## Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

## Faculty of Chemical Technology and Engineering

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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2                                                                                                                                         | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for of<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | d at incr<br>ant mora<br>which e<br>which e<br>thics a<br>engineer<br>of Integr<br>of hun<br>and Integr                                                                                                                                                    | al theories, catego<br>engineers may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Enginee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ories of ethical de<br>acounter in their p<br>uction<br>Ethics – basic cond<br>– falsification of c<br>arch subjects, hidin                                                                                                                                                        | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o                                                                                                                                                                           | g, professiona<br>fe. Students w<br>ical theories<br>on of data, pl<br>f interest, gho                                                                                      | I codes of vill be ab                                                                      | of ethics<br>le to ma                                                           | s and va<br>aking et        | arious c<br>thical de | ase<br>ecision<br>hours<br>2<br>2                                                                                 |
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Students w<br>ical theories<br>on of data, pl<br>f interest, gho<br>agement, poo<br>cs related to s<br>he environme                                   | agiarism<br>ostwriting<br>or produ-<br>sustainal                                           | of ethics<br>le to ma<br>,<br>g, guest<br>ct                                    | s and va<br>aking et        | arious c<br>thical de | ase<br>ecision<br>hours<br>2<br>2<br>2<br>2                                                                       |
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Students w<br>ical theories<br>on of data, pl<br>f interest, gho<br>agement, poo<br>cs related to s<br>he environme                                   | agiarism<br>ostwriting<br>or produ-<br>sustainal                                           | of ethics<br>le to ma<br>,<br>g, guest<br>ct                                    | s and va<br>aking et        | arious c<br>thical de | ase<br>ecision<br>hours<br>2<br>2<br>2<br>2<br>2<br>2                                                             |
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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2<br>T-W-3<br>T-W-4<br>T-W-5<br>T-W-6                                                                                                     | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for a<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | d at incr<br>ant mora<br>s which e<br>various<br>Ethics a<br>engineer<br>ad Integr<br>and Integr<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future p                                                                                              | al theories, catego<br>engineers may en<br>s forms of instru-<br>and Engineering E<br>rs<br>rity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – case<br>rofession                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>- falsification of c<br>arch subjects, hidir<br>ers – fraud, corrup<br>cted topics in eng<br>ies, economic issu                                                                                     | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>ition, mismar<br>ineering ethi<br>ies, care for t                                                                                                                      | g, professiona<br>fe. 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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2<br>T-W-3<br>T-W-4<br>T-W-5<br>T-W-6<br>Student w                                                                                        | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their<br>workload - forms of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | d at incr<br>ant mora<br>s which e<br>which e<br>t c<br>thics a<br>engineer<br>d Integr<br>and Integr<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future p<br>f activity                                                                           | al theories, catego<br>engineers may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – caso<br>rofession                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>- falsification of c<br>arch subjects, hidir<br>ers – fraud, corrup<br>cted topics in eng<br>ies, economic issu                                                                                     | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>ition, mismar<br>ineering ethi<br>ies, care for t                                                                                                                      | g, professiona<br>fe. 