SEATTLE COLLEGES
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# ENGR&214 - Statics

Document Type: Master Course Outline
Proposal Type: Revision
Requester(s): Dennis Schaffer
College: North
Origination Approved: 06/13/2018 - 5:17 PM

## BASIC INFORMATION

**Requester(s):** Dennis Schaffer

**College:** North Seattle College

**Division/Dept:** Math / Science

**Dean:** Alissa D Agnello

**Peer Reviewer(s):** Rainer Heller
Francois B. Lepeintre

## COURSE INFORMATION

**Proposed Course Number:**
Prefix: **ENGR&** Number: **214**

☐ Request a new Prefix
☑ This will be a common course

**Full Title:** Statics

**Abbreviated Title:** Statics

**Catalog Course Description:**
Covers force and moment systems, equilibrium principles for particles and rigid bodies, analysis by vector algebra of two- and three-dimensional structures, frames, machines, trusses and beams. Includes analysis of internal forces, friction, centroids, and moment of inertia. Prereq: MATH& 152 and PHYS& 221.

**Course Length:** 11 Weeks ☐ Request an Exception

**Topical Outline:**

I. Basic concepts
   A. Review of vector algebra
   B. Forces, moments, couples
   C. Resultants of various force systems
   D. Distributed Loads
II. Equilibrium
   A. Particle
   B. Rigid Body
III. Trusses, Frames, and Machines
   A. Method of joints
   B. Method of sections

C. disassembly method

IV. Beams
- A. Shear and moment equations
- B. Shear and moment diagrams

V. Friction

VI. Geometric Properties of an Area
- A. First moment (centroid)
- B. Second moment (moment of inertia)
- C. Transfer theorum (parallel axis theorem)
- D. Composite areas

## COURSE CODING

**Funding Source:** 1.....State

**Institutional Intent:** 11.....Academic Transfer

Select the Distribution Area of the AA Degree that this course will satisfy, if applicable:

(No Distribution Areas Selected)

**Will this course transfer to a 4-year university?** **Yes**

Please Describe:
Transfers to the University of Washington as AA 210 (4), 2XX (1)

**Is this course designed for Limited English Proficiency?** **No**

**Is this course designed for Academic Disadvantaged?** **No**

**Does this course have a Workplace Training component?** **No**

**CIP Code:** 14.0101 ☐ Request Specific CIP Code

**Credits:**

**Will this course be offered as Variable Credit?** No
**No**

**List Course Contact Hours**

| | |
|---|---|
| Lecture (11 Contact Hours : 1 Credit) | 55 |
| Lab (22 Contact Hours : 1 Credit) | 0 |
| Clinical Work (33 Contact Hours : 1 Credit) | 0 |
| Other (55 Contact Hours : 1 Credit) | 0 |
| Total Contact Hours | 55 |
| Total Credits | 5 |

**This is to certify that the above criteria have all been met and all statements are accurate to the best of my knowledge.**

Faculty involved in originating this program:

| Dennis Schaffer | Dennis Schaffer | 1/1/0001 |
|---|---|---|
| **Print Name** | **Signature** | **Date** |

Dean:

| Alissa D Agnello | Alissa D Agnello | 5/28/2018 |
|---|---|---|
| **Print Name** | **Signature** | **Date** |

**Results of NSCC Curriculum and Academic Standards Committee Findings**

**Participating Faculty Response and Remarks**

[X] Recommended for approval

[ ] Not recommended for approval

Chairman, Curriculum and Academic Standards Committee:

| Denise G Brannan | Denise G Brannan | 6/13/2018 |
|---|---|---|
| **Print Name** | **Signature** | **Date** |

Vice President for Instruction:

| Kristen A Jones | Kristen A Jones | 6/13/2018 |
|---|---|---|
| **Print Name** | **Signature** | **Date** |