinical skills in preparation for advancing in that program. This course has been available as a seminar course for many years. Per the Provost's request, we are changing to an actual course number. Faculty will not receive loading for this course.
201601	N	MIT	411	Magnetic Resonance Externship	0-13-5	F, W, S, Su	A one to three term practicum designed to develop clinical skills at the imaging centers where students are employed. Students perform MRI examinations for competency, as well as completing the clinical requirements to sit for the post primary American Registry of Radiologic Technologists (ARRT) MRI examination.	Prerequisite: MIT 341 with grade "C" or better. Corequisite: MIT 342, MIT 365 or instructor approval	This distance delivery course is designed for inclusion in a proposed specialization for Magnetic Resonance Imaging (MRI). It will be offered on-campus for students who choose MRI as their focus for the senior year of clinical externship as well as distance education students pursuing the specialization online. On-campus students pursuing the specialization, and who choose MRI for their modality training term in the RDSC 411 externship, will not have to take MIT 411 to earn the specialization.

201601	N	NMT	315	Breast Imaging	1-0-1		An in-depth analysis of breast anatomy and physiology, positioning, and interventional methods. Patient education and breast cancer statics will also be discussed at great lengths.	Prerequisite: Junior standing in Nuclear Medicine	This course has been taught as a trial seminar course for the past 3 years. There are some healthcare facilities that perform Breast Specific Gamma Imaging, requiring positioning of a breast similar to a Mammogram. Historically, mammographers had to position the patient for the Nuclear Medicine department. This course trains the Nuclear Medicine student how to position the breast, in addition to the didactic information listed in the course description. Interest in the course has grown, so we have decided to make this a permanent option for Nuclear Medicine students.
201601	M	NMT	341	Magnetic Resonance Imaging	3-3-4	F, W, S, Su	Physics and principles used in the production of magnetic resonance images and spectroscopy, including: safety issues, static and gradient magnetic fields, coils, resonance, frequencies, relaxation, and computer applications. Basic pulse sequence are examined in detail.	Prerequisites: BIO 335 and PHY 201 or PHY 217 all with a grade of "C" or better.	The course is now in the curriculum of Nuclear Medicine Technology (NMT) as well as RDSC. It will also be in the curriculum of the MRI specialization that will be made available to students in both disciplines. The courses are the same. The reason for the change is to bring them both to the same prefix and number under the MIT designation.
201601	M	PSY	334	Behavior Modification I		F	Measurement of behavior and key concepts of operant learning are covered, e.g., reinforcement, extinction, punishment, stimulus control and shaping, among others. Laboratory exercises are interactive computer simulations of these concepts. Fist in five course sequence approved by The Behavior Analyst Certification Board, Inc.® as meeting the coursework requirements for eligibility to take the Board Certified Behavior Assistant Analyst Examination ®. Applicants will have to meet additional requirements to qualify.	Prerequisite: PSY 201, 202, or 203	Students are sufficiently prepared for the work in PSY 334 if they have passed any of the introductory psychology courses.
201601	M	PSY	372	Human Sexuality II	3-0-3	S	Social, cultural, psychological and physiological influences on human sexuality are examined. Topics include: sexual orientation, pregnancy, contraceptive practices, sexual dysfunctions, sexually transmitted infections, paraphilias, sexual assault, media images, the sale of sex.	Prerequisite: PSY 201, PSY 202, or PSY 203. SS	The content in PSY 371 is not necessary for a student to successfully complete 372. While these two courses are on the same topic, they do not have to be taken in a specific order. A general psychology course provides the foundation needed for a student to enroll in PSY 372.
201601	N	PSY	385	Peer Mentorship	1-3-2		Applied learning experience working with college and college bound populations. Enrolled students are engaged as mentors for peers, utilizing skills and technology to guide successful academic and social college experiences. May be repeated for credit. Not open to first year freshman or first term transfer students.	Prerequisite: 90 credit hours and at least one term at Oregon Tech	This course will offer students of all majors the opportunity to build and utilize skills in working with and aiding others. These skills are important in any career field and would be beneficial to have an demonstrate before applying for employment. This also meets the need to retain Oregon Tech students, who will benefit from this course as peers that are being mentored.
201601	M	PSY	434	Advanced Behavior Modification I	4-0-4	W	Ethical principles and issues in Applied Behavior Analysis and behavioral assessment methods and techniques, including measuring behavior and analyzing data. Third in five course sequence approved by The Behavior Analyst Certification Board, Inc. ®. Applicants will have to meet additional requirements to qualify.	Pre or Corequisite: PSY 335 (SS)	The content of the course has changed to have less emphasis on research methods and therefore the PSY 313 (research methods) course is no longer necessary as a pre-requisite.
201601	N	SEM	522	Advanced Systems Engineering			Advanced concepts in systems science and systems engineering; modeling and mathematical methods for systems engineering; system simulation tools; optimization and decision analysis; case studies involving practical systems engineering integration of hardware, software, information, and human factor systems		Course has been offered as SEM 507. This course is cross-listed with SEM 422. Course outline and objectives are the same as SEM 422. Winter
201601	N	SEM	525	Advanced Engineering Management			Competitive Strategic Frameworks (Porter, RBV, Delta); Strategic Execution Framework; Project Management (PMBOOK); Financial Management; New Product Development; Case Studies.		Course has been offered as SEM 507. This course is cross-listed with SEM 425. Course outline and objectives are the same as SEM 425. Spring
201601	N	SEM	521	Systems Engineering			Foundations of Systems Engineering; Structure of Complex Systems; System Development Processes and Frameworks; Systems Engineering Management; System Needs Analysis; System Design & Development; System Engineering Validation, Reliability, Availability, Maintainability and Deployment; Human Factors Engineering.		Course has been offered as SEM 507. This course is cross-listed with SEM 421. Course outline and objectives are the same as SEM 421. Fall
201601	M	VAS	225	Patient Management Practices	2-3-3	F	Current issues in the practice of vascular technology with emphasis on basic concepts of patient care, infection control procedures, and the technologist's responsibility to the patient, the patient's family, and the vascular technology profession.	Prerequisite: MIT 103 with grade "C" or better.	The course is currently taught to both Vascular Technology and Echocardiography students. By separating the courses into two separate lectures, the instructor can focus on issues central to each specific discipline and make the course more inclusive.