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| Module/co     C-1     Course co     T-W-1     T-W-2     T-W-3     T-W-4     T-W-5     T-W-6     Student w     A-W-1     A-W-3                                                           | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for of<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their<br>workload - forms of<br>Lecture participatio<br>Individual literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | d at incr<br>ant mora<br>s which e<br>various<br>Ethics a<br>engineer<br>of Integr<br>at of hun<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future pu<br>f activity<br>on<br>e studies                                                             | al theories, categories, categories, categories may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – case<br>rofession<br>y<br>s<br>ontent to the writ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>– falsification of c<br>arch subjects, hidin<br>ers – fraud, corrup<br>icted topics in eng<br>ies, economic issu<br>e study of differer                                                             | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>ition, mismar<br>ineering ethi<br>ies, care for t                                                                                                                      | g, professiona<br>fe. 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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2<br>T-W-3<br>T-W-4<br>T-W-5<br>T-W-6<br>Student w<br>A-W-1<br>A-W-2                                                                      | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for of<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their<br>workload - forms of<br>Lecture participatio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | d at incr<br>ant mora<br>s which e<br>various<br>Ethics a<br>engineer<br>of Integr<br>at of hun<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future pu<br>f activity<br>on<br>e studies                                                             | al theories, categories, categories, categories may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – case<br>rofession<br>y<br>s<br>ontent to the writ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>– falsification of c<br>arch subjects, hidin<br>ers – fraud, corrup<br>icted topics in eng<br>ies, economic issu<br>e study of differer                                                             | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>ition, mismar<br>ineering ethi<br>ies, care for t                                                                                                                      | g, professiona<br>fe. 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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2<br>T-W-3<br>T-W-4<br>T-W-5<br>T-W-6<br>Student w<br>A-W-1<br>A-W-2<br>A-W-3<br>A-W-4                                                    | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for of<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their<br>workload - forms of<br>Lecture participatio<br>Individual literature<br>Repetition of the le<br>One-on-On Teachir<br>methods / tools                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | d at incr<br>ant mora<br>s which e<br>Ethics a<br>engineer<br>of Integr<br>at of hun<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future pu<br>f activity<br>on<br>e studies<br>ecture co                                                           | al theories, categories, categories, categories may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – case<br>rofession<br>y<br>s<br>pontent to the writ<br>ultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>- falsification of c<br>arch subjects, hidir<br>ers – fraud, corrup<br>cted topics in eng<br>ies, economic issu<br>e study of differer                                                              | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>tion, mismar<br>ineering ethi<br>ies, care for t<br>nt situations v                                                                                                    | g, professiona<br>fe. 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| Module/co<br>C-1<br>Course co<br>T-W-1<br>T-W-2<br>T-W-3<br>T-W-3<br>T-W-4<br>T-W-5<br>T-W-6<br>Student w<br>A-W-1<br>A-W-2<br>A-W-3<br>A-W-3<br>A-W-4<br>Teaching<br>M-1<br>Evaluation | ourse unit objectiv<br>The course is aime<br>familiar with releva<br>studies - situations<br>within engineering<br>ontent divided into<br>Introduction to the<br>Code of ethics for of<br>Research Ethics ar<br>unethical treatmer<br>authorship<br>Professional Ethics<br>design, deliberate<br>Engineering Ethics<br>including adaptive<br>Facing the potentia<br>encounter in their<br>workload - forms of<br>Lecture participatio<br>Individual literature<br>Repetition of the le<br>One-on-On Teachir<br>methods / tools<br>Activating methods                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | d at incr<br>ant mora<br>s which e<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-                                                                                                                          | al theories, categories, categories, categories may enders may enders may enders may enders may enders forms of instru-<br>and Engineering Enders for Engineers | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>- falsification of c<br>arch subjects, hidir<br>ers – fraud, corrup<br>cted topics in eng<br>ies, economic issu<br>e study of differer<br>tten test                                                 | cision-makin<br>rofessional li<br>cepts and eth<br>lata, fabricati<br>ng conflicts o<br>tion, mismar<br>ineering ethi<br>ies, care for t<br>nt situations v                                                                                                    | g, professiona<br>fe. Students w<br>ical theories<br>on of data, pl<br>f interest, gho<br>agement, poo<br>cs related to s<br>he environme<br>which enginee                  | agiarism<br>ostwriting<br>or produ-<br>sustainal                                           | of ethics<br>le to ma<br>,<br>g, guest<br>ct                                    | and va<br>aking et<br>Num   | ber of                | ase<br>ecision<br>hours<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>5<br>hours<br>15<br>8<br>5                     |
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| Module/colC-1Course colT-W-1T-W-2T-W-3T-W-4T-W-5T-W-6Student wA-W-1A-W-2A-W-3A-W-4TeachingM-1EvaluationS-1KnowledgChEn_1A_B0Student poss                                                | ourse unit objectiv   The course is aimed familiar with relevant studies - situations within engineering   content divided into   Introduction to the   Code of ethics for edition of the editis the edition of the edition of the edition of | d at incr<br>ant mora<br>s which e<br>various<br>Ethics a<br>engineer<br>and Integr<br>and Integr<br>and Sus<br>design,<br>al ethica<br>future p<br>f activity<br>on<br>e studies<br>ecture co<br>ng Consu<br>s - lectu<br>gressiv<br>al exam<br>g outco   | al theories, categories, categories may en<br>s forms of instru-<br>and Engineering E<br>rs<br>ity for Engineers<br>nan-animal resea<br>egrity for Engineers<br>aults<br>stainability – sele-<br>green technologi<br>I dilemmas – case<br>rofession<br>y<br>s<br>ontent to the writ-<br>ultation<br>re and didactic d<br>re, P - final)<br>based on the lect<br>omes<br>he research and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ories of ethical de<br>noounter in their p<br>uction<br>Ethics – basic cond<br>– falsification of c<br>arch subjects, hidin<br>ers – fraud, corrup<br>cted topics in eng<br>ies, economic issu<br>e study of differer<br>study of differer<br>iscussion, multime<br>ture contents  | cision-making<br>rofessional li<br>cepts and eth<br>lata, fabricating<br>conflicts o<br>tion, mismar<br>ineering ethi<br>les, care for t<br>it situations v<br>edia presenta<br>defined for the<br>learning outcomes<br>defined for the<br>particular areas of | g, professiona<br>fe. Students w<br>ical theories<br>on of data, pl<br>f interest, gho<br>agement, poo<br>cs related to s<br>he environme<br>which enginee<br>which enginee | agiarism<br>ostwriting<br>or produ-<br>sustainal<br>ent<br>ers may<br>Course<br>objectives | ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>ct<br>c | s and va<br>aking et<br>Num | ber of                | ase<br>ecision<br>hours<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>5<br>hours<br>15<br>8<br>5                |

| ChEn_1A_B06_U01<br>Student possesses an ability to make informed ethical decisions<br>when confronted with engineering problems in different types of<br>work. Student is able to assess the consequences and threats<br>resulting from non-compliance with the rules of professional<br>ethics in the engineer's activity. | ChEn_1A_U05<br>ChEn_1A_U11 | P6S_UU<br>P6S_UW_TA12 | P65_UW_IA12     | C-1      | T-W-3<br>T-W-4 | T-W-5<br>T-W-6 | M-1      | S-1   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------|-----------------|----------|----------------|----------------|----------|-------|
| Other social / personal competences                                                                                                                                                                                                                                                                                         |                            |                       |                 |          |                |                |          |       |
| ChEn_1A_B06_K01<br>Student understands his/her duties and responsibilities as<br>professionals. Student has an improved awareness and ability of<br>pointing of potential ethical issues within an engineering<br>context.                                                                                                  | ChEn_1A_K02                | P65_KO                |                 | C-1      | T-W-3<br>T-W-4 | T-W-5<br>T-W-6 | M-1      | S-1   |
| Required reading                                                                                                                                                                                                                                                                                                            |                            |                       |                 |          |                |                |          |       |
| 1. C.E. Harris Jr., M.S. Pritchard, M.J. Rabins, Engineering I<br>ISBN: 978-0-495-50279-1                                                                                                                                                                                                                                   | Ethics: Concept            | s and Cases, 4        | th Edition, Ce  | ngage    | Learnin        | g, Wads        | worth, 2 | 2009, |
| 2. C.B. Fleddermann, Engineering Ethics, 4th Edition, Prer                                                                                                                                                                                                                                                                  | ntice Hall, Uppe           | r Saddle River        | , New Jersey, 2 | 2012, I  | SBN: 97        | 78-0-13-2      | 214521-  | -3    |
| Supplementary reading                                                                                                                                                                                                                                                                                                       |                            |                       |                 |          |                |                |          |       |
| 1. S.K. Starrett, A.L. Lara, C. Bertha, Engineering Ethics: F<br>0-7844-1467-5                                                                                                                                                                                                                                              | Real World Case            | Studies, Ame          | rican Society o | of Civil | Engine         | ers, 201       | 7, ISBN: | 978-  